Professional Women in Agriculture

(Sponsored by Department of Science and Technology)

भाकृअनुप
ICAR

National Academy of Agricultural Research Management
Rajendranagar, Hyderabad – 500 030, India
August, 1998

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Contents

S.No.	Topic	Page No
	Foreword	i
	Acknowledgments	ii
	Abstract	iv
	Executive summary	v
1.	Introduction	1
2.	Methodology	8
3.	Stock and the response	14
4.	Personal information	26
5.	Academic information	48
6.	Work environment	70
7.	Career information	79
8.	Career opinions and perceptions	112
9.	Career problems	137
10.	Brainstorming workshop	148
11.	Conclusions and recommendations	152
12.	Annexures	
	Annexure-1: List of universities	161
	Annexure-2: Growth of students	163
	Annexure-3: Students outturn data	164
	Annexure-4: Growth of trained manpower	165
	Annexure-5: Faculty in universities	166
	Annexure-6: List of resource persons	168
	Annexure-7: Local project advisory committee	170
	Annexure-8: Questionnaire to women graduates	171
	Annexure-9: Questionnaire to students	184
	Annexure-10 : Questionnaire to educational institutions	186
	Annexure-11: Questionnaire to organizations	189
	Annexure-12: Advertisement	190
	Annexure-13: Workshop schedule	191
	Annexure-14: Case study - PDKV, Akola	197
	Annexure-15: Case study - UAS, Dharwad	200
	Annexure-16: International experiences	202
	Annexure-17: Estimation of women agricultural graduates	208
	Annexure-18: State-wise distribution of respondents	211
	Annexure-19: Age at marriage of respondents	212
	Annexure-20: Number of siblings of respondents	213
	Annexure-21: Medium of instruction in school	214
	Annexure-22: Type of school studied	215
	Annexure-23: Choice of college education	217
13.	References	218

Foreword

On an overall basis women constitute more than two thirds work force in agriculture and allied sectors. However, spurt in the number of women professionals in agriculture is only a recent phenomenon. With the rapidly changing agricultural scenario against the backdrop of globalization of agriculture, contribution of professional women in development on the one hand and emancipation of rural women on the other assumes a greater significance. In this emerging scenario highlighting swing towards more and more openness for the rural women, role of women extension workers in terms of their number and quality of technology transfer mechanisms becomes of paramount significance. There is a need to understand this interface which influences the growth of professionals and their lady clients alike. To arrive at a comprehensive grasp on various aspects related with rising number of trained women, the present project entitled "Professional Women in Agriculture" was carried out at NAARM, Hyderabad sponsored by Department of Science and Technology (DST).

This project is a part of Academy's ongoing efforts to identify various issues of graduate women. A number of results have emanated from the study which relate to education, employment, mobility, career expectations, values, problems and contribution to agriculture and development. The primary purpose of this project was to arrive at an agenda for action for enlarging the role of women professionals and in harnessing science and technology for women in rural sector.

The Academy has been carrying out research projects with active technical and financial support from NSTMIS Division, DST. The present project is an outcome of an earlier research project "AGRIUNIS" which was funded by NSTMIS Division, DST. I am grateful for the financial and professional input support from NSTMIS Division, DST for this important endeavor and to the project team for their careful planning and execution. Specifically I appreciate the efforts put forth by D. Rama Rao and N. Sandhya Shenoy in the successful conduct of this project.

J.C. Katyal
Director, NAARM

Acknowledgments

The development of this study owes much to the encouragement and support provided by National Science and Technology Management Information System (NSTMIS) Division of Department of Science and Technology (DST). The idea of conducting a study on issues of graduate women in agriculture was conceived by Dr A.R. Rajeswari, former Head,NSTMIS, as the issues of women in other professions have been covered by NSTMIS endeavors. Thus this study was initiated by her and brought to fruition during the tenure of successive heads of NSTMIS division, viz., Dr Ramesam, Dr A.N. Murthy, and Dr Laxman Prasad. We sincerely thank all of them for their expert advice and support. Special thanks are due to Dr Laxman Prasad, whose comments helped us immensely to sharpen and refocus the final report.

Almost all the scientific officers of NSTMIS division participated in this task. We thank Mr Rakesh Chetal, Dr G.J. Samathanam and Mr Parveen Arora for their cooperation and contributions. Without their special attention and advice, it would have been difficult to do justice to this endeavor.

We express our immense gratitude to Dr J.C. Katyal, Director, NAARM for his all out support and guidance in almost all major activities of this project. Dr Katyal's deep involvement in this project was heart warming and his close association in execution of the many activities were the foundation which led to the successful completion of the present work on time.

We sincerely acknowledge the help received from Dr C. Prasad and Dr J.C. Kalla, former Directors of NAARM, who were instrumental in the initiation of the project and were important in helping us conceptualize many of the ideas in the project.

This work had benefited greatly from the guidance of a Project Advisory Committee headed by Dr Kulandai Swamy. We extend our thanks to Dr Kulandai Swamy for his advise.

We have received support from National Commission for Women (NCW) in organising the workshop on "Issues of Professional Women in Agriculture". We thank Smt. Padma Seth and Smt.Indira Basavaraj of NCW for their active participation and cooperation in organising the workshop.

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We would like to thank Ms Suguna Sri, our colleague at the Academy, and investigator of this project till she resigned from service at the Academy in November,1996.

This study was a group effort. We are grateful to all the project staff, viz. Dr Nikita Gopal, Dr Vijaya Kumari, Ms Sunanda, Mr Devendra Rao and Ms Madhuri for their sincere and hard work. Dr Nikita Gopal's contribution in the initial phase of the project, and Dr Vijaya Kumari and Ms Sunanda's contribution in the final report preparation need special mention. Their contribution to this project is gratefully acknowledged with thanks.

We would like to make special mention of our thanks to our colleagues at the Academy, Mr Suresh Kumar, Chief Administrative Officer and Mr B. Pandu Reddy, Finance and Accounts Officer for their timely help in the execution and implementation of this project.

This study was possible only through massive support from various Agricultural Universities/Institutions in this country. Our sincere thanks are to all those resource persons from different agricultural universities who have participated in this project. We specially thank all the respondents for their prompt response to the national wide survey carried out to elicit opinions on issues of graduate women in agriculture.

Throughout this endeavor, NAARM secretarial, editorial and press staff have offered strong support. Mr Nam Dev designed the creative cover page and Mr Narasimha Reddy supervised the overall publication effort. Ms Mercy provided the sustained and cooperative secretarial support. We sincerely thank them.

We express our gratitude to the DST for funding the project and NAARM for providing all the facilities needed.

Finally, we would like to thank all NAARM staff for their help.

D. Rama Rao
N. Sandhya Shenoy
Investigators

Abstract

This study investigates the issues of graduate women in agriculture in India. It is intended to help planners and policy-makers to effectively utilise the increasing number of graduate women in the country. The study uses output from brainstorming sessions, workshop and survey data from women graduates besides official records from educational institutions and employing organisations.

Although women constitute minority work force in most organisations, there are no marked differences in their approach to work and competence. Women's career is affected more by their family responsibilities, i.e., dual role. Physical facilities are, by and large, not compatible to working women, and women participation is low in professional and employees association, training, seminars and conferences. The study identifies organisational shortcomings specific to working women. The integration of women into traditionally male-dominated agricultural systems poses challenges to build their careers. The study provides insights into policy issues that can assist to boost better management practices for effective incorporation of women into workforce.

Executive summary

The DST Project on "Professional Women in Agriculture " was taken up to study the status and growth of agricultural women graduates, career opportunities, preference, and perceptions regarding professional and career issues. The target population included the UG, PG and Ph.D degree holders in agriculture and allied sciences, i.e. all disciplines offered by agricultural universities. The number of female students with professional degree in agriculture has increased many fold, i.e. from 387 (3.9% of total) in 1980 to about 3,773 (21.6% of total) in 1996.

The employees of professional agricultural women such as ICAR, agricultural universities, banks, state and central departments, private sector, the unemployed women graduates, and students were contacted for the survey purpose. Four different questionnaires were used - three for maintaining databases on agricultural graduate students, employees and organizations employing them, and one for survey covering personal, academic, career information, career expectations and values as well as career problems.

The estimated number of agricultural women graduates in the country in 1995 was 14,460. Purposive sampling was done for the survey using the snow ball technique. The survey could identify 7,821 graduate women, out of which 1,443 expressed their willingness to participate in the survey. The final sample consist a total of 1,298 respondents, out of which 454 were male and 844 were female. Male respondents were included to identify gender-neutral issues and also for comparison of perceptual differences.

The project report shows the changes needed in procedures, rewards and policies of both government and private agencies. The work is culmination of serious survey, case-studies and brainstorming workshop.

Organisation of the report

The report consists of thirteen chapters. First three chapters give general introduction to the system, and methodology used and response. Chapters IV and V give personal and academic details of the respondents. Physical facilities, career opportunities and job related issues are explored in chapter-VI to chapter-IX. Out come of a brainstorming workshop on issues of professional women is given in chapter-X, and chapter-XI gives summary of the findings and looks to the future. International experiences on issues of professional women, Indian case studies, and some project information are given in chapter-XII as annexes. References are given in chapter-XIII.

Major findings

Based on the findings it can be concluded that there is no major perceptual difference between women and men professionals as both regard work as gender-neutral and give more importance to competence. The results are discussed in terms of per cent respondents agreeing or disagreeing to a particular issue or event. Broad subject wise findings are given in the following.

Agricultural education

A study of the school background of the female respondents indicate that 14.9% were from rural and 85.1 per cent were from urban schools. The professional education in agriculture was opted as the second best (next to medicine) by female respondents (18.5%) at the time of entry into college. Agriculture was preferred as it was regarded as a challenging profession working with nature, tapping the potential resources for the welfare of the country. It is worth noting at this juncture that parents had been most influential in motivating to take up education in agriculture, more so, the mother in case of female respondents. In agricultural education fieldwork is mandatory, and the study revealed that majority of the respondents had not faced difficulties in field work. However, 12 per cent of the respondents claimed to have faced difficulties in field work due to one of the following reasons: lack of practical training and guidance, physical strain, non-agricultural background, negative attitude of colleagues and distance from field. Student respondents opined that, home science (40.9%), horticulture (18.9%) and extension (15.7%) specialisations were convenient specialisations for graduate women.

Employment issues

Data on job-status of female graduates indicate that 72.6 per cent are employed, 6.6 per cent were unemployed and 20.8 per cent were students. The situation of unemployment in agriculture was low compared to other professions. Female respondents, who were unemployed, cited the reasons that employment in agriculture involved frequent travel and intensive fieldwork. As far as the employing organisations are concerned, it is seen that the largest number (39.7%) of female graduates were employed in educational institutions. This is followed by government development departments (19.2%), research institutions (7.9%), private sector (4.2%), and financial institutions (1.1%).

The study pointed the fact that sexual harassment faced by the female respondents was low at the place of work and about 22.3 per cent indicated facing this problem. Thus, a congenial atmosphere / work condition existed for women at the place of work, in most organisations.

Career perceptions

Majority of women (57.2%) opinied that they have to do better than men to get equal professional recognition. About 52.8 per cent women revealed that family is of primary concern when compared to career. Both, male (82.8%) and female (85.6%) respondents considered family support a key factor to a successful career. As infrastructure facilities are poor in field stations, women (35.5%) felt that it will be convenient to work in such stations during the initial entry of their career when the family obligations would be minimum.

In the choice of colleagues at work, majority of the respondents opined that work is gender neutral. In the choice of their supervisor, 61.5 per cent of the female respondents indicated gender-neutrality, 22.9 per cent preferred male supervisor, and 15.6 per cent preferred female supervisor. Data on preferences for choice of subordinate revealed that 66.3 per cent of the female respondents implied gender-neutrality, 16.5 per cent preferred male subordinates, and 17.2 per cent preferred female subordinates.

Management issues

The non-availability of physical facilities like creche, school, wash room, accommodation, transport and health facilities were reported by majority of the respondents. It is to be noted as a vital issue that both female and male respondents expressed concern on absence of flexible working hours. Gender prejudice was cited as an important reason by female respondents for not getting job especially in private sector. The awareness and participation in employee associations and training programmes was relatively low in case of female respondents. Some of them (27.0%) had not undergone any training programme in their professional career. Low salary, distance of work place from residence and lack of accommodation were cited as reasons for refusal of job by women.

On the question of reservations to women in education and employment, nearly one third female respondents were against any reservations. However, two third female respondents felt the need for reservations in all activities supported by government.

The number of female respondents with top level management positions was negligible. To alleviate some of the managerial problems, the female respondents felt the need to associate women in all decision making bodies, like selection committees.

Recommendations for action

Based on the analysis of nation-wide survey findings, and supported by case studies, and brainstorming workshop, the following recommendations are made for alleviating the problems faced by women graduates and also to encourage more and more women graduates to come to main stream economy. The detailed recommendations along with concerned agencies for policy and action are given in chapter-XI.

Educational issues

- As urban graduates are reluctant to serve in rural areas, more number of rural students be admitted in the agricultural courses so as to increase the number of professional graduates with rural back ground, who may take up extension related jobs/ activities.

- Women reservations are to be extended to all activities supported by state such as scholarships, admissions, nominations to awards, curricular and co-curricular activities.

(Action : SAUs and ICAR)

Technology transfer issues

- The organizational climate in the line departments needs to be made gender-friendly to encourage women to take up extension jobs. The women employees are to be provided necessary facilities and services like transport, accommodation and spouse employment.

(Action : Development departments)

General issues of working women

- It must be made mandatory to associate at least one woman member in all committees such as selection panels for recruitment/ promotion, grievances, etc. This may minimise discrimination met by certain women purely on gender basis.

- For the better satisfaction of employees, work structure can be modified incorporating features like flexible timings, easy leave option and contract jobs.

- Personnel policies to be evolved aiming at spouse employment and preferential placement for working women.

- For out-station tours, availability of facilities like transport and accommodation may be made a prerequisite.

- Essential minimum infrastructure facilities like boarding, lodging, transport, toilets, etc., exclusive for women, be provided at training institutes and work places.

- HRD programmes for professional women in agriculture need proper planning in timing and duration keeping in view the dual responsibility of women employees.

- More women professionals should be encouraged to become members in professional societies and proportionate opportunities be given to participate in conferences and training programmes.

(Action : All employing organisations)

- There is need for a coordination body (women cell) and also a need to network agricultural professional women at organisational and national level. NCW may provide broad guidelines and insist for creation of a women cell in each organization for implementation of women related policies. It may establish an organisation-independent mechanism to review the progress from time to time.

(Action : NCW)

Chapter – I

Introduction

Origin of the problem

The present project proposal came out of the recommendations of the National Academy of Agricultural Research Management's (NAARM) Department of Science and Technology (DST) sponsored research project on "Agricultural Universities Information System", (AGRIUNIS) 1994, and also from the deliberations of the national workshop on "Women in Agriculture" organized by the Academy in 1993. Both the studies have shown concern to the issues of graduate women in agriculture in the country. There is evidence of rapid increase in the number of women graduates, particularly in southern states. There is a clear evidence of increasing participation of women in agriculture development around the world, more specifically in developing countries (Bush *et al*, 1995). Need for the present study is further elaborated after giving a brief description of the agricultural system in India.

Agricultural system in India

In India, about two thirds of the labour force is employed in agriculture, and it contributes about 25 per cent of country's GDP. Agricultural research and education provides a strong support to the agricultural development of the country. In India agriculture is a state subject. Though the central government supports agriculture development activities, the share of state governments outweighs that of the centre. The State Agricultural Universities (SAUs) are strong centers for agricultural research, education and extension in the country.

Agriculture continues to be the predominant occupation of about two thirds of population in the country. The rural population, primarily engaged in agriculture, increased from 298 million in 1950-51 to about 720 million in 1997-98, and the share to total GDP has declined from 56 per cent to 27 per cent in the same period. The foodgrain production has increased from 51 million tonnes in 1950-51 to about 194.1 million tonnes in 1997-98. About 60 per cent of agriculture potential is unrealised and 4.7 per cent of cultivable land remains uncultivated and the productivity is only two-thirds of the world average. The country's Eighth Five-year Plan budget is only two-thirds of the world average. The country's 8th plan budget outlay for agriculture is about 14.7 per cent of the total public sector outlay.

Agricultural education

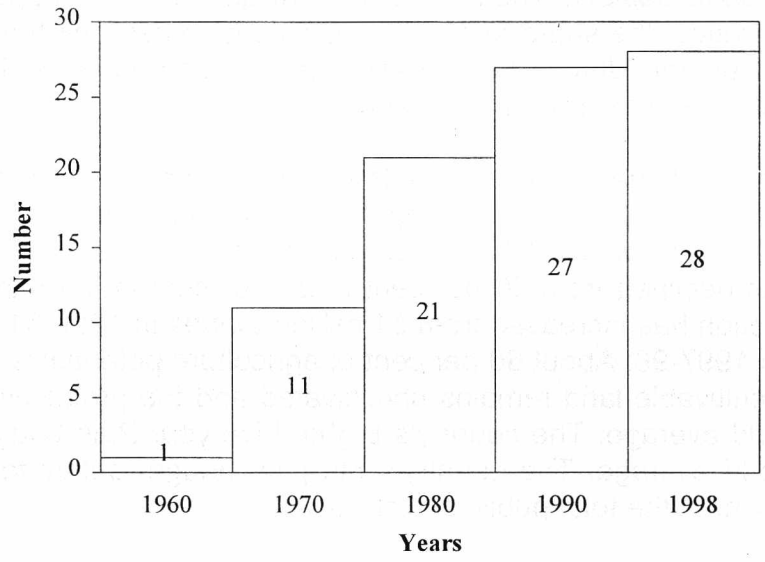
In India, agricultural research, education and extension activities are coordinated by ICAR at national level and State Agricultural Universities (SAUs) at state level. The SAUs receive funds from respective state governments, ICAR, central government and other agencies in that order. During 1991-92, out of total expenditure of Rs 3,510 million for ICAR, the assistance to SAUs was about 26 per cent and it was largely to support project-based research and for infrastructure facilities at advanced centers of teaching, research and extension (AGRIUNIS, 1994).

More than 80 per cent of the agricultural graduates were economically active and the unemployment is low (CERPA, 1989). This is largely because of the restrictions on intake of students at various levels in agriculture stream as compared to the number of students admitted to other professional and general courses.

At the time of independence, agricultural education was offered by general universities. Agricultural universities have come into existence beginning from G.B. Pant University of Agricultural and Technology, Pantnagar in 1961 on the land grant pattern of USA. At present, there are 28 agricultural universities, and ICAR coordinates their activities at national level. List of universities providing agricultural education in India is given in Annexure-1.

Growth of agricultural education in India since 1960 is provided in Fig-1.1 (ICAR, 1998). Briefly, during the past three decades there was a three fold growth in the infrastructure for education in agricultural universities.

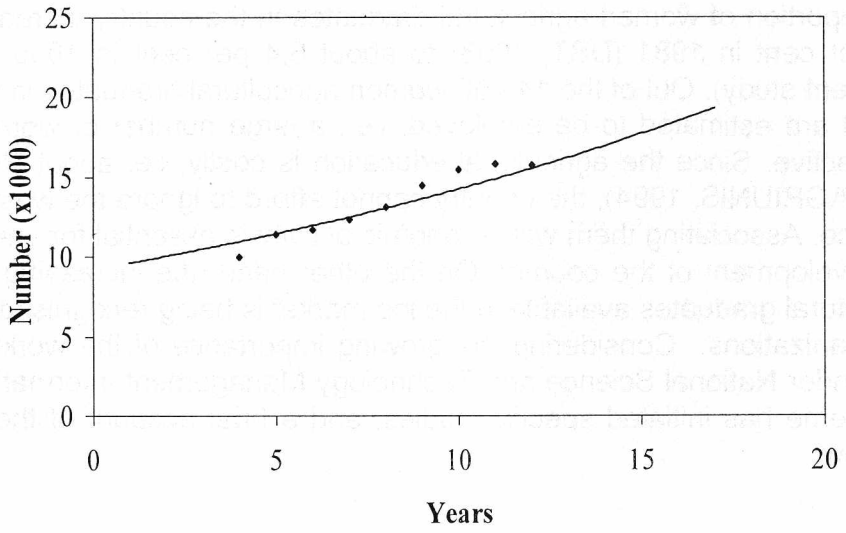
Fig-1.1: Growth of agricultural universities in India



There are 186 colleges in the 28 agricultural universities. In addition, there are 48 colleges affiliated to 24 general universities, 7 colleges in 4 deemed universities and 6 colleges in central agricultural university (ICAR, 1998).

Data on growth of student's outturn during 1980-97 (degree-wise and discipline-wise) is given in Annexure-2, and the university-wise outturn during 1996-97 is given in Annexure-3. The growth of students outturn during 1980-97 is shown in Fig-1.2.

Fig-1.2: Growth of students outturn in agriculture & allied disciplines in India (1980-1997)



Stock of agricultural graduates in different science and technology sectors

Specialisation-wise distribution of science and technology personnel during 1950-96 is given in Annexure-4. About 3.9 per cent of total S&T graduates in the country in 1996 are from agricultural sciences. Most of the women graduates in agriculture are in research and education sectors. The data on women agricultural graduates employed as faculty and scientific staff in universities providing agricultural education in India is given in Annexure-5.

Specialisation-wise distribution of women science and technology personnel during 1981, for which detailed data are given in Table-1.1.

Table-1.1: Specialisation-wise distribution of women graduates in 1981

By Field of Science	Total	Women	Per cent women
Agricultural Science	73133	806	1.1
Engineering	393081	8758	2.2
Medicine	134668	21653	16.0
Biological Science	505620	108600	21.5
Other Sciences	320569	69596	21.7
All above	1427071	209413	14.7

Source: Research and Development Statistics 1992-93, DST.

The proportion of women agricultural graduates in the country increased from a modest 1.1 per cent in 1981 (DST, 1993) to about 6.4 per cent in 1995 (estimation based on present study). Out of the 14,460 women agricultural graduates in the country in 1995, 4,979 are estimated to be employed, i.e., a large number of women are not economically active. Since the agricultural education is costly, i.e. about Rs two lakh, per graduate (AGRIUNIS, 1994), the country cannot afford to ignore the wastage of this human resource. Associating them with economic activity is essential for the social and agricultural development of the country. On the other hand, the increasing number of women agricultural graduates available in the job market is being recognised by various employing organizations. Considering the growing importance of the working women issues, DST under National Science and Technology Management Information System (NSTMIS) scheme has initiated specific studies, and a brief account of the same are described below.

Status of research on professional women issues

In the developed world the women issues are focused on representation of women in science and technology and also in the newly emerging sectors. On the other hand, in the developing countries the focus is on women education vis-a-vis development. The issues of professional women have been discussed more extensively in the recent past in developed countries (Brush and Rao, 1991; Thomas *et al*, 1991; Zuckerman, 1991) and in developing countries (Faruqui *et al*, 1991; Brush *et al*, 1995; Rama Kumari *et al*, 1990, Radha Chakraborthy *et al*, 1991; Parikh and Sukhatme, 1992; Khalid, 1990; Malcolm Adisesaiah, 1985; and Rajeswari, 1995. A recent publication by Gaddagimath *et al* (1993) has bibliographed 965 publications on women in agriculture in India during the period 1975-93. Most of the studies are on farm women and their role in agriculture. DST sponsored studies on women in engineering by Parikh and Sukhatme (1992) and in science and technology by Radha Chakraborthy *et al* (1991) and science postgraduate women in northern India by Manju Pandey

(1998) are now available. Excepting for a specific doctoral study by Premlata Singh (1993) on working women scientists in ICAR, a detailed study encompassing all professional agricultural women in India is not available. This is mainly because of their relatively small number.

Feminist theories and gender studies have contributed enormously to narrowing the gap between the personal and the political expectations of women. The exploitation which millions of women suffer in developing countries should be of concern to those interested in development. Development interventions have been shown to be more sustainable when women are involved as equal partners. The role of agricultural graduate women in agriculture development, thus, forms an important concern in development studies. With economic development there will be more opportunities for women in education and employment (World Bank, 1990). Professional agriculture is a promising area for women in India.

The present study

The enrollment of women in various agricultural programmes is increasing rapidly. During 1996-97 the country has produced 3,824 women under graduates, which is 21.5 per cent of the total outturn of 17,715. This is phenomenal jump considering the outturn of about 3.3 per cent women in 1981. In southern states and Punjab, the women students constitute more than 45 per cent of the total students. The present study aims to collect qualitative and quantitative information on various issues and problems faced by graduate women in their profession.

Since agriculture is primarily associated with rural development, most of the jobs available for agricultural graduates are either field based or in smaller towns. The low participation of women in Science and Technology, in general, and in agriculture, in particular, were of serious concern as they are critical constituents in improving the quality of rural life. The work environment which is male dominated so far has to adjust to the infusion of women. In certain areas like extension of agricultural technologies it is often felt that women are better suited than men as women have better access to rural women and hence to rural households. There have been many assumptions and apprehensions in the society on the placement of women graduates in the rural areas / field jobs and also on their role for certain jobs. Such limitations and virtues can emerge only from detailed study and in-depth analysis of the factual information. The present study points in that direction.

National Academy of Agricultural Research Management (NAARM), supported by Indian Council of Agricultural Research (ICAR) has taken initiative to address the issues of professional women in agriculture in India. With the support from Department of Science and Technology (DST), NAARM designed the present study to focus on the major issues of graduate women in agriculture and to suggest policy framework to assimilate the increasing number of women graduates into economic force.

Objectives

The project aims to study:

- Status and growth of agricultural women graduates.
- Career opportunities for agricultural women graduates.
- Professional performance of women graduates.
- Issues pertaining to women professionals and the influencing factors.

To achieve the above objectives the project was designed to answer the following sub-objectives.

- Growth of discipline-wise trained graduate personnel in agriculture.
- Influence of background of male and female students in opting career in agriculture.
- Performance in school and choice of graduation in agricultural courses.
- Variables which influence women and men to join agricultural courses.
- Preferences of disciplines convenient / suitable for women in post-graduation.
- Reasons for pursuing higher studies in agriculture.
- Participation of women in conferences / workshops / seminars / symposia, and also in national and international professional societies.
- Analysis of opinions of male and female graduates to questions on perceptions about professional and career issues.

Definition of the sample of the study

For the purpose of the present study, graduate women include all undergraduates, post-graduates and doctorate holders in various disciplines of agricultural and allied sciences, i.e., the graduates in agriculture, horticulture, forestry, cooperation and marketing, veterinary and animal sciences, dairy, fishery, agriculture engineering, home science and all such disciplines offered by state agricultural universities (SAUs). The total sample of 1,298 respondents of this study represent all associated sub-systems and, hence, reflect the problems faced by agricultural women graduates in different systems in the country.

Organization of the report

The report consists of thirteen chapters. Chapters I - III of the report give general introduction to the system, methodology used and response. Chapters IV - V give personal and academic details of the respondents. Chapters VI - IX explore the physical facilities, career opportunities and job related issues. Brief outcome of the workshop on issues of professional women in agriculture is given in chapter- X. Chapter- XI presents the summary of the findings and looks to the future. Survey questionnaires, estimation of working women, some information pertaining to the project and international experiences on issues of professional women in agriculture are given as annexures in chapter-XII. References are listed in chapter-XIII.

Chapter - II

Methodology

Target population

For the purpose of the survey, graduate women include all undergraduates, post-graduates and doctorate holders in various disciplines of agricultural and allied sciences.

Source of the data

The data were collected from two sources i) employers of professional agricultural women such as ICAR, agricultural universities, banks, state departments, etc., and ii) the individual women graduates.

Resource persons

The study was carried out by collaborating with agricultural institutions in India. Resource persons were identified in different agricultural institutions (at least one in each agricultural university), for providing the data and also for assisting in the survey work. All SAUs and selected ICAR institutes were approached to nominate resource persons. Details of 28 resource persons nominated by different SAUs and ICAR institutes are given in Annexure-6. During March 8-9, 1996 the resource persons were provided orientation training on the project objectives and methodology to obtain uniform data from different places/ institutions in the country. The resource persons coordinated the project work in their respective states or university jurisdictions in case of states having more than one agricultural university.

Brainstorming

Brainstorming session was held on March 8, 1996 to identify the issues for inclusion in the questionnaire to be used for the project survey. The identified issues were discussed in detail with the resource persons from SAUs.

Local Project Advisory Committee (LPAC)

A 15-member LPAC was constituted to guide and review the progress of the project. List of LPAC members is given in Annexure-7. Four LPAC meetings were held. In the first meeting, held on December 19, 1995, the project objective, methodology and utility were explained to the members and the programme of activities were discussed

in detail. In the second meeting, held on August 2, 1996, the questionnaires and sampling method were discussed and finalized. The third meeting, held on November 19, 1997 reviewed the recommendations of the workshop. The fourth LPAC meeting was held on August 4, 1998, and draft final report was discussed.

Questionnaires

Four different questionnaires were used: one for survey and other three for maintaining data bases on agricultural graduate students, employees and organizations employing them.

Questionnaire to individual graduates

A structured questionnaire was designed to capture information from male and female graduates on issues such as education, family, social, and economic backgrounds, employment, professional achievements, and on some specific issues pertaining to career expectations, job related opinions/ values and problems faced by women. A database was created for input and for retrieving the information for analysis

Snowball technique was used to develop database of women graduates. The details of snowball technique are given in the "sampling for survey" section below. A simple questionnaire was sent along with a business reply envelope to all the women graduates, whose addresses were supplied by their employers or known to us from secondary sources. They were asked to provide names of their colleagues and also mention their willingness to participate in the survey. A database of 7,821 women graduates was, thus, developed following this snowball technique.

Based on the issues identified during the brainstorming session, personal interviews with experts and also from the questionnaires used in related studies, questionnaires were designed for this study. The questionnaire was sent to 50 experts for pre-testing. The questionnaire was designed to capture information from women graduates on issues such as education, family, social, and economic backgrounds, employment, and professional achievements, and on some specific issues pertaining to the problems faced by women.

Two individual questionnaires were prepared – one for graduates (Annexure-8) and the second for students, i.e., graduates but pursuing post graduation or doctoral programmes (Annexure-9). The questionnaires broadly covered the following aspects:

I. Personal information
II. Academic information
III. Career information
IV. Career expectation and values
V. Career problems

The questionnaire was designed to choose the option from the multiple choice answers provided so as to enable the respondents to fill the questionnaire within 15 minutes of time. With regard to some questions the respondents were asked to comment upon their views frankly and space was provided for the same. The respondents were assured that their information will be kept confidential and will be exclusively used for the present study.

Questionnaire to educational institutions

This questionnaire (Annexure-10) was prepared to seek data through three forms on student outturn and names of the students studying in the final year UG and PG / PhD courses. This questionnaire was mailed to Deans/ Principals of agricultural education institutions in the country.

Questionnaire to organizations

This questionnaire (Annexure-11) was prepared to seek information on number of agricultural graduates employed in different organisations in both public and private sector.

Software

A software package was developed to maintain database on graduate women in agriculture and also on organizations employing them. The following databases were created:

1. Database on graduate women in agriculture
2. Database on organisations employing women
3. Database on agriculture - related journals

Publicity

In order to reach women working in unorganized sector or unemployed or housewives, advertisements were given in some selected agricultural journals / magazines. There are about 965 publications in the country on agriculture. Out of this about 90 journals in English and 50 in other Indian languages were approached to insert an advertisement about the project. The advertisement shown in Annexure-12 was published in six publications and about 30 women responded to the advertisements.

Sampling for survey

Since the stock of women agricultural graduates in the country was not known at the beginning of the project, a variant of 'Snowball sampling' was undertaken. Snowball sampling is a method for identifying and sampling the cases in a network, which is based on analogy a snowball, which begins small but becomes larger as it is rolled on wet snow and picks up additional snow. Snowball sampling is a multi-stage technique, which begins with one or few people/cases and spreads out on the basis of links to the initial cases (Lawrence Neuman, 1991). It is useful to identify a previously unknown population. The representativeness of the sample has to be judged by the logical reasonableness that the sample represents the population. Deliberate efforts were made to obtain representative sample across organizations and regions.

The database on agricultural women graduates had names and addresses of 7,821 graduate women; 1,288 students and 6,533 others (other than students). Letters were sent to all 6,533 female graduates seeking their willingness to participate in the study. 1,443 women expressed their willingness to be part of the study and questionnaires were sent to all these women. Considering the large number of female students pursuing agricultural courses in the universities, it was decided to seek the opinions of about 600 female students. The questionnaires to the students were sent through the local resource persons in agricultural universities. To achieve organisational and regional balance in the sample, data was collected in person by project staff and local resource persons at different centers (SAUs) in the country. A total of 844 (176 from female students and 668 from other female graduates) filled-in questionnaires were received.

Sampling for male graduates

As certain professional issues of agricultural graduates are gender-neutral, it was decided to seek the perceptions of male graduates also. In addition, it would provide a check to discuss the women specific issues on comparative terms. To serve this purpose, attempts were made to reach male and female graduates in 1:2 ratio. Fifty per cent of the women graduates (at random) in each organization were given two sets of questionnaires with a request to give the second questionnaire to their male colleague of same qualification, experience and age. Filled-in questionnaires were received from a total of 454 (139 male students and 315 other male graduates).

Data codification

Data of all the questionnaires received were codified for easy computation and analysis. Following certain universal standard practices, codes were given to certain fields like for degrees, disciplines, subject specialisation, etc. Due care was taken for no response cases. For issues where responses were in multiple options, the response was codified into numeric form.

Terminology used in analysis

In the analysis of survey responses, the actual number of respondents (referred as "Number responded") and number not responded (referred as "No response"), are given for each data table. The total in each case refers for a particular issue as per the following classification.

The survey covers total 1,298 respondents and this total is referred as "Total sample". The total sample contains 315 students (referred as "Total students sample") and 983 graduates (referred as "Total graduates sample"). The 789 married respondents in the total-sample are referred as "Total married respondents". In certain cases, respondents are further grouped based on their specific response to an issue and such grouped-sample is referred as " Total eligible sample".

Workshop

A workshop was organized from November 18 to 20, 1997, as a part of this project to identify the Issues of graduate women in order to serve the rural women better and also to disseminate the information obtained for this project. About 50 experts representing from the Agricultural organisations all over the country participated in the workshop. The recommendations of the workshop are given in chapter-X.

Specific observations from individuals

Specific individual responses are also included in the report at appropriate places. These responses need not be the majority opinion as reflected in the numeric data but they give rich insights into varied experience of the respondents. In such instances, the respondents code number, the issue, the respondent's status and age are also given.

Two case studies, viz. of PDKV, Akola (Annexure-14) and UAS, Dharwad (Annexure-15), reported by the project resource persons on specific issues of women in their respective universities are also given. In addition, international experiences on issues of professional women in some countries are given in Annexure-16.

Technical programme - Milestones

First half-year

The project was launched on March 1, 1996. All the Universities/ ICAR institutes were approached for information on number of agricultural women graduates and also for the nomination of a resource person to assist in the data collection. A preliminary

questionnaire was sent for seeking issues of importance and comments on certain issues from all the resource persons. This was discussed in the First Local Project Advisory Committee (LPAC) meeting.

A brainstorming session was conducted to identify important issues of professional agricultural graduate women for inclusion in the project. An orientation programme on project objectives and methodology was organised for resource persons. The names and addresses of women graduates in SAUs, and ICAR was collected through resource persons. The names and addresses of the women graduates in unorganised sector were sought through advertisement in selected agricultural publications.

Second half-year

The questionnaire was pre-tested on about 50 graduate women, printed and then mailed to all the women graduates. The database was maintained and software developed for analysis of the data. The status of the project was reviewed by second LPAC meeting. Questionnaires were mailed and wherever possible, the respondents were approached personally through investigators and resource persons.

Third half-ear

Analysis of the data was done. First year report, based on available data, was prepared. Correspondence was made with non-respondents for data and consolidation of data.

Fourth half-year

The data were analyzed and a conduction of national workshop on 'Issues of Professional women in agriculture' was conducted. The workshop report was prepared and sent to DST and discussed during third LPAC meeting.

Fifth half-year

Initiated case studies on issues of professional women graduates in different institutions. Completion of data analysis, data tabulation, preparation of tentative report, review in the final LPAC meeting and printing of final report. The project work was successfully completed by August 31, 1998.

Chapter – III

Stock and the response

An overview regarding the survey sample, profiles of participating women graduates and estimation of graduate students and stock of working women graduates in agriculture is presented in this chapter.

The survey

The project data were collected from two sources - i.e., employers of professional agricultural women graduates such as ICAR, agricultural universities, banks, state departments, etc., and the individual women graduates. A brief questionnaire (Annexure-11) was sent to various organisations employing agricultural graduates and the responses are given in Table-3.1.

Table-3.1: Details of questionnaires sent to organizations

System	Letters sent	Response	Per cent response
SAUs	28	21	75.0
General Universities	43	14	32.6
ICAR Institutes	89	89	100.0
Central Departments	97	29	30.0
State Departments	89	41	46.0
Private Institutions	217	45	20.7
Financial Institutions	416	46	11.0
All above	979	285	28.0

The response was good from ICAR and SAUs as the information was available in electronic media (computers). Good number of private institutions have responded though they do not have working women graduates. On the whole the response was about 28 per cent from organisations. The detailed data on manpower estimations given in Annexure-17 were made based on this data in conjunction with the data available from ICAR and DST publications.

The estimated number of women graduates working in various organisations in the country in 1995 is given in Annexure-17 and the summary of the same is presented in Table-3.2 and Fig-3.1. In 1995, 4,979 women graduates were working in various systems (organisations) in the country and their proportion with respect to total agricultural graduates ranged between 1.5 and 8.2 per cent. State departments (agriculture, veterinary and animal husbandry, and related disciplines) employ maximum of 46.0 per cent followed by 27.3 per cent in universities and 8.0 per cent

in ICAR. To estimate the number of agricultural women graduates in the country by 2010AD, the outturn of women students from universities is considered next.

Fig-3.1: Distribution of working women graduates in 1996

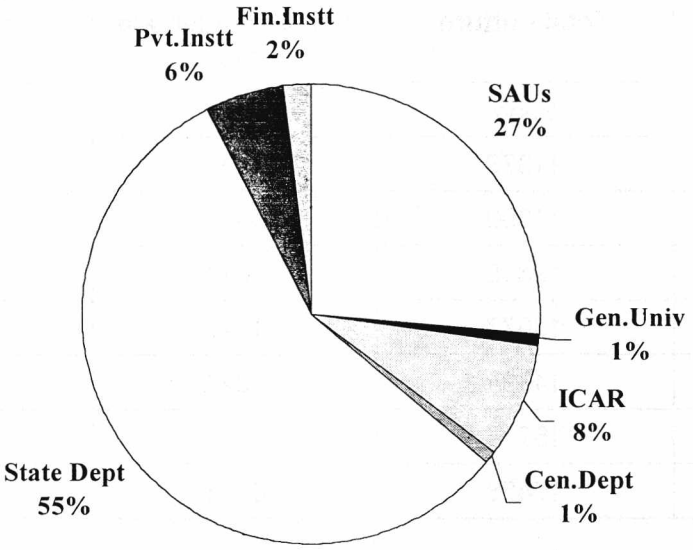


Table-3.2: Estimated number of working agricultural women graduates in 1995

System	Total agricultural graduates	Women agricultural graduates	Per cent women in	
			same system	all systems*
SAUs	19420	1301	6.7	26.1
General Universities	1402	46	3.3	0.9
ICAR Institutes	5461	402	7.3	8.0
Central Departments	449	37	8.2	0.8
State Departments	42705	2819	6.6	56.4
Private Institutions	9183	279	3.0	5.6
Financial Institutions	6539	95	1.5	1.9
All above	85159	4979	5.8	100.0

* All systems with respect to total 4,979 women in all organisations in the country

Growth of women students in agricultural sciences

Data on growth of students out - turn during 1980-97 (degree-wise and discipline-wise) is given in Annexure-2. The year wise growth of women students and their per cent share with respect to the total out-turn in agricultural sciences is presented in Table-3.3 and Fig-3.2.

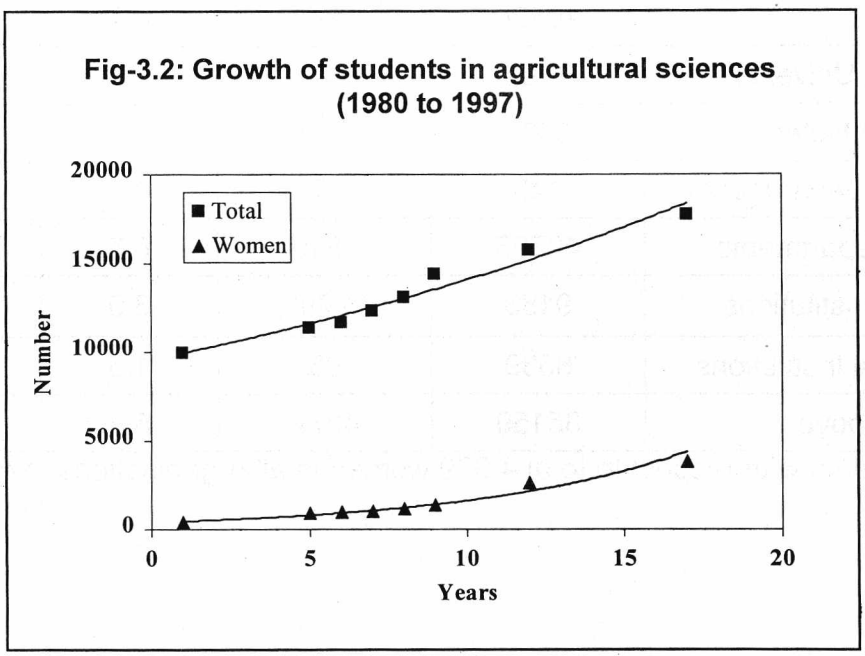
Table-3.3: Year-wise growth of female students in agricultural sciences

Year	Total outturn	Outturn of female students	Per cent female students
1980-84	9966	387	3.9
1984-85	11370	929	8.2
1985-86	11656	943	8.1
1986-87	12315	1014	8.3
1987-88	13077	1147	8.8
1988-89	14394	1344	9.4
1991-92	15718	2593	16.5
1996-97*	17458	3773	21.6

Notes:

1. Data for the total students out-turn was obtained from AGRIUNIS,1994. Complete data for the year 1991-92 was taken from AGRIUNIS.
2. The data for 1996-97 was collected for this project.
3. The per cent female students out-turn during 1980-89 is estimated as follows. The intake of female students in agriculture and animal sciences was taken from Agrawal & Aggarwal (1992). The out-turn of women students in home science, engineering and fisheries was taken from AGRIUNIS (1994). Assuming that the per cent women students enrolment and outturn would be same, the number of female students out-turn was calculated.

Fig-3.2: Growth of students in agricultural sciences (1980 to 1997)



The per cent female students increased from a modest 3.9 per cent in 1980-84 to about 21.6 per cent in 1996-97. The change in the rate in the 1990s is perceptible. As a matter of fact, the total out-turn of women graduates prior to 1990 is less than two consecutive years out-turn at present. This rapid increase of women in the recent past has been one of the reasons for this study.

Estimation of stock of agricultural women graduates

The stock of trained agricultural manpower, at any given point of time, presupposes the availability of base stock in the base year, additional outturn, and withdrawal from service due to retirement and natural death (Rama Rao et al, 1997). The estimated stock of agricultural graduates (women and total) in India is given in Table-3.4 and Figure-3.3.

Table-3.4: Stock of agricultural graduates in India

Year	Stock of agricultural graduates		
	Total	Women	Per cent women
1981	73133	806	1.1
1990	196200	8500	4.3
1995	228000	14460	6.3
2000	262000	23600	9.0
2005	300000	37400	12.5
2010	342000	58600	17.1

Notes:

1. Data for the year 1981 taken from Agricultural Research Data Book, ICAR 1996.
2. Data for the year 1990 taken from AGRIUNIS, 1994 and Women's Higher Education in India: Agrawal & Aggarwal, 1992.
3. Data for the year 1995 was collected for this project.
4. Data for the years 2000-2010 are estimations.

The stock of agricultural graduates for the year 1981 is obtained from the R&D Statistics 1992-93, DST. The stock of women for the year 1990 was obtained from the students' out-turn data. The estimations for the period 1990 - 2010 were based on the following assumptions.

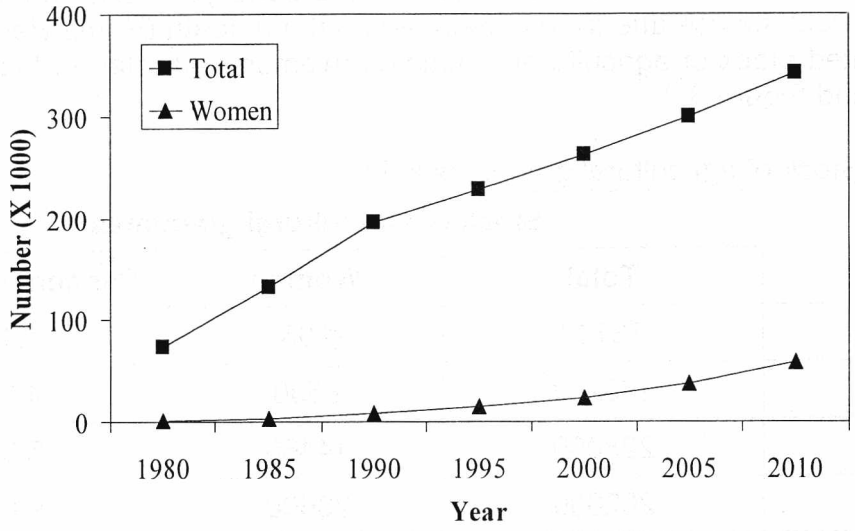
1. About 40 per cent of the women undergraduates go for higher studies, viz. PG and PhD.

2. Loss due to attrition and wastage was taken as 2.0 per cent (IAMR, 1995).

The stock of women graduates increased from a modest 806 (1.1%) in 1981 to 14,460 (6 3%) in 1995. However, as indicated in the students outturn data above,

the stock of women graduates prior to 1990 is just about two years women students out-turn at present. Thus, the estimated stock by 2000AD is 23,600 (9.0%) which will increase to 58,600 (17.1%) by 2010AD. This is a conservative estimate as it may increase at a much higher rate if more and more states introduce reservation for women in agricultural education and employment.

Fig-3.3: Estimation of stock of agricultural graduates in India



The number of women graduates in the country by beginning of 1995 is 14,460. However, 4,979 graduates were estimated as working in 1995 (Table-3.2). The distribution of the stock of the agricultural women graduates, shown in Table-3.5, reflects their status in the country in 1995.

Table-3.5 : Distribution of stock of agricultural women graduates in 1995

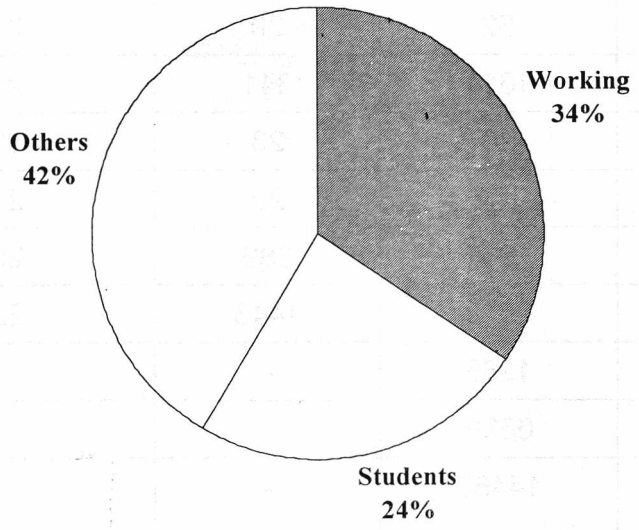
Status	Number	Per cent
Working women	4979	34.4
Students (PG/PhD)	3500	24.2
Others*	5981	41.4
All above	14460	100.0

* Others include unemployed and housewives.

Out of stock of 14,460 women agricultural graduates in the country in 1995, 34.4 per cent are working, 24.2 per cent are pursuing higher education leading to PG/PhD and the details of the remaining 41.4 per cent are not known. Since the major employing organizations have been considered in the estimations, it is apparent that most of the women in the later category are either housewives or

unemployed. For the present study, efforts were made to reach women in all the three categories indicated in Table-3.5 and Fig-3.4.

Fig-3.4: Distribution of stock of agricultural women graduates in 1996



The data given by organisations provided names and addresses of large number of working women graduates, which formed basis for reaching more and more women graduates through snow ball technique. The response from individual women is given in Table-3.6.

Letters were sent to all the women graduates whose addresses were supplied by the employers. By snowball technique names and addresses of 7,821 women graduates were obtained which includes 1,288 students and 1,864 unemployed or housewives. Inadequate records with employers and high level of unemployed women graduates made the task difficult to locate women in some states like Gujarat and organizations like banks and insurance companies, where their number is otherwise low. Letters were sent to 6,533 women identified (excluding students) seeking their consent to participate in the study. About 22 per cent of the graduates (Table-3.6) indicated their willingness to receive the detailed questionnaire

Questionnaires were mailed to all the 1,443 women who have given their consent and also to 600 female students. Fifty per cent of the women and students (at random) in each organisation were given two sets of questionnaires so that they could give it to their male colleague of same age, qualification and experience. Care was taken to ensure representation from all the regions in the country. The response from individual graduates to survey questionnaires is given in Table-3.7. In all 3064 questionnaires were mailed: 900 to students and 2164 to other women graduates (including all working and non-working degree holders). The response rate was 35.0 per cent from students and 45.4 per cent from others.

Table-3.6: Response to snow ball technique from agricultural women graduates

System	Letters sent	Response	Per cent response
SAUs	2171	480	22.1
General Universities	51	28	54.9
ICAR	649	139	21.4
Central Departments	52	20	38.5
State Departments	1611	341	21.2
Private Institutions	26	23	88.5
Financial Institutions	109	23	21.1
Others**	1864	389	20.9
All above	6533	1443	22.1
Students*	1288	-	-
Women not reached	6639	-	-
Women Agricultural Graduates Stock	14460	-	-

* Letters were not sent to students (doing PG/ PhD) as they were approached through resource persons at respective universities

** Others include house wives, unemployed, self-employed and employed in unorganised sector for which information is not available

Table-3.7: Response to survey questionnaires

Category	Questionnaires mailed			Questionnaires received			Per cent response
	Male	Female	Male+ Female	Male	Female	Male + Female	Male + Female
Students	300	600	900	139	176	315	35.0
Others	721	1443	2164	315	668	983	45.4
Total	1021	2043	3064	454	844	1298	42.4

The sector-wise response from individual graduates is given in Table-3.8. In all 1,298 responses were received, of which 844 were from female and 454 were from male graduates. Educational qualification, region and specialisation of the respondents are given in Tables-3.9 to 3.11.

Distribution of survey respondents by sector is given in Table-3.8. As most of the working graduates are employed in the government sector, it was considered that

a sample of about 50 from each sector would be sufficient to reflect the organisation - specific issues. This norm could be satisfied in all systems excepting for the financial sector due to less number of agricultural graduate women working in this system. SAUs, and general and deemed universities represent the education system and majority of 40.9% respondents were from this sector. Though research system accounted only for 10.6%, most of the respondents in education system also work in research, as research and education are well integrated in SAUs. 14.8% respondents were from development sector, which includes primarily the state departments. The total sample of 1,298 respondents of this study represent all associated sectors and, hence, reflect the problems faced by agricultural women graduates in different sectors in the country.

Table-3.8: Distribution of survey respondents by sector

Sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Education	195	42.9	336	39.7	531	40.9
Research	56	12.2	82	9.6	138	10.6
Development	44	9.6	148	17.5	192	14.8
Private	10	2.3	36	4.2	46	3.5
Financial	3	0.6	10	1.1	13	1.0
Others *	7	1.5	56	6.6	63	4.9
Students	139	30.6	176	20.8	315	24.3
Total sample	454	100.0	844	100.0	1298	100.0

N = Number of respondents

* Others include unemployed and housewives.

Qualification-wise distribution of respondents

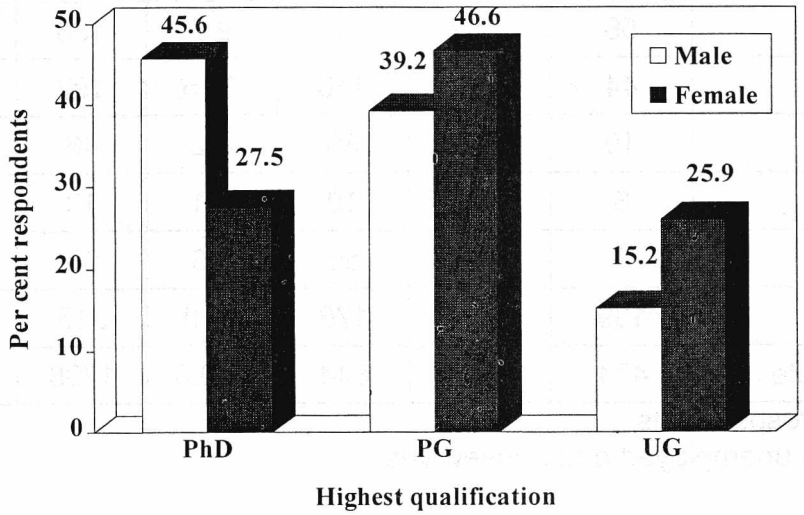
The educational profile of the respondents is presented in Table-3.9 and Fig-3.5. Agricultural science has the highest proportion of high - degree holders in the country and this is reflected in the present sample also. Qualification wise, 33.8 per cent have PhD, 44.0 per cent had PG and rest 22.2 per cent had UG degree.

The majority of male respondents held doctorate degree (45.6%), whereas majority in female group held masters degree (46.6%). Like wise, in the undergraduate category, the proportion of female respondents (25.9%) was more than the male respondents (15.2%). These results indicate ease in acquiring higher degree by male respondents as compared to the female respondents. As shown in the subsequent sections, female respondents have greater restrictions on their mobility, and this single reason would account for their relatively low proportion in doctorate degree and high proportion in graduate category.

Table-3.9: Highest educational qualification of the respondents

Highest qualification	Male		Female		Male+Female	
	N	%	N	%	N	%
Ph. D	207	45.6	232	27.5	439	33.8
PG	178	39.2	393	46.6	571	44.0
UG	69	15.2	219	25.9	288	22.2
Total sample	454	100.0	844	100.0	1298	100.0

Fig-3.5: Educational qualification of the respondents



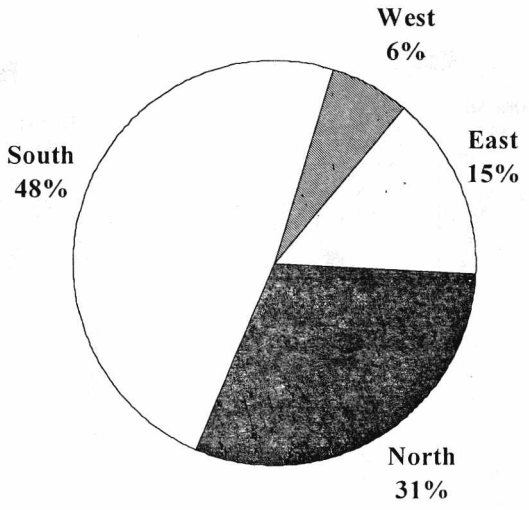
Region-wise distribution of respondents

The distribution of respondents based on school education is given in Table-3.10 and Fig-3.6, and state-wise data is given in Annexure-18. The distribution of the respondents closely resembled the out-turn of women graduates from these zones. A low per cent of 6.5 from west zone is due to near absence of women graduates from Gujarat state and also low representation and response from Rajasthan and Maharashtra states. On the other hand, 29.9 per cent from north is due to relatively large number of universities vis-à-vis outturn from this region. Though the outturn was low in Uttar Pradesh, Madhya Pradesh and Bihar states, it was compensated by Punjab and Haryana.

Table -3.10: Distribution of respondents based on the school location

Zone	Number	Per cent response
East	192	14.9
North	385	29.9
South	626	48.6
West	84	6.5
Number responded	1287	100.0
No response	11	-
Total sample	1298	-

Fig-3.6: Distribution of respondents based on the school location



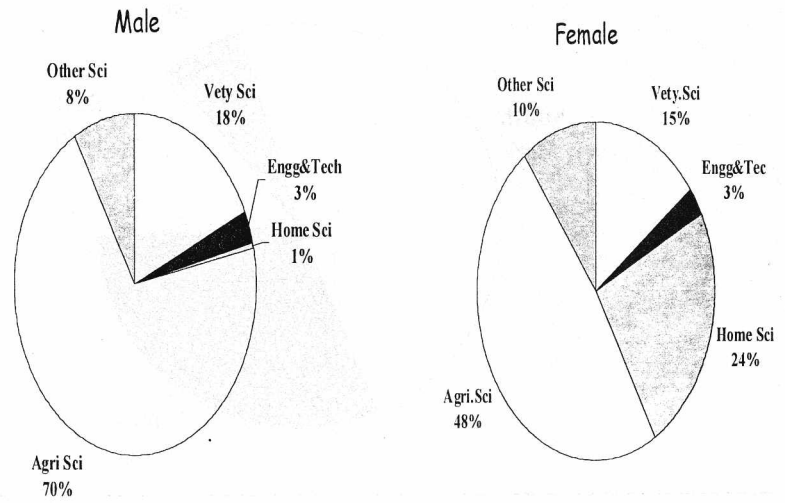
Discipline-wise distribution of respondents

The broad specialisation of the respondents within agricultural sciences is given in Table-3.11 and Fig-3.7. Though, no efforts were made to select sample based on the specialisation, the distribution of respondents closely resembled their relative outturn in various specialisations. The distribution of respondents by qualification, specialisation, region and organization makes it very clear that the sample is representative of the stock or outturn of graduates in agricultural sciences. More detailed information on the personal profiles of the respondents is given in the next chapter.

Table-3.11: Responses according to broad specialisations

Specialisation	Male		Female		Male + Female	
	N	per cent	N	per cent	N	per cent
Veterinary Sciences	82	18.1	122	14.6	204	15.7
Engineering & Technology	13	2.9	24	2.8	37	2.9
Home Sciences	4	0.8	204	24.2	208	16.0
Agricultural Sciences	317	69.8	406	48.1	723	55.7
Other Sciences	38	8.4	88	10.3	126	9.7
Total sample	454	100.0	844	100.0	1298	100.0

Fig-3.7: Responses according to broad specialization's



Summary

1. In 1995, there were about 14,460 women agricultural graduates in the country, out of which 34.4 per cent (i.e. 4,979) were working and their proportion with respect to total agricultural graduates in respective organisations ranged between 1.5 and 8.2 per cent. State departments employed maximum of 56.4 per cent followed by 27.0 per cent in universities and 8.0 per cent in ICAR.

2. The stock of agricultural women graduates is estimated to increase from 14,460 in 1995 to 23,600 by the year 2000 and 58,600 by the year 2010.

3. The number of female students outturn increased from a modest 387 (3.9 per cent of total) in 1980 to 3,773 (21.6 per cent of total) in 1997. The cumulative outturn of women graduates prior to 1990 was less than two years out-turn at present.

4. By adopting snowball technique, names and addresses of 7,821 women graduates were obtained, out of which 1,443 women graduates gave their consent to be part of the study. The questionnaires were mailed to all 1,443 women graduates and 600 female students. Fifty per cent of the women in each organization and female students were given two sets of questionnaires so that they could give it to their male colleague. The total sample comprised of 1,298 respondents, of whom 844 were female and 454 were male graduates.

5. Female respondents have greater restrictions on their mobility and this single reason would account for their relatively low proportion in doctorate degree and high proportion in graduate category.

6. The distribution of respondents reflects that the sample was representative of the distribution of the agricultural graduates by organization, qualification, specialisation and region.

Chapter – IV

Personal information

The respondents

The survey questionnaires were sent to agricultural graduates as per the sampling procedure described in the methodology. The graduates were broadly classified into two categories, i.e. students (who were in the university during the survey period) and all others (including all working and non-working degree holders). The break up of the response is given in Table-4.1 and Fig-4.1.

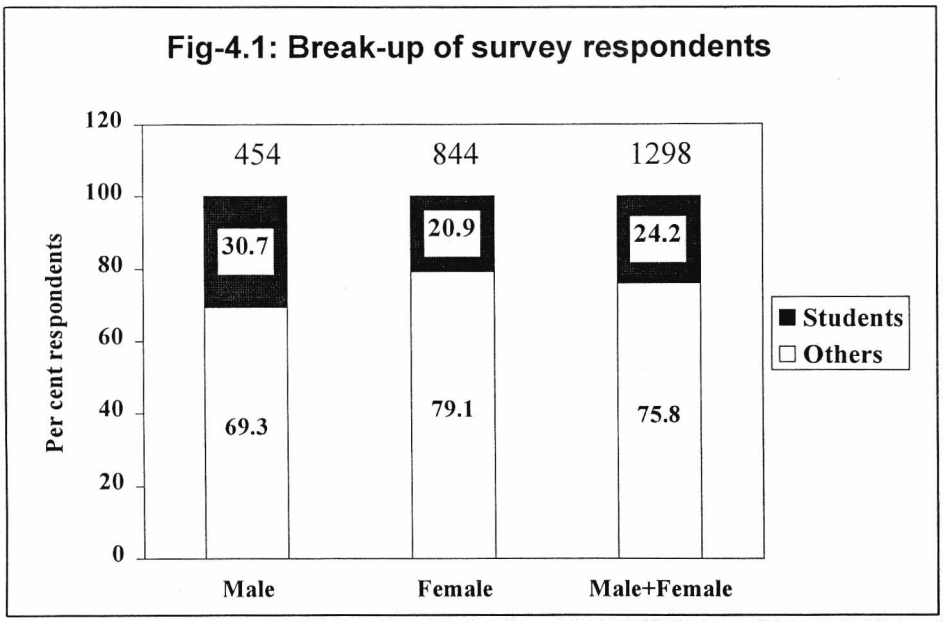
Table-4.1: Break-up of survey respondents

Category	Male		Female		Male + Female	
	N	%	N	%	N	%
Students	139	30.7	176	20.9	315	24.2
Others	315	69.3	668	79.1	983	75.8
Total sample	454	100.0	844	100.0	1298	100.0

N = Number of respondents

Out of the 1,298 respondents, 75.8 per cent were old graduates and the rest 24.2 per cent belonged to students' category. About 79.1 per cent of the women respondents were under the category of old graduates and the remaining 20.9 per cent under students category. In case of males, 69.3 per cent of the respondents were old graduates and the rest 30.7 per cent were students. The reason for having the respondents from both the categories, viz. employees and students in the ratio of about 3:1, is to analyze how the old graduates and the students view their aims and future career prospects.

Fig-4.1: Break-up of survey respondents

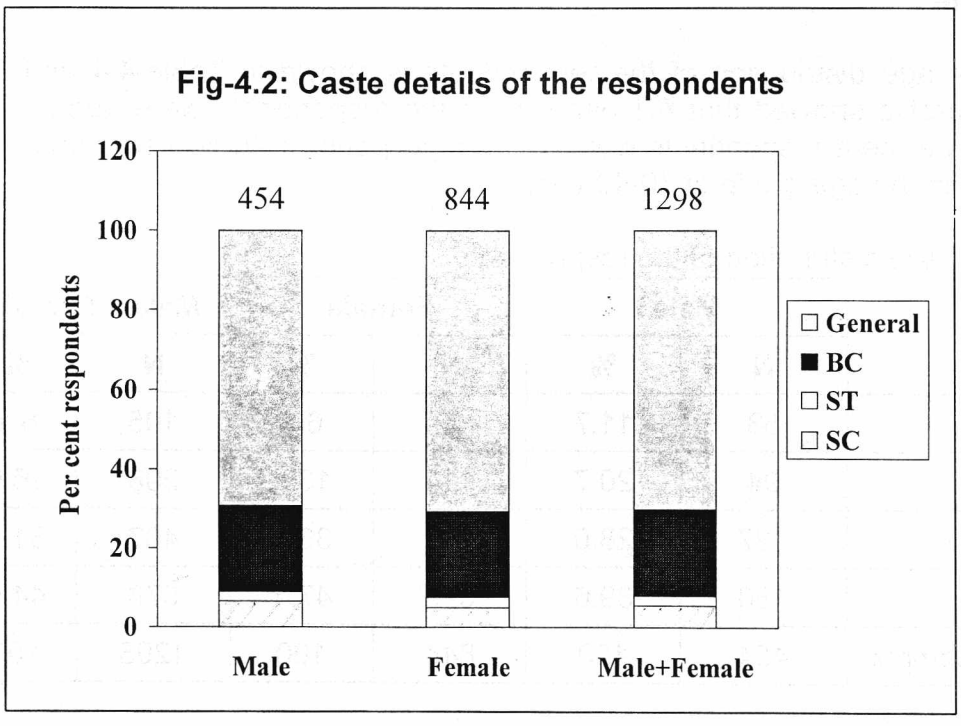


Caste

The caste details of the respondents are provided in Table-4.2 and Fig-4.2. The overall picture revealed that 70.3 per cent of the respondents belonged to general category, and the rest 29.7 per cent to different classes for whom reservation were made in education and employment. About 21.7 per cent belonged to Backward Caste category, 5.6 per cent Scheduled Caste and 2.4 per cent Scheduled Tribe categories. The same inference was observed in case of males and females. Considering the changing reservation policies over time, and age distribution of respondents, it can be stated that the sample reasonably represented the population. However, no efforts were made to obtain the sample based on category, and the query on caste was asked for cross checking on randomness of the sample.

Table-4.2: Caste details of the respondents

Category	Male		Female		Male + Female	
	N	%	N	%	N	%
SC	30	6.6	43	5.1	73	5.6
ST	10	2.2	21	2.5	31	2.4
BC	38	8.4	69	8.2	107	8.2
OBC	62	13.6	113	13.4	175	13.5
General	314	69.2	598	70.8	912	70.3
Total sample	454	100.0	844	100.0	1298	100.0



Language proficiency

India being multilinguistic country, the education is provided in sixteen recognized languages. Proficiency in Indian languages reflects the mobility of the respondents. The data on language proficiency are shown in Table-4.3. Nearly four fifth of the respondents had proficiency in three or more languages. Only 19.7 per cent respondents spoke two languages, i.e., one more language beside mother tongue. About 49.5 per cent of the respondents could converse in three languages, 21.6 per cent in four languages and 9.2 per cent in five languages. Gender-wise there was no difference in language proficiency.

Table-4.3: Languages known to the respondents

Number of languages known	Male		Female		Male + Female	
	N	%	N	%	N	%
2	99	22	155	18.5	254	19.7
3	207	46	430	51.2	638	49.5
4	94	20.9	185	22.1	279	21.6
5	50	11.1	69	8.2	119	9.2
Number responded	450	100	840	100	1290	100
No response	4		4		8	
Total sample	454		844		1298	

Age profile

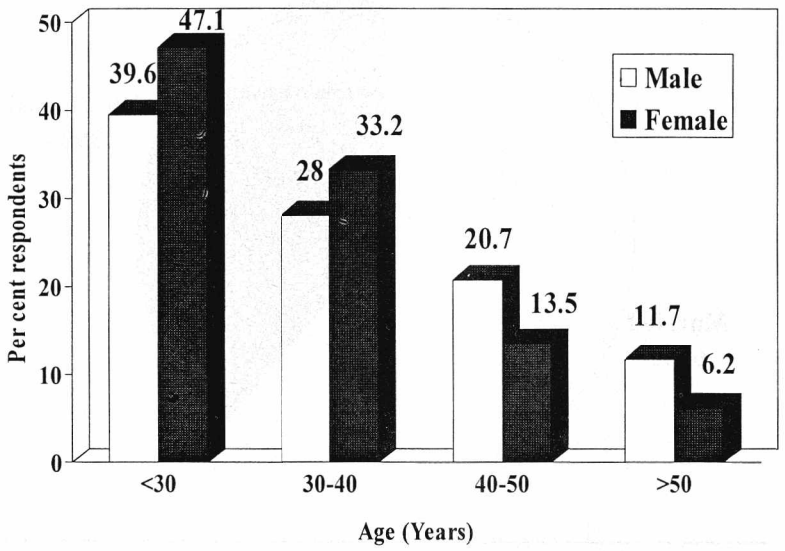
The age distribution of the respondents is shown in Table-4.4 and Fig-4.3. The age profile showed that 8.1 per cent of the respondents were aged above 50 years, 16 per cent respondents were in the age group of 40-50 years and 31.4 per cent were in the age group of 30-40 years.

Table-4.4: Age distribution of the respondents

Age (Years)	Male		Female		Male + Female	
	N	%	N	%	N	%
>50	53	11.7	52	6.2	105	8.1
40-50	94	20.7	114	13.5	208	16.0
30-40	127	28.0	280	33.2	407	31.4
<30	180	39.6	398	47.1	578	44.5
Total sample	454	100	844	100	1298	100

Bulk of the respondents, i.e., , 44.5 per cent came from the age group below 30 years Gender-wise, female respondents were more in younger age groups, 47.1 per cent in below 30 years category and 33.2 per cent in 30-40 years category. In the higher age group, 32.4 per cent males accounted for the age group of 40 years and above as against 19.7 per cent females. This suggests the increasing number of female workers over the years.

Fig-4.3: Age distribution of the respondents



Marital status

The distribution of per cent married male and female respondents is shown in theTable-4.5 and Fig-4.4.

Table-4.5: Marital status of the respondents

Status	Male		Female		Male + Female	
	N	%	N	%	N	%
Unmarried	180	39.7	322	38.2	502	38.7
Married	273	60.1	516	61.1	789	60.8
Others	1	0.2	6	0.7	7	0.5
Total sample	454	100.0	844	100.0	1298	100.0

Out of the 1,298 respondents, 38.7 per cent are unmarried and the rest 60.8 per cent are married and 0.5 per cent are other category (widowers, divorcees). The distribution of per cent married and unmarried is comparable in both the gender groups. Relationship between respondents' age and marriage is shown in Table-4.6 and Fig-4.5.

Fig-4.4: Marital status of the respondents

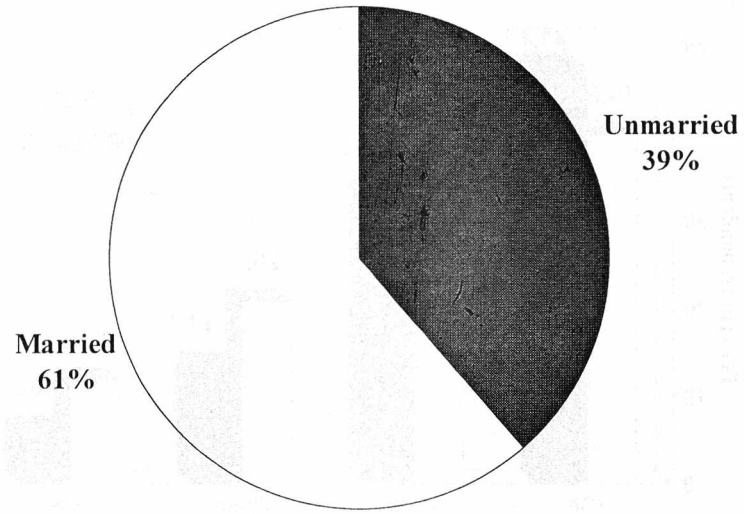


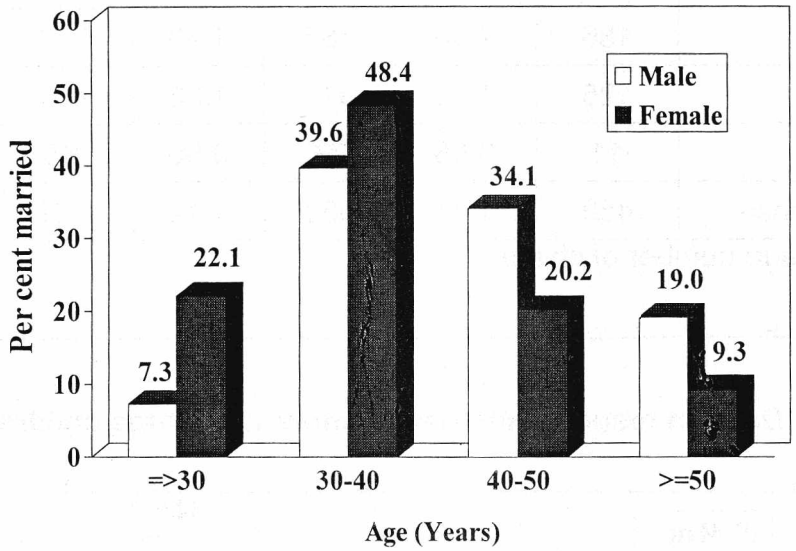
Table-4.6: Relation between age of the respondents and their marital status

Age (Years)	Male		Female		Male + Female	
	N	% married	N	% married	N	% married
>=50	52	19.0	48	9.3	100	12.7
40 – 50	93	34.1	104	20.2	197	25.0
30 – 40	108	39.6	250	48.4	358	45.3
=<30	20	7.3	114	22.1	134	17.0
Total married respondents	273	100.0	516	100.0	789	100.0
Average age at marriage (years)	27.1		25.3		26.0	

About 44.5 per cent male and female respondents are below 30 years (as per Table-4.4) whereas the per cent married in this category is 17 per cent. This

difference is due to the students' respondents who fall in this category. Amongst the two gender groups, there are more married males in older age groups (40-50 and above 50 years) whereas married females are more in younger age (30-40 and below 30 years) groups. The average age at marriage of the respondents is 25.3 for female and 27.1 for males. The average age at marriage for both male and female respondents' 26.0 years, is much higher than the national average. This indicates that agriculture graduates married only after their education and settlement in career. The details are given in Annexure-19.

Fig-4.5: Relation between age of the respondent and the marital status



Family size of the married respondents

The data on respondents' family size, i.e., number of children is shown in Table-4.7. The data showed that the average number of children increased with respondents' age, i.e., it changed from 0.5 in below 30 year age group to 2.04 in above 50 year age group. Amongst the two gender groups, the average number of children were more in male group as compared to the female group; in the above 50 year age group was 2.42 for males as against 1.63 for females. This difference in higher age group reflects higher social awareness for small family norm by female respondents. To resolve this further, the data on respondents having more than three children is shown in Table-4.8.

The data in Table-4.8 and Fig-4.6 give per cent respondents having more than three children in different age groups. The number of children were more in the older age groups of the respondents; 45 per cent in the above 50 years group, 35 per cent

in 40-50 years group and 20 per cent in 30-40 years group. This reflects the general trend and social awareness of respondents on small family norms essentially in the recent past. However, the change for this awareness could also be seen in male respondents as the number of male respondents having more than three children decreased from 54.0 per cent in above 50 year age group to 8.1 per cent in the below 30 year age group. On the other hand, the number of female respondents having more than three children were fairly same in all the age groups.

Table-4.7: Average number of children of the married respondents

Age	Male		Female		Male + Female	
(Years)	N	Avg *	N	Avg *	N	Avg *
>50	128	2.42	80	1.63	208	2.04
40 – 50	186	2.00	185	1.73	371	1.86
30 – 40	125	1.16	341	1.36	466	1.30
=<30	11	0.55	57	0.50	68	0.50
Total response	450	1.85	663	1.42	1113	1.57

* Avg = Average number of children

Fig-4.6: Data on respondents having more than three children

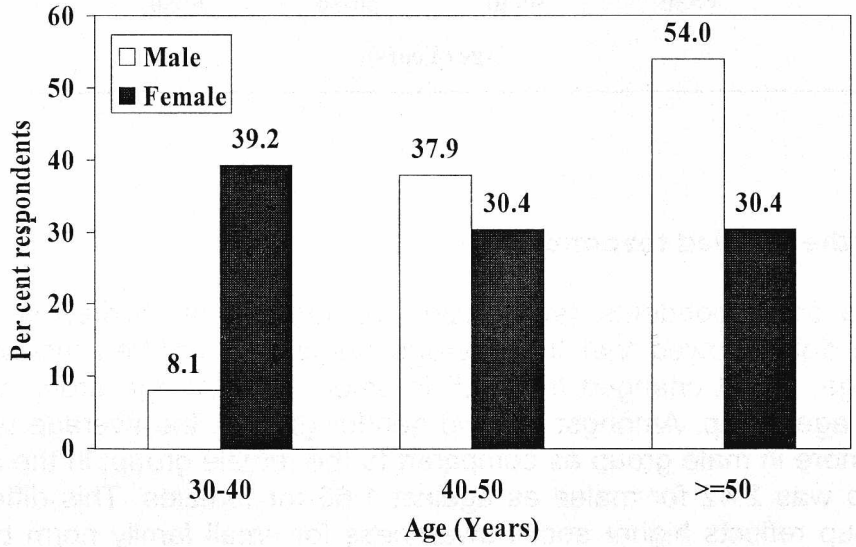


Table-4.8: Data on respondents having more than three children

Respondents age (Years)	Male		Female		Male + Female	
	N	%	N	%	N	%
>50	20	54.0	7	30.4	27	45.0
40 – 50	14	37.9	7	30.4	21	35.0
30 – 40	3	8.1	9	39.2	12	20.0
Number responded	37	100.0	23	100.0	60	100.0

Education of the spouse

The data on education of spouse of the respondents are given in Table-4.9. The pattern of educational status of the respondents' spouse was nearly same as that of the respondents, i.e., both the male and female respondents married equally qualified partners, as nearly 90 per cent of the respondents spouses possessed UG or higher degree. 17.3 per cent spouses of male respondents held Ph.D as against 24.8 per cent by spouses of female respondents. The respondents' spouses having lower qualification (diploma or less) was 16.7 per cent in case of males and 7.1 per cent in case of females. In general, the spouses of female respondents were more qualified (UG, PG & Ph.D) than the spouses of male respondents. It confirms the societal norm that educated females marry either equally or more qualified males, whereas educated males marry either equally or low qualified females.

Table-4.9: Education of the spouse

Qualification	Male		Female		Male + Female	
	N	%	N	%	N	%
Ph.D	39	17.3	119	24.8	158	22.4
PG	84	37.2	169	35.3	253	35.9
UG	65	28.8	157	32.8	222	31.5
Diploma	8	3.5	29	6.1	37	5.2
Up to 12thclass	29	12.8	4	0.8	33	4.7
Uneducated	1	0.4	1	0.2	2	0.3
Number responded	226	100.0	479	100.0	705	100.0
No response	47		37		84	
Total married respondents	273		516		789	

Employment of the spouse

The data on employee organization of the respondents' spouses was given in Table-4.10. Nearly 34.4 per cent of the respondents' spouses worked in research and education sector followed by 23.1 per cent in development sector, 15.5 per cent in household activity and 10.7 per cent in private sector. Amongst the two gender groups, the proportion of spouses working in research and education sector was nearly same for male (34.7%) and female (34.4%) respondents. The per cent spouses of respondents working in development, banking, private and self-employment sector were more in case of females than for the male respondents. On the other hand, 46.3 per cent of the male respondents' spouses were in household activity (i.e., housewives).

Table-4.10: Employee organizations of the respondents spouse

Occupational sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Research & Education	80	34.7	168	34.4	248	34.4
Development / Extension	22	9.5	144	29.5	166	23.1
Banks / Finance	3	1.3	43	8.8	46	6.4
Private / NGO's	12	5.2	65	13.3	77	10.7
Self-employment	4	1.7	56	11.4	60	8.3
International organization	-	-	2	0.4	2	0.3
Household	107	46.3	5	1.0	112	15.5
Others*	3	1.3	4	0.8	7	1.0
Agriculture	-	-	2	0.4	2	0.3
Number responded	231	100.0	489	100.0	720	100.0
No response	42		27		69	
Total married respondents	273		516		789	

*Others include social work and part-time employment

Annual income

The income status of the employed category is shown in Table-4.11. The data show that about three fourths of the respondents earned more than Rs 50,000 per annum indicating the fact that agricultural graduates are well paid. Gender-wise, it is noticed that a higher percentage of women fell under the income group of less than

Rs 50,000 per annum. The possible reason might be that female respondents have accepted low paid jobs.

Table-4.11: Annual income of the respondent

Annual income	Male		Female		Male+Female	
	N	%	N	%	N	%
Below Rs 50,000	29	9.5	108	18.5	137	15.5
Rs 50,001-1,00,000	120	39.6	322	55.2	442	49.8
Above Rs 1,00,000	154	50.9	153	26.3	307	34.7
Number responded	303	100.0	583	100.0	886	100.0
No response	12		85		97	
Total graduate sample	315		668		983	

Annual income of the married respondent and the spouse

Out of 789 married respondents, 549 respondents had working spouses, and the data on annual income of 549 respondents and their spouses are given in Table-4.11. Comparative data on annual income of the 789 married respondents and their spouses are given in Table-4.12 and Fig-4.7 for males and 4.8 for females.

Table-4.12: Comparison of the annual income of the respondent and the spouse

Annual income (Rs)	Male respondents				Female respondents				Male &Female respondents			
	Self		Spouse		Self		Spouse		Self		Spouse	
	N	%	N	%	N	%	N	%	N	%	N	%
<50,000	6	5.2	24	20.7	62	14.3	40	9.2	68	12.4	64	11.6
50,001-1,00,000	44	37.9	61	52.6	249	57.5	220	50.8	293	53.4	281	51.2
>1,00,000	66	56.9	31	26.7	122	28.2	173	40.0	188	34.2	204	37.2
Number responded	116	100	116	100	433	100	433	100	549	100	549	100
No response	157		157		83		83		240		240	
Total married in sample	273		273		516		516		789		789	
Average income (Rs)	87900		76500		78500		82700		80500		81400	

The respondents were asked to specify their income in three categories, viz., below Rs 50,000, Rs 50,000 to 1,00,000 and above Rs 1,00,000. For the sake of

convenience, these three groups were termed as low, middle and high-income groups. The approximate average income was calculated considering Rs 50,000 for low, Rs 75,000 for middle and Rs 1,00,000 for high-income group averages.

Fig-4.7: Comparison of the annual income of the male respondent and his spouse

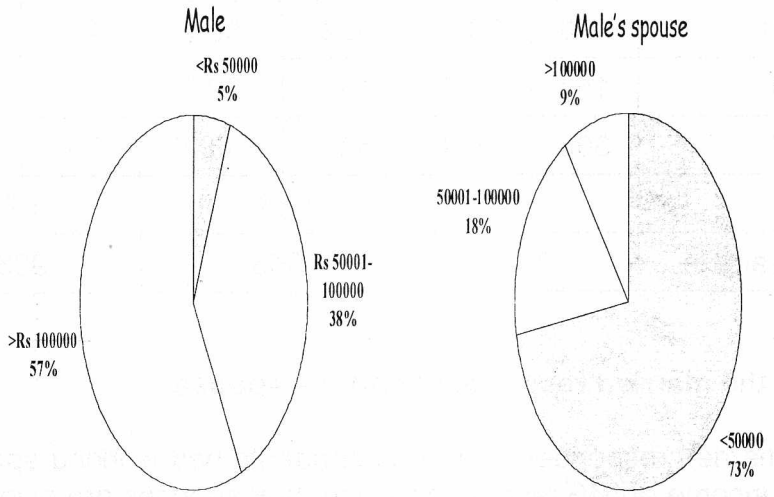
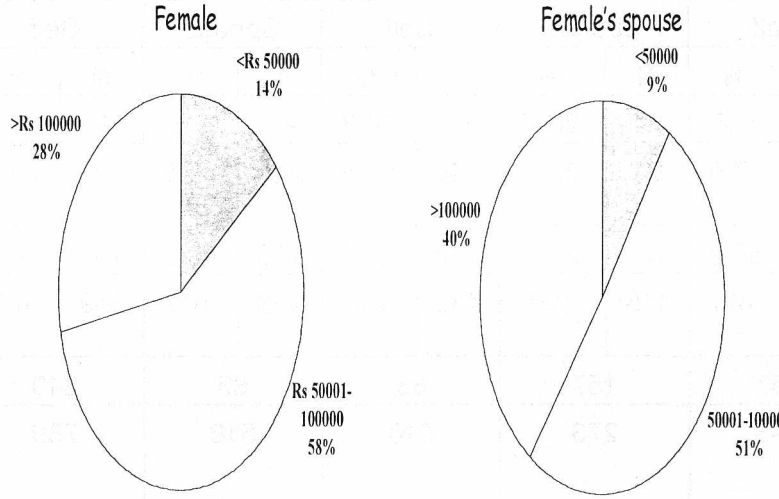


Fig-4.8: Comparison of the annual income of the female respondent and her spouse



On the whole, about 53.4 per cent of both male and female respondents and 51.2 per cent of their spouses were in the middle income group (Rs 50,001-1,00,000). 34.2 per cent respondents and 37.2 per cent spouses of the respondents were in the high-income group (Rs >1,00,000). 12.4 per cent respondents and 11.6 per cent spouses of the respondents were in the low-income group (Rs <50,000). In comparative economic terms, half of the respondents were in the middle -income group, and one third in the high-income group. The average income of the respondents and their spouses was nearly same.

Gender-wise data shows interesting patterns of income. A maximum of 56.9 per cent male respondents were in the high annual income group followed by 37.9 per cent in the middle -income group and 5.2 per cent in the low-income group. The corresponding figures for the respondents' spouses were 26.7 per cent in high, 52.6 per cent in middle and the rest 20.7 per cent in low-income groups. This clearly shows that the male respondents earned more than their spouses.

The trend was different in the female respondents. They were 28.2 per cent in high, 57.5 per cent in middle and 14.3 per cent in low-income groups. On the other hand, the spouses of the female respondents were 40.0 per cent in high, 50.8 per cent in middle and 9.2 per cent in low-income groups. The income of the female respondents was less than their spouses.The average income of the male respondents (Rs 87,900) was more than the average income of their spouses (Rs 76,500). The average income of the female respondents (Rs 78,500) was less than the average income of their spouses (Rs 82,500). In either case the income of the male members was more than the female members.

Parents annual income

The details of the respondents' parents annual income is provided in Table-4.13 and Fig-4.9. Agricultural education, being professional, is expensive. The information in Table-4.18 was sought primarily to verify the financial status of parents sending their children for agricultural education. It is assumed that it is almost impossible for parents to support their children's education with annual income below Rs 10,000 and it may be possible with some difficulty for those having income between Rs 10,000 and Rs 50,000. For parents having income above Rs 50,000, it may be comfortable to support their children's education.

Only 35.2% of the parents had annual income above Rs 50,000 and 47.8 per cent were in Rs 10,000 to 50,000 range. A significant per cent of 17.0 per cent had less than Rs 10,000 annual income. In such cases the education must have been supported by the state through various scholarships. Gender-wise data shows that female respondents parents (40.8%) were relatively more in high-income bracket of Rs 50,000 as against 24.7 per cent in case of male respondents.

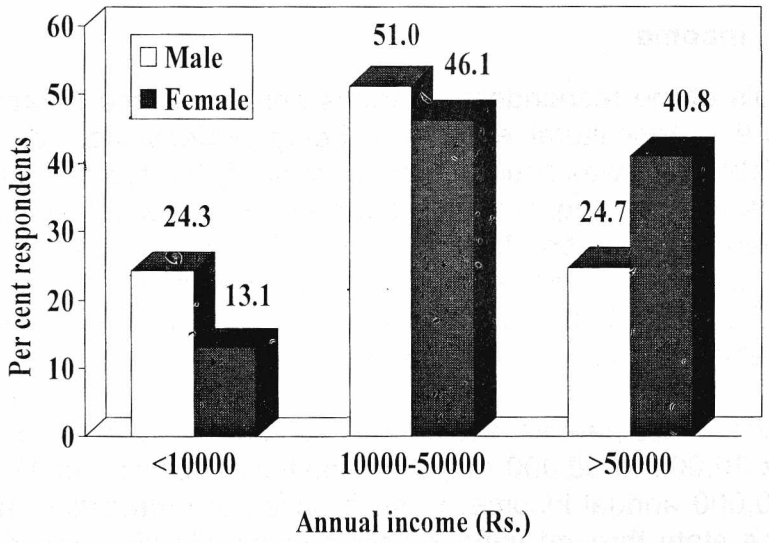
The average income was calculated using Rs 10,000, Rs 30,000 and Rs 50,000 as representative income of the three income groups. The average income of the male respondents' parents of Rs 30,100 is less than Rs 35,500 for the parents of

the female respondents. On the whole, parents annual income revealed that most of the respondents hailed from middle or low-income groups. Most of the families also had single breadwinner (77.8% as in Table-4.16). Nevertheless, both male and females were given professional education, which revealed the high value given to education in those families.

Table-4.13: Annual income of the respondents' parents

Annual income	Male		Female		Male+Female	
(Rs)	N	%	N	%	N	%
<10,000	108	24.3	110	13.1	218	17.0
10,000-50,000	227	51.0	386	46.1	613	47.8
>50,000	110	24.7	341	40.8	451	35.2
Number responded	445	100	837	100	1282	100
No response	9		7		16	
Total sample	454		844		1298	
Average annual income	Rs 30,100		Rs 35,500		Rs 33,600	

Fig-4.9: Annual income of the respondents parents



Family size of the respondents parents

The data on brothers and sisters of respondents are given in Annexure-20 and the summary of the data is presented in Table-4.14. Majority (62.5%) respondents had up to three brothers or sisters and 35.8 per cent came from families having more than three siblings. Amongst the two gender groups, relatively more females came from small families; 66.9 per cent females as against 54.4 per cent males come from small family. The average number of brothers or sisters is 3.22 for all the respondents; 3.44 for males and 3.1 for females. In general, the family size was more for male respondents as compared to the female respondents. This shows that more number of females came from families conscious of small-family norm.

Table-4.14: Number of brothers and sisters of the respondents

Number of brothers and sisters	Male		Female		Male + Female	
	N	%	N	%	N	%
0	10	2.2	12	1.4	22	1.7
1-3	247	54.4	563	66.9	810	62.5
4-6	156	34.4	213	25.3	369	28.5
7-12	41	9.0	54	6.4	95	7.3
Number responded	454	100	842	100	1296	100
No response	0		2		2	
Total sample	454		844		1298	
Average number of brothers and sisters	3.44		3.10		3.22	

Birth order

The details of the birth order of the respondents are provided in Table-4.15. The purpose of seeking this information is to check whether the birth order has any influence on the choice of career of the respondents.

About 30.6 per cent respondents were the first child of their parents followed by 47.1 per cent as middle and 20.6 per cent as last child. The birth order is nearly similar in both male and female respondents separately. Most agricultural graduates of either gender are mid-children of big families. It is revealed that both males and females were able to get agricultural professional education what ever may be the birth order, which indicated that they came from families that had high value for education.

Table-4.15: The birth order of the respondent

Birth order	Male		Female		Male+Female	
	N	%	N	%	N	%
Only child	10	2.2	12	1.4	22	1.7
Eldest child	127	28.0	267	31.9	394	30.6
Middle child	235	51.9	373	44.6	608	47.1
Last child	81	17.9	185	22.1	266	20.6
Number responded	453	100	837	100	1290	100
No response	1		7		8	
Total sample	454		844		1298	

Education of the respondents' mother

The data on respondents' mothers education are shown in Table-4.16.

Table-4.16: Education status of the respondents mother

Qualification	Male		Female		Male + Female	
	N	%	N	%	N	%
Ph.D	1	0.3	4	0.6	5	0.5
PG	21	6.1	53	7.6	74	7.2
UG	32	9.4	143	20.6	175	16.9
Diploma	8	2.4	47	6.8	55	5.3
Up to 12thclass	228	67.1	406	58.6	634	61.4
Uneducated	50	14.7	40	5.8	90	8.7
Number responded	340	100	693	100	1033	100
No response	114		151		265	
Total sample	454		844		1298	

The data in Table-4.16 reveal that mother's education seem to have an important bearing on the respondents career as maximum number of respondents claimed to have their mother's support and influence upon them in choosing their career. The data shows that 61.4 per cent of the respondent's mothers had education up to 12th class and 16.9 per cent of the mothers had undergraduate education. Only 7.7 per cent of the respondent's mothers had education beyond undergraduation, i.e.,

post-graduation (7.2%) and doctor of philosophy (0.5%). 92.3 per cent respondents' mothers had high school or above education indicating that most graduate respondents come from educated families. A smaller fraction of 8.7 per cent respondents had uneducated mothers and their proportion being 14.7 per cent for male respondents as against 5.8 per cent for female respondents. This is in general agreement with the other observations that relatively more number of female respondents' came from educated families.

Employment of the respondents' mother

The data shown in Table-4.17 indicate that, 77.8 per cent of the respondents' mothers took to household activities and were not involved in economic activity that generates money. However, 13.5 per cent respondents' mothers worked in research and education sector. Very few (6.4%) worked in development departments, private institutions, banks and international organizations. A mere 1.4 per cent was self-employed.

Table-4.17: Employment status of the respondents' mother

Occupational sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Research & Education	41	10.4	116	15.2	157	13.5
Development / Extension	8	2.0	36	4.7	44	3.8
Banks / Finance	-	-	4	0.5	4	0.3
Private / NGO's	6	1.5	18	2.3	24	2.1
Self-employment	4	1.0	12	1.6	16	1.4
International organization	-	-	2	0.3	2	0.2
Household	330	83.6	573	74.9	903	77.8
Others *	4	1.0	3	0.4	7	0.6
Agriculture	2	0.5	1	0.1	3	0.3
Number responded	395	100.0	765	100.0	1160	100.0
No response	59		79		138	
Total sample	454		844		1298	

* Others include retired, social worker, elected peoples representatives, etc.

The gender-wise break up shows that the per cent mothers of the respondents that were engaged in house work was more in male respondents (83.6%) than the female respondents (74.9%). As a corollary, 25.1 of female respondents' mothers were employed as against 16.4 per cent for the male respondents. This is in conformity with the earlier observation that relatively more female respondents came from educated families having working parents.

Education of the respondents' father

The educational status of the respondents' father is shown in Table-4.18. Majority i.e., 34.9 per cent respondents' fathers had under-graduate level education and 31.7 per cent of the respondents' fathers had education up to 12th class. On the whole, one fourth respondents' fathers were having PG and Ph.D education and the rest three fourth were less educated than their wards, and yet they opted their children to take up professional courses and further higher studies. A mere 1.8 per cent of the respondents' fathers was uneducated which indicates that the respondents, by and large, came from educated families.

The educational status of the respondents' fathers having PG or Ph.D degrees was similar in case of both male and female respondents. Gender-wise, fewer number of female respondents (0.7%) had uneducated father as compared to male respondents (4.1%). This clearly indicates that a highly educated father had no sex-bias towards educating his children but the situation was to the disadvantage of female child in case of uneducated father.

Table-4.18: Education of the respondents' father

Qualification	Male		Female		Male + Female	
	N	%	N	%	N	%
Ph.D	16	4.4	36	5.0	52	4.8
PG	68	18.8	137	18.8	205	18.8
UG	97	26.8	283	38.9	380	34.9
Diploma	18	4.9	69	9.5	87	8.0
Up to 12th Class	148	41.0	197	27.1	345	31.7
Uneducated	15	4.1	5	0.7	20	1.8
Number responded	361	100.0	727	100.0	1088	100.0
No response	93		117		210	
Total sample	454		844		1298	

Employment of the respondents' father

The Employment details of the respondents' fathers are given in Table-4.19. Of the 1,176 respondents' fathers, 33.2 per cent worked in development sector, 25.2 per cent in research and education sector and the remaining in various sectors viz., private, non-government organizations, agriculture, banks, household and international organizations. However, a sizable portion (13.8%) was self-employed.

Table -4.19: Employment of the respondents' father

Occupational sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Research & Education	109	27.2	187	24.1	296	25.2
Development / Extension	100	24.9	291	37.5	391	33.2
Banks / Finance	15	3.8	42	5.4	57	4.9
Private / NGO's	27	6.7	72	9.3	99	8.4
Self-employment	60	15.0	102	13.2	162	13.8
International organization	1	0.3	1	0.1	2	0.2
Household	21	5.2	19	2.5	40	3.4
Others *	23	5.7	33	4.3	56	4.7
Agriculture	45	11.2	28	3.6	73	6.2
Number responded	401	100.0	775	100.0	1176	100.0
No response	53		69		122	
Total sample	454		844		1298	

* Others include retired, social worker, elected peoples representatives, etc.

Education of the respondents mother-in-law

The education of the respondents' mothers-in-law is given in Table-4.20. Majority (65.5 per cent) of the respondents' mothers-in-law had 12th class education, 19.4 per cent pursued higher education viz., UG, PG and Ph.D and only 15.1 per cent were uneducated. The same observations were noticed for male and female respondents separately.

The data in Table-4.20 are similar to the data in Table-4.15 representing the education of the respondents' mother, but 30 per cent of the respondents mother had education above diploma as against 19.4 per cent in case of respondents mother-in-law.

Employment of the respondents' mother-in-law

The data on the employment of the respondents' mothers-in-law are given in Table-4.21. As expected, majority of the respondents' mothers-in-law (86.4%) took to household work, and only 13.6 per cent were working, mostly in research and education sector (8.0%). The gender-wise differences were small. A perusal of data in Table-4.16 shows that about 22.2 per cent of the respondents' mothers were working as against 13.6 per cent of their mothers-in-laws.

Table-4.20: Education of the respondents' mother-in-law

Qualification	Male		Female		Male + Female	
	N	%	N	%	N	%
PhD	1	0.5	1	0.3	2	0.4
PG	9	4.8	15	4.0	24	4.3
UG	20	10.8	34	9.2	54	9.7
Diploma	2	1.1	26	7.0	28	5.0
Up to 12th Class	127	68.3	238	64.1	365	65.5
Uneducated	27	14.5	57	15.4	84	15.1
Number responded	186	100.0	371	100.0	557	100.0
No response	87		145		232	
Total married respondents	273		516		789	

Table-4.21: Employment of the respondents' mother-in-law

Occupational sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Research & Education	17	7.6	37	8.3	54	8.0
Development / Extension	7	3.1	6	1.3	13	1.9
Banks / Finance	-	-	2	0.5	2	0.3
Private / NGO's	1	0.4	4	0.9	5	0.8
Self-employment	-	-	2	0.5	2	0.3
International organization	-	-	1	0.2	1	0.2
Household	191	85.7	389	86.8	580	86.4
Others*	6	2.7	6	1.3	12	1.8
Agriculture	1	0.4	1	0.2	2	0.3
Number responded	223	100.0	448	100.0	671	100.0
No response	40		68		118	
Total married respondents	273		516		789	

* Others include retired, social worker, elected people's representatives, etc.

Education of the respondents' father-in-law

The data on education of the respondents' fathers-in-law are shown in Table-4.22. Except for 3.8 per cent of the respondents' father-in-law, the rest were educated; 34.2 per cent had education up to class 12, while 32.5 per cent had UG education and 19.3 per cent pursued PG and Ph.D. There is no marked difference with respect to female and male respondents' in terms of the education status of their fathers-in-law.

The educational record of the respondents' father (Table-4.17) is similar to that of their fathers-in-law (Table-4.22). This close correspondence in education of the father and father-in-law reflects tendency for marriages across families of similar educational attainments.

Table-4.22: Education of the respondents' father-in-law

Qualification	Male		Female		Male + Female	
	N	%	N	%	N	%
Ph.D	11	5.3	11	2.9	22	3.8
PG	31	14.9	60	15.8	91	15.5
UG	63	30.3	128	33.9	191	32.5
Diploma	22	10.6	38	10.3	60	10.2
Up to 12th Class	72	34.6	129	34.0	201	34.2
Uneducated	9	4.3	13	3.4	22	3.8
Number responded	208	100.0	379	100.0	587	100.0
No response	65		137		202	
Total married respondents	273		516		789	

Employment of the respondents' father-in-law

The data on employment of the respondents' fathers-in-law are given in Table-4.23. Out of the 658 respondents, 27.6 per cent were working in the development sector, 23.5 per cent in research and education sector and 16.6 per cent were self-employed. The rest were working in other sectors. The data for male and female respondents are similar.

Table-4.23: Employment of the respondents' father-in-law

Occupational sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Research & Education	58	25.3	97	22.6	155	23.5
Development / Extension	57	24.9	125	29.1	182	27.6
Banks / Finance	11	4.8	21	4.9	32	4.8
Private / NGO's	23	10.0	30	7	53	8.1
Self-employment	39	17.0	70	16.3	109	16.6
International organization	1	0.5	2	0.5	3	0.5
Household	10	4.4	25	5.8	35	5.3
Others *	14	6.1	18	4.2	32	4.9
Agriculture	16	7.0	41	9.6	57	8.7
Number responded	229	100.0	429	100.0	658	100.0
No response	44		87		131	
Total married respondents	273		516		789	

*Others include retired, social worker, elected people's representatives, etc.

Summary

The analysis presented in this chapter can be summarised as follows:

1. The caste details of the respondents indicate that 70.3 per cent belonged to general category and the rest 29.7 per cent to different classes for whom reservations were made in education and employment.

2. More than 80 per cent of the respondents had proficiency in three or more languages.

3. Agricultural education did not have any specific influence on the marriage prospects. The average age at marriage of the respondents was 26 years, which was much higher than the national average but was comparable to that observed in other professional categories.

4. Only 7.6 per cent of the 789 married respondents had more than three children. This data indicated awareness for small family norm among agricultural graduates. Furthermore, two-thirds of the female respondents came from families conscious of small-family norm.

5. Spouses of almost all married professional women had either equivalent or higher educational qualifications, whereas reverse is the case with spouses of married male respondents. More than 60 per cent of the working spouses of both male and female respondents were in state-supported R&D sectors

6. In comparative economic terms, nearly one third of the respondents were in high-income group (Rs >1,00,000) and majority of the remaining respondents were in the middle-income group (Rs 50,000 – 1,00,000). The average annual income of the women respondents (Rs 78,500) was close to the income of their spouses (Rs 82,500).

Chapter – V

Academic information

The information regarding the location of the school, type of the school, medium of instruction, personal background and the respondents' preference for the agricultural course were studied. To enlighten the facts, a comparison was made between male and female respondents at each stage. Performance at school and college is discussed along with other relevant facets of the academic career.

Location of the school

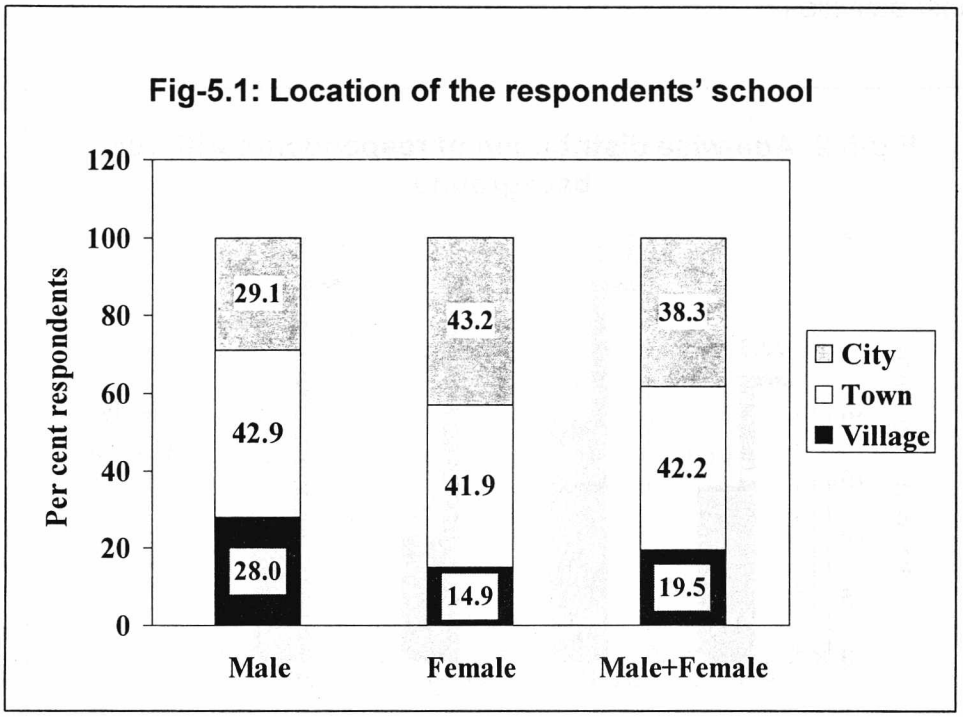
The data on location of school in village town or city are given in Table-5.1 and Fig-5.1. The data indicate that the per cent male and female respondents having school education in town schools was nearly same, whereas the proportion of female respondents having their education in city schools (43.2%) was relatively more than that of the male respondents (29.1%). The reverse is the case with education in village schools as only 14.9 per cent of the female respondents hailed from village schools as against 28.0 per cent of male respondents. About 80.5 per cent respondents, both male (42.9%+29.1%) and female (41.9%+43.2%), had their education in urban areas (towns and cities), whereas the rest 19.5 per cent of the respondents had their education in village schools.

Table-5.1: Location of the respondents' school

School location	Male		Female		Male+Female	
	N	%	N	%	N	%
Village	127	28.0	125	14.9	252	19.5
Town	194	42.9	353	41.9	547	42.2
City	132	29.1	365	43.2	497	38.3
Number responded	453	100.0	843	100.0	1296	100.0
No response	1		1		2	
Total sample	454		844		1298	

N = Number of respondents

As there is a general feeling about growing urban character of the agricultural education, the data were analyzed in terms of age group so as to analyse the relation between respondents' age and the urban/ rural background of the students in agricultural education and the data are presented in Table-5.2 and Fig-5.2.



The male and female respondents data in Table-5.2 viewed together indicate that the per cent rural respondents decreased with age group, i.e., per cent rural respondents were less in younger age group. The gender-wise data are interesting. The trend with male respondents was same as that of the total respondents, the trend with female respondents was just the opposite, i.e., the proportion of female respondents was more in younger age groups. This directly reflects that higher proportion of female candidates is coming into the system than in the past.

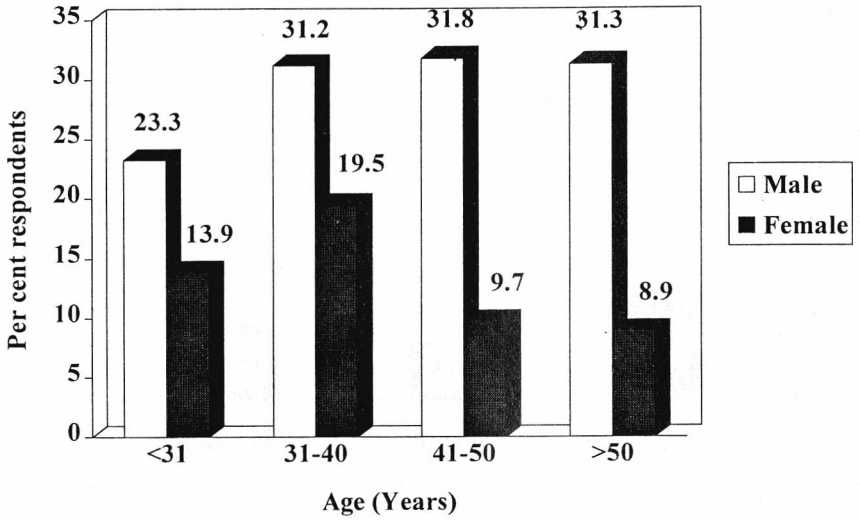
Table-5.2: Age-wise distribution of respondents with rural background

Age group	Male		Female		Male+Female	
	N	Rural (%)	N	Rural (%)	N	Rural (%)
>50	48	31.3	45	8.9	93	20.4
41-50	88	31.8	103	9.7	191	19.9
31-40	125	31.2	251	19.5	376	23.4
<31	193	23.3	445	13.9	638	16.8
Total sample	454	28.0	844	14.8	1298	19.4

As admission to SAUs is merit based, the proportion of students with urban background is increasing over the years. In the process, the agricultural education system has become urbane. If either more seats are reserved for rural students and/ or one third seats are reserved for women, then it will increase the number of

professional women graduates with rural background, who may take up extension related-jobs/ activities.

Fig-5.2: Age-wise distribution of respondents with rural background



Medium of instruction at school

The zone-wise medium of instruction at school of the respondents is given in Table-5.3. State-wise data are given in Annexure-21.

Table-5.3: Medium of instruction at school

Zone	Male		Female		Male+Female	
	N	%	N	%	N	%
East	73	34.2	118	37.2	191	36.1
North	157	29.9	246	45.1	403	38.9
South	189	46.0	433	57.9	622	54.3
West	29	65.5	40	65.0	69	65.2
Number responded	448		837		1285	
No response	6		7		13	
Total sample	454		844		1298	

* Per cent studied in English medium

For the country as a whole, the medium of instruction at school was English for 47.5 per cent of the respondents, whereas the rest were taught in the local languages of the respective states. The gender-wise differences were remarkable; the proportion of female respondents, who studied in English medium schools, was higher (51.6%) than the proportion of male respondents (39.5%). Amongst the zones, the proportion of respondents coming from English medium schools was highest (of 65.2%) in west zone, followed by 54.3 per cent in south zone, 38.9 per cent in north zone and 36.1 per cent in east zone.

Unisex or co-education type of school

The type of school, in terms of unisex or co-education, in which the respondents completed their school education, is given in Table-5.4.

Table -5.4: Type of school

Type of school	Male		Female		Male+Female	
	N	%	N	%	N	%
Co-education	269	59.2	448	53.3	717	55.4
Uni-sex	185	40.8	393	46.7	578	44.6
Number responded	454	100.0	841	100.0	1295	100.0
No response	-		3		3	
Total sample	454		844		1298	

The data in Table-5.4 indicate that majority of male respondents came from co-education schools whereas majority of female respondents came from exclusive girls' schools. Out of the 454 male respondents, 59.2 per cent had co-education at school level and the remaining 40.8 per cent studied in boys' schools. In case of female respondents, 53.3 per cent had co-education at school level and 46.7 per cent studied in exclusive girls' schools. Out of 1295 (454 male + 841 female) respondents, 55.4 per cent studied in co-education schools and the rest 44.6 per cent studied in the unisex schools.

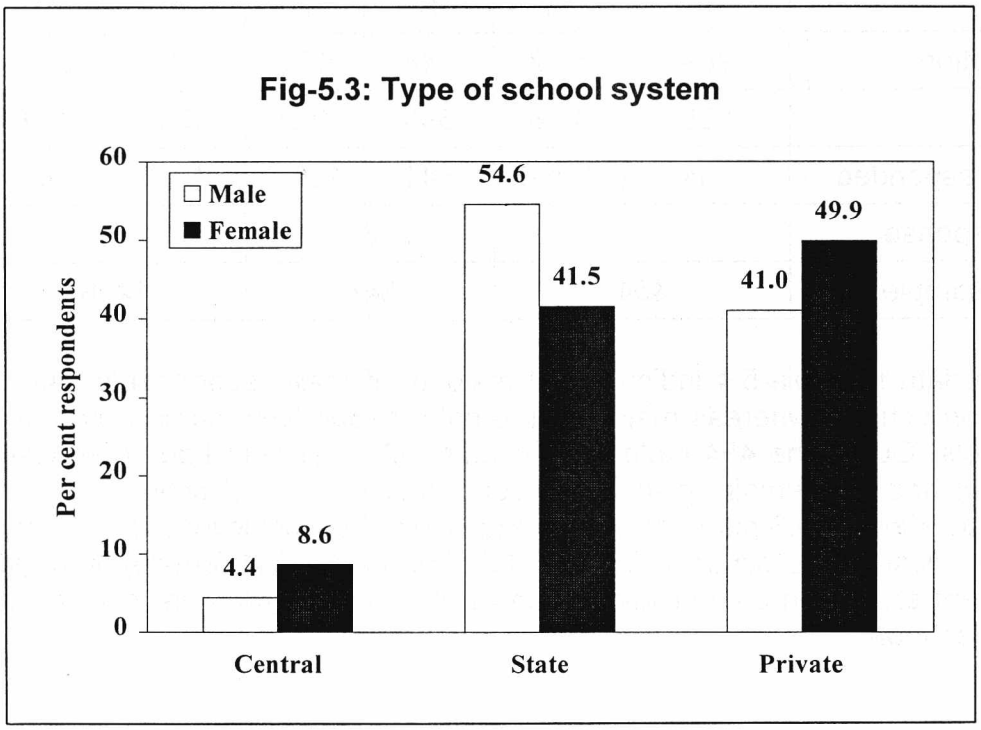
School system

The data in Table-5.5 and Fig-5.3 depict about the type of school system where the respondents had their school education. State-wise data of the same are given in Annexure-22. There are striking differences in the type of school in which male and female respondents studied. Majority of the male respondents, i.e., 54.6 per cent studied in state-supported schools, i.e. supported by state government or local bodies like municipalities and *zilla parishad,* followed by 41.0 per cent in private schools and the remaining 4.4 per cent in central government-supported schools. Contrasting to the type of school in which male respondents studied. About 49.9 per cent female respondents studied in private schools followed by 41.5 per cent in state-

supported schools and 8.6 per cent in central-supported schools. Greater percentage of female respondents came from private schools whereas in case of male students it was from state-supported schools. This observation is in line with the earlier observation on the gender dependence of medium of instruction at school. Higher proportion of girls studied in English medium schools as most private schools offer education in English medium.

Table-5.5: Type of school system

School type	Male		Female		Male+Female	
	N	%	N	%	N	%
Central	20	4.4	73	8.6	93	7.2
State	248	54.6	350	41.5	598	46.1
Private	186	41.0	421	49.9	607	46.7
Total sample	454	100.0	844	100.0	1298	100.0



Both male and female respondents' data in Table-5.5 show that 46.7 and 46.1 per cent studied in private and state-supported schools respectively, and the remaining 7.2 per cent of the respondents studied in central-supported schools. The low proportion of respondents of both sexes from central supported schools is note worthy. It is possible that the students from these schools may have different or better choices to choose from. As these schools have better facilities and largely located in urban areas, low proportion from this system reflects low priority to agriculture. However, this will be resolved in a latter section dealing with the respondents' preferences on disciplines

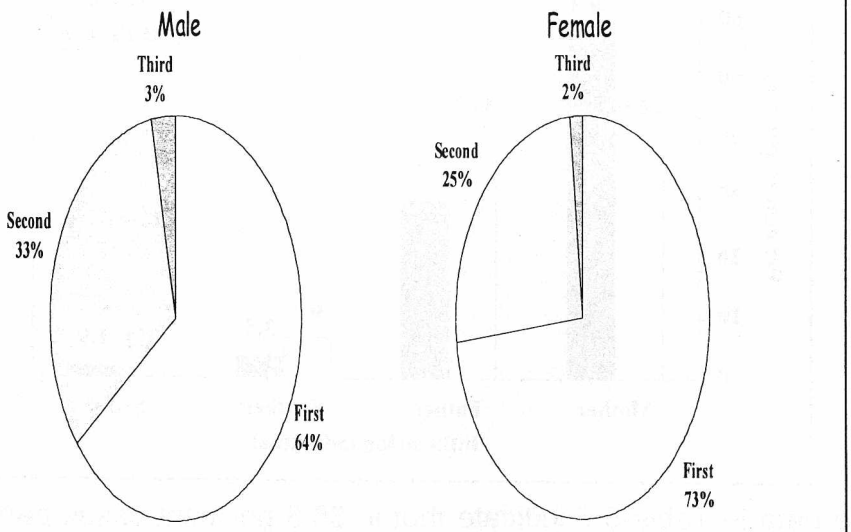
Performance at school

The data on performance at school, in terms of overall rank in school final are given in Table-5.6 and Fig-5.4. The data (Table-5.6) on the overall rank at school was collected to view the general performance of the respondents at higher secondary (12^{th} class / Intermediate) level. As expected, 70.1 per cent of the respondents achieved first division and 27.7 per cent secured second division. Only 2.2 per cent of the respondents secured third division. As admission to agricultural courses is, by and large, based on merit in most places, it is quite natural to expect better performance by the respondents at school-level. Gender-wise, female respondents showed better performance than the male counterparts as 73.0 per cent of female respondents secured first class as against 64.5 per cent by male respondents.

Table-5.6: Overall rank in school final

Division/ class	Male		Female		Male+Female	
	N	%	N	%	N	%
First	290	64.5	614	73.0	904	70.1
Second	146	32.5	211	25.2	357	27.7
Third	13	3.0	15	1.8	28	2.2
Number responded	449	100.0	840	100.0	1289	100.0
No response	5		4		9	
Total sample	454		844		1298	

Fig-5.4: Overall rank in school final

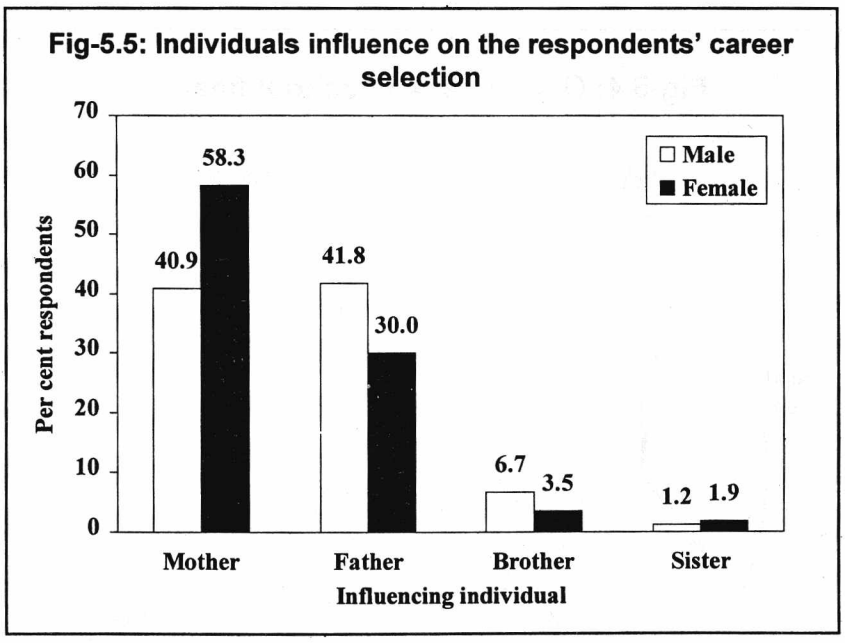


Motivation to join agricultural course

It would be interesting to know the persons who motivated the respondents in their selection of career in agriculture discipline. The respondents were asked to indicate two individuals who influenced them in this regard and their response is shown in Annexure-23. The data on the person who most influenced them are given in Table-5.7 and Fig-5.5.

Table-5.7: Individuals influence on the respondents selection of career

Relation	Male		Female		Male + Female	
	N	%	N	%	N	%
Mother	183	40.9	491	58.3	674	52.3
Father	187	41.8	252	30.0	439	34.0
Brother	30	6.7	29	3.5	59	4.6
Sister	5	1.2	16	1.9	21	1.7
Teacher	18	4.0	22	2.6	40	3.1
Classmates	8	1.8	7	0.8	15	1.2
Others	16	3.6	24	2.9	40	3.1
Number responded	447	100.0	841	100.0	1288	100.0
No response	7		3		10	
Total sample	454		844		1298	



The data in Table-5.7 indicate that in 86.3 per cent cases parents were most influential in the selection of career, and the other family members or teachers influenced to a very small proportion. It is interesting to note the gender-wise response. The male respondents indicated mother and father as almost equal. On

the other hand, in case of female respondents, the support from their mothers was overwhelming (58.3%) as compared to the support from their fathers (30.0%).

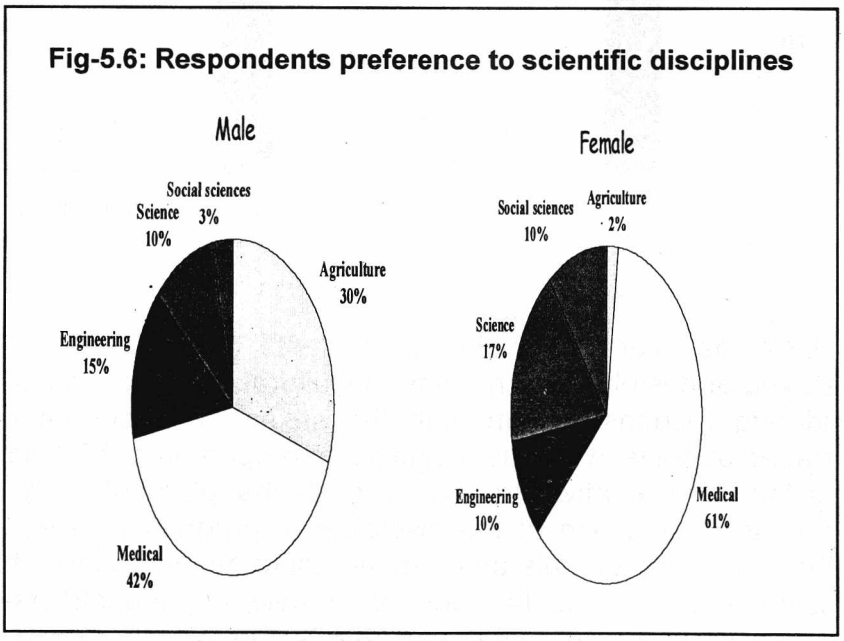
Preference to sciences

The students have certain choices at the time of entry to college and it is well known fact that most students in India prefer admission to professional courses. In order to find out the relative preference shown to agriculture, the respondents were asked to specify their preference to courses at the time of their entry to college, i.e. after completion of their school education and the responses on preference to scientific disciplines are presented in Table-5.8 and Fig-5.6.

Table-5.8: Respondents preference to scientific disciplines

Discipline	Male		Female		Male+Female	
	N	%	N	%	N	%
Agriculture	137	30.3	155	18.5	292	22.6
Medical	188	41.6	425	50.7	613	47.5
Engineering	67	14.8	67	8.0	134	10.4
Science	45	9.9	120	14.3	165	12.8
Social sciences	15	3.4	71	8.5	86	6.7
Number responded	452	100.0	838	100.0	1290	100.0
No response	2		6		8	
Total sample	454		844		1298	

Fig-5.6: Respondents preference to scientific disciplines



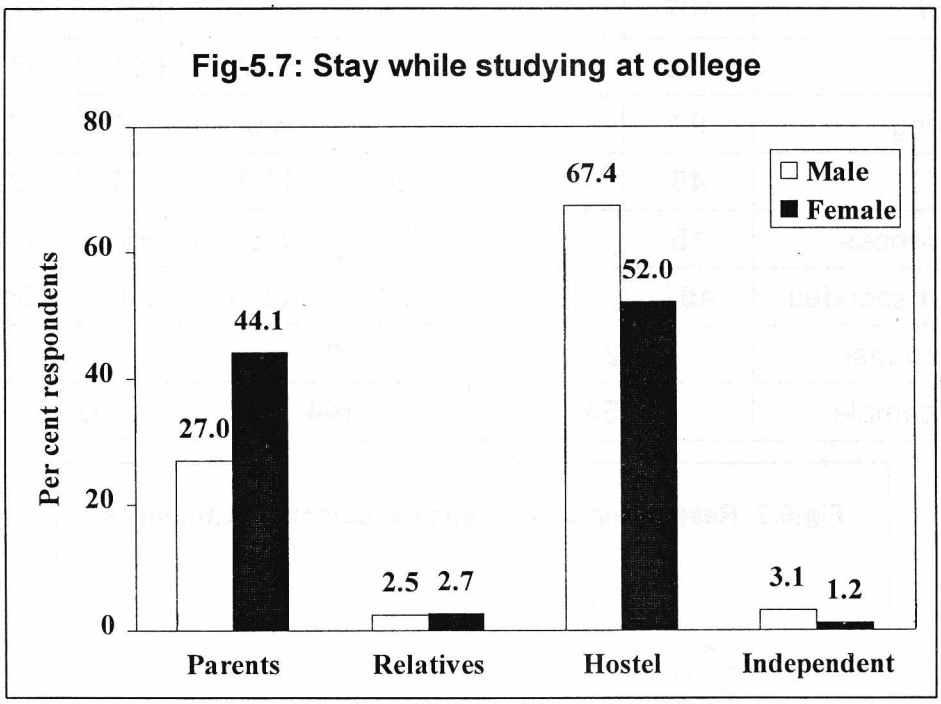
The data in Table-5.8 reflects agriculture as the second best preference among both the respondent groups, Medicine being the first preference. This is on expected lines. However, the proportion of female respondents preferring agriculture was only

18.5 per cent, which is relatively low as compared to 30.3 per cent by male respondents. In fact, the preference shown by female respondents to both agriculture and engineering was rather low as compared to their male colleagues' preferences. It would be interesting to explore further the specific reasons for the relatively low preference reflected by female respondents to agricultural sciences.

Stay during college study

Agriculture being professional education and well supported by government, it is expected that greater proportion of respondents may have stayed outside their home during their college education. As the place of residence has great influence on the overall personality development of individuals, the respondents were asked to specify about the place of stay during their college education. The responses are presented in Table-5.9 and Fig-5.7.

Fig-5.7: Stay while studying at college



About 67.4 per cent of male respondents and 52.0 per cent female respondents stayed at hostel indicating that agricultural education is not residential in nature. Considering responses from both the sexes, 57.4 per cent of the total respondents stayed at hostel whereas a significant proportion of 38.1 per cent stayed along with their family. The latter strongly suggests that place of study could be one of the determinants in selection of the discipline at graduation level. This is more evident from the responses of male and female respondents, and to a higher degree in case of female respondents as 44.1 per cent female respondents stayed with their families as against 27.0 per cent male respondents. On the other hand, a very small per cent of respondents indicated staying either independently or at relatives' home. This type of response is expected as most agricultural colleges offer hostel

accommodation. However, a smaller proportion may stay independently or at relatives' home, as reflected here, due to economic or other family considerations.

Table-5.9: Stay while studying at college

Place of stay	Male		Female		Male+Female	
	N	%	N	%	N	%
At parents home	122	27.0	370	44.1	492	38.1
At relatives home	11	2.5	22	2.7	33	2.6
Hostel	304	67.4	436	52.0	740	57.4
Independent stay	14	3.1	10	1.2	24	1.9
Number responded	451	100.0	838	100.0	1289	100.0
No response	3		6		9	
Total sample	454		844		1298	

Academic performance at college

The academic performance of the respondents is given in Table-5.10. More than 50 per cent of the respondents (51.0% male and 60.0% female) secured position within the top 10 per cent of their class at graduation. The data indicate that majority of the respondents were top rankers; 87.6 per cent of the respondents were in the top 25 per cent of their class at graduation. It is possible that survey could reach apparently those who are more successful in their career or the individuals, who are more successful, have propensity to readily respond to the survey. This is an inherent limitation as no efforts were made to screen the respondents based on their academic achievement.

Table-5.10: Merit in the college at graduation

Merit position	Male		Female		Male+Female	
	N	%	N	%	N	%
In upper 10	228	51.0	494	60.0	722	56.7
10 - 25	156	34.8	237	28.7	393	30.9
25 – 50	49	11.0	77	9.3	126	9.9
Below 50	14	3.2	17	2.0	31	2.5
Number responded	447	100.0	825	100.0	1272	100.0
No response	7		19		26	
Total sample	454		844		1298	

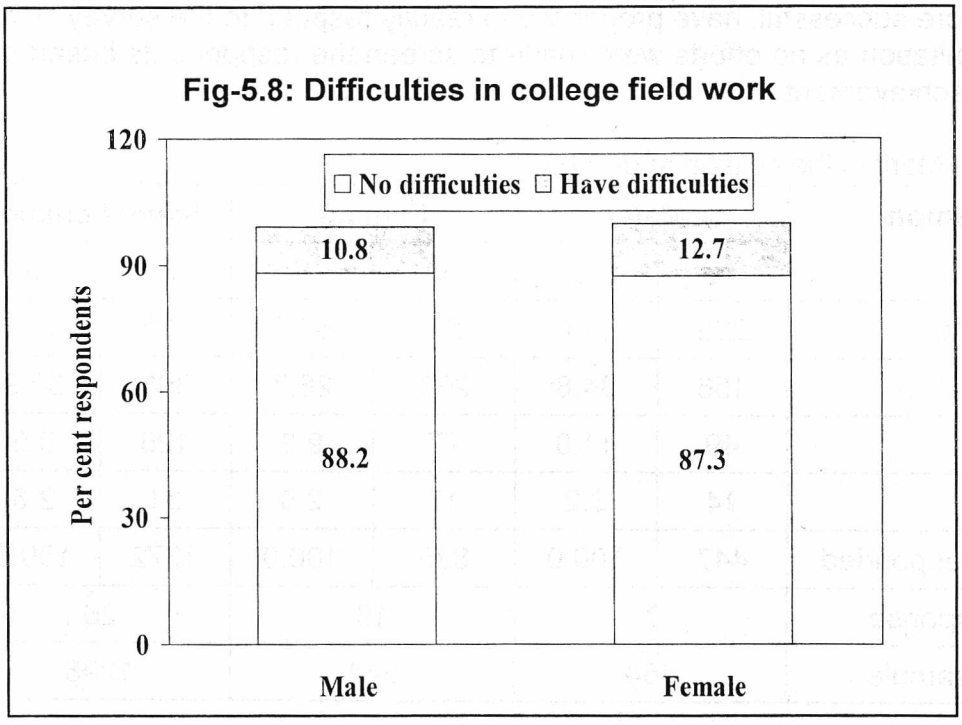
Difficulties in college fieldwork

Agriculture education has unique feature of fieldwork, which is mandatory and repeats in many forms during the period of graduation. In the recent past, internship, i.e., stay in a village for one academic term, is made mandatory. The nature of fieldwork is not only strenuous but also has various other ramifications from behavioral and sociological dimensions. In view of the importance of this in agricultural education, the respondents were asked to reflect on the difficulties in the fieldwork and their responses are presented in Table-5.11 and Fig-5.8.

It is interesting to note that out of 1,298 respondents, only 156 (12%) indicated experiencing some difficulty in the field work at college, with near equal proportion from male (10.8%) and female (12.7%) respondents.

Table-5.11: Difficulties in college fieldwork

Respondents	Number of respondents in the sample	Respondents who faced problems in fieldwork	
		N	%
Male	454	49	10.8
Female	844	107	12.7
Male+Female	1298	156	12.0



Out of 156 male and female respondents, 61 attributed difficulties due to lack of practical training and guidance, and 19 reported physical strain during the fieldwork. The rest of the respondents (but no more than 5 respondents in each case) cited other reasons like non-agricultural background, negative attitude of colleagues, distance of the field and lack of time to reach field.

In our personal discussions, it was pointed out that the rural work experience programme was not uniform in all the universities and the present agricultural education in the universities is not sensitive to gender issues. Gender, as an important dimension to agricultural development, is poorly inculcated in the education system. This imbalance can be minimized through rural work experience programme. Thus, there is need to make it compulsory and uniform. During this programme, the students can prepare a report on the impact of agricultural programmes, identify gender specific technologies and provide feedback to the R&D system. Some selected quotes from the survey respondents illustrate the difficulties and inconveniences experienced by female students in the college fieldwork.

1400 *People were not very cooperative during M.Sc thesis work. For clinical oriented topic, people from government corporations refused to give blood, information, etc. (Female researcher, 24)*

1026 *In - state, only 1 per cent or 2 per cent girls are taking admission in agriculture course and boys are very narrow minded in our time and for girls field work is very hard. (Female agricultural officer, 29)*

1356 *Being the first girl student in the country for ... course, reputed private dairy plants were apprehensive about allowing me to do in-plant training, despite my first position academically. I had to do my training at a government plant as last choice. (Female officer,37)*

1203 *For field work, students are being posted away from their native place. In such cases, getting accommodation and other basic facilities is a problem. (Female veterinary officer, 30)*

1361 *My research work in M.Sc was to be carried out at a place 20 km away. It is very difficult for any lady to travel for a long time and work. (Female researcher, 25)*

1723 *As a female student, travelling to the remote areas for survey work was not safe and it was inconvenient too due to lack of adequate transport facilities. (Female researcher, 29)*

1324 *Field work was given very less importance in our college. Stress was on theoretical aspect leaving us with very little practical knowledge. (Female student, 24)*

1924 *The field training obtained in college is not sufficient to guide the farmers. At least in the final year some major subjects like Entomology, Agronomy, Pathology should be translated in local language. (Female development officer, 33)*

2558 *The rural Agricultural work experience programme for 6 months was very ill-planned and so poorly executed, leaving us in a shoddy position to face the farmers of the village. (Female student, 25)*

1919 *As a girl it is very difficult to handle animals while giving them vaccines and performing artificial insemination. (Female supervisor, 28)*

2651 *Being a girl student, I was discouraged in performing field work. (Female student, 24)*

2717 *Field preparation, sowing, insect collection, etc. were found to be very difficult. (Female student, 23)*

2770 *Being a day-scholar, I felt difficulty in the fieldwork and returned home late evenings. (Female student, 24)*

Students perceptions on academic issues

Student respondents in the sample were asked a few questions pertinent to the academic issues such as criteria for admission and selection of specialization at PG, reservation for women in education and employment and reasons for pursuing PG course. The data were collected from 315 student respondents and the results are discussed below.

Criteria for admission to post-graduate courses

Opinion of students on average weightage to be given for different criteria for admission into PG courses is presented in Table-5.12. It is evident from the Table-5.13 that both male and female students expressed that highest weightage of 42 per cent should be given to the entrance examination, followed by 37 per cent weightage at qualifying examination and 21 per cent weightage for interview.

Table-5.12: Criteria for admission to post-graduate courses

Criteria for admission to PG course	Per cent weight by		
	Male	Female	Male+Female
Marks	37	36	37
Entrance examination	43	42	42
Interview	20	22	21
All above	100	100	100

Selection of PG specialization

The data regarding most influencing persons in the students' choice of PG course specialization are given in Table-5.13. About 76.8 per cent of students (74% male and 79.3% female student respondents) had chosen their specialization in PG course on their own interest, 8.1 per cent student respondents selected based on the advice of family members, 6.6 per cent based on advise from their teachers, 3.3 per cent by classmates and 5.2 per cent by others like seniors, near relatives, etc.

Table-5.13: Source of influence in selection of specialization at the PG

Influencing person	Male		Female		Male+Female	
	N	%	N	%	N	%
Own choice	94	74.0	115	79.3	209	76.8
Family members	10	7.9	12	8.3	22	8.1
Teachers	8	6.3	10	6.9	18	6.6
Classmates	7	5.5	2	1.4	9	3.3
Others	8	6.3	6	4.1	14	5.2
Number responded	127	100.0	145	100.0	272	100.0
No response	12		31		43	
Total students sample	139		176		315	

Reasons for pursuing PG course

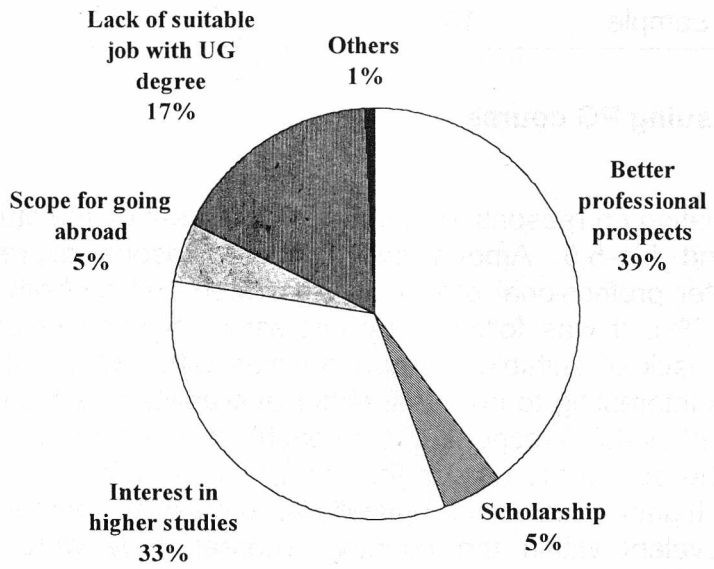
The information on reasons for pursuing PG course by the students is furnished in Table-5.14 and Fig-5.9. Among the different reasons expressed by student respondents, better professional prospects was rated first by both male and female respondents (39.6%). It was followed by interest in higher studies by 33 per cent respondents and lack of suitable job opportunities with UG degree by 17 per cent respondents. It is interesting to note that either availability of scholarship or scope for going abroad (cited by 4.8% respondents for each) were not rated high by both gender groups. It might be due to the reason that both male and female respondents would have taken up higher studies in agricultural profession primarily for better job opportunities prevalent within the country, whereas they were aware of limited opportunities available for going abroad.

The responses of both male and female respondents were nearly same for all the reasons excepting for the reason on interest in higher studies, which was cited more by female (36.0%) than the male (29.3%) respondents. This is in agreement with the students outturn data indicating increase in number of female students in higher education. Although nearly one third agricultural graduates went for higher studies, the proportion of females in PG seems to be increasing at a higher rate than their growth in UG programmes.

Table-5.14: The most important reason for pursuing PG course

Reasons for pursuing PG course	Male		Female		Male+Female	
	N	%	N	%	N	%
Better professional prospects	49	39.8	58	39.5	107	39.6
Scholarship / stipend	7	5.7	6	4.1	13	4.8
Interest in higher studies	36	29.3	53	36.0	89	33.0
Scope for going abroad	8	6.5	5	3.4	13	4.8
Lack of suitable job with UG degree	22	17.9	24	16.3	46	17.0
Others	1	0.8	1	0.7	2	0.8
Number responded	123	100	147	100	270	100
No response	16		29		45	
Total students sample	139		176		315	

Fig-5.9: The most important reason for pursuing PG course



Preferences to sciences

Response on specialisations, convenient to graduate women in agriculture, is given in Table-5.15. The graduate student respondents were asked to specify

specialisations convenient for or preferred by female students and the reasons for the same. The students responses are given in Table-5.15. In all, 677 students responded, out of which 35.0 per cent respondents specified only one specialisation, 34.3 per cent specified two and the remaining 30.7 per cent specified three specialisations. About 70 specialisations are available for PG in agriculture and allied sciences.

Table-5.15: Specialisations convenient to graduate women in agriculture

Number of specialisations selected	Male		Female		Male+Female	
	N	%	N	%	N	%
One option	102	34.2	135	35.6	237	35.0
Two options	100	33.6	132	34.8	232	34.3
Three options	96	32.2	112	29.6	208	30.7
All above	298	100.0	379	100.0	677	100.0

The PG specialisations in agricultural universities are broadly classified into five broad sciences, viz. animal sciences, agriculture sciences, home sciences, engineering & technology and basic sciences. The responses up to three choices were pooled according to broad specialisation, and the data are given in Table-5.16 and Fig-5.10.

Table-5.16: Preferred science according to broad specialization convenient to graduate women in agriculture

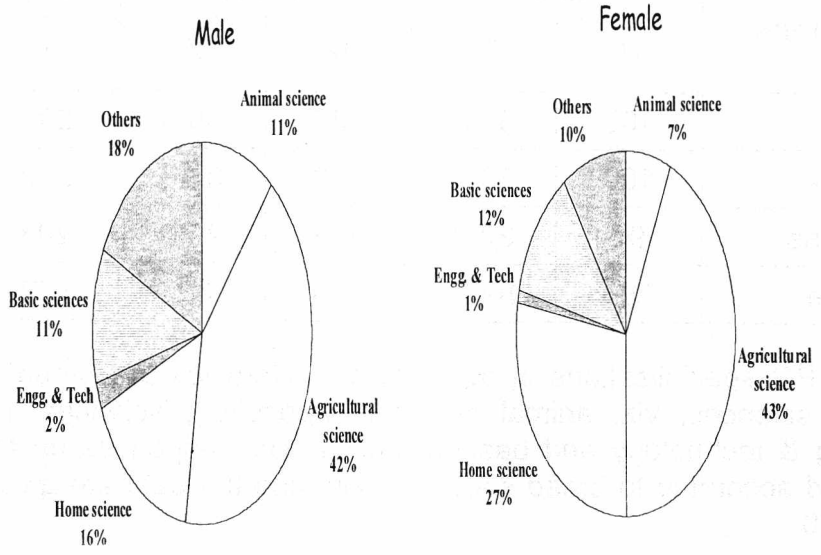
Preferred science	Male		Female		Male + Female	
	N	%	N	%	N	%
Animal sciences	32	10.7	25	6.6	57	8.4
Agricultural sciences	125	41.9	165	43.5	290	42.8
Home sciences	48	16.1	105	27.7	153	22.6
Engg. & Technology	6	2.1	4	1.1	10	1.5
Basic sciences	34	11.4	44	11.6	78	11.5
Others*	53	17.8	36	9.5	89	13.2
Above all	298	100	379	100	677	100

* Others include management, information sciences, social sciences, etc.

The preference to various specialisations that are cited by male and female respondents are grouped into broad sciences, and are given in Table-5.16. The preferences are as follows: 42.8 per cent for agriculture followed by 22.6 per cent for home science, 11.5 per cent for basic sciences and 8.4 per cent for animal sciences and the remaining 13.2 per cent for other sciences like management, information sciences, social sciences, etc. Home science is being offered to female students only

and yet 16.1 per cent male and 27.7 per cent female respondents only recommended it as convenient choice for female students. The female respondents' (6.6%) preference to animal sciences was comparatively less than that shown by male respondents (10.7%).

Fig-5.10: Preferred science according to broad specialization convenient to graduate women in agriculture



Preference to specific specialisation

Since there are more than 70 specialisations, those cited by at least 25 respondents were considered for identifying specific specialisations convenient for women. The data on preference to specific specialisations are listed in Table-5.17. As the number cited for animal science and engineering specialisations are less than 10, the specialisations having maximum responses in these areas are also listed in Table-5.17.

The three most important specialisations considered convenient for women are home science (20.0%), horticulture (18.9%) and extension (15.7%). Majority of both male and female respondents indicated preference to home science specialisations. Female respondents were specific in mentioning the home science specialisation whereas male respondents opined any branch of home science as convenient to women. The preference to social sciences (extension) is informative; it was preferred by 12.8 per cent male and 17.7 per cent female respondents. Large number of eminent social scientists, especially extension specialists, recommend more and more number of women in extension services as they have better communication access to rural women. Though the jobs in extension agencies are not female-friendly, the preference shown by female respondents is encouraging. However, the extension agencies are slow in providing the basic infrastructure facilities to attract women into this sector. Because of this, women prefer research

and education sectors where the basic infrastructure facilities are better than in most extension departments.

Table-5.17: Specific specialisation convenient to graduate women

Specific specialisation	Male		Female		Male + Female	
	N	%	N	%	N	%
Dairy science	4	2.7	5	2.2	9	2.4
Bio-technology	16	10.7	16	7.1	32	8.5
Home science (any branch)	41	27.5	34	15.0	75	20.0
Home science-Food & Nutrition	5	3.4	44	19.5	49	13.1
Home science-Child Development	2	1.3	27	12.0	29	7.8
Plant breeding	19	12.8	22	9.7	41	10.9
Horticulture	37	24.8	34	15.0	71	18.9
Agricultural extension	19	12.8	40	17.7	59	15.7
Agriculture engineering	6	4.0	4	1.8	10	2.7
Above all	149	100	226	100	375	100

The field of specialisation of the respondents may have biased the preference to specialisation. To check this it may be worthwhile to look at the data on respondents showing preference to their own specialisation (Table-5.18).

Table-5.18: Respondents suggesting their own specialization as appropriate for women at post-graduation

Specialization	Male		Female		Male + Female	
	N	%	N	%	N	%
Management	1	5.3	-		1	2.1
Home science- Food & Nutrition	1	5.3	2	6.9	3	6.2
Home science (any branch)	-	-	3	10.4	3	6.3
Plant breeding	3	15.8	7	24.1	10	20.8
Horticulture	12	63.2	9	31.0	21	43.8
Extension	-	-	5	17.2	5	10.4
Agronomy	2	10.4	3	10.4	5	10.3
Above all	19	100	29	100	48	100

The data in Table-5.18 show that out of total 677 responses (from Table-5.16) about 48 responses matched with the respondents' own specialisation. This clearly indicates that the respondents were not biased to their own specialisation in recommending appropriate specialisation for women at post-graduation. It is interesting to note that most of the home science graduates recommended various agricultural specialisations and similarly agricultural science graduates recommended home science specialisations.

Reservation for women in education

The data on student respondents' opinion on reservation for women in education are presented in Table-5.19 and Fig-5.11. The respondents were equally divided (approximately one third for each) for keeping reservations at reduced level, increased level and total removal. On the whole, two third respondents agreed on reservations but they differed on the proportion of reservations.

Table-5.19: Reservation for women in education

Reservation for women in education	Male		Female		Male+Female	
	N	%	N	%	N	%
Should be there, but reduced	47	37.0	35	23.6	82	29.8
Should be there, but increased	33	26.0	62	41.9	95	34.6
Should not be there	47	37.0	51	34.5	98	35.6
Number responded	127	100	148	100	275	100
No response	12		28		40	
Total students sample	139		176		315	

About 63.0 per cent of the male respondents expressed the need for reservation for women in education; 26.0 per cent for increased level and 37.0 per cent for reduced level - but an equal percentage (37%) opposed suggesting total removal of reservation. Among the female student respondents, about 65.5 per cent agreed for reservations; 41.9 per cent for increase in reservation and 23.6 per cent for keeping reservations at reduced level, whereas 34.5 per cent were of the opinion to abolish it.

Reservation for women in employment

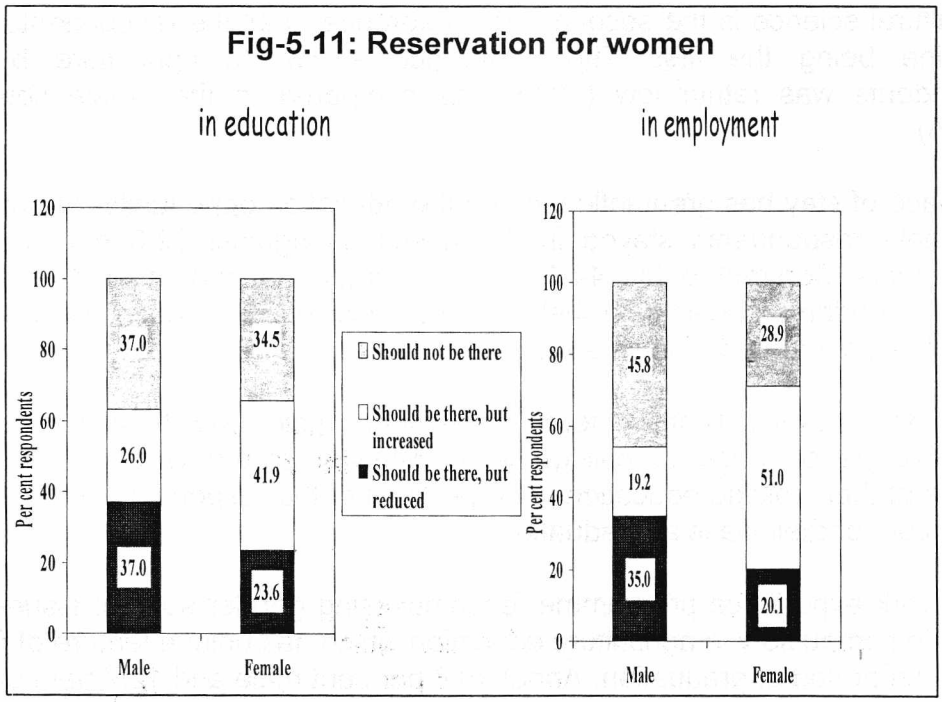
The data on the opinion of student respondents over reservation for women in employment are furnished in Table-5.20 and Fig-5.11. These are similar to those expressed for reservation of women in education given in Table-5.19. On the whole, about 63.6 per cent of both male and female student respondents expressed their opinion that the reservation in employment should be there, and the remaining 36.4 per were against reservation.

Amongst the gender groups, 45.8 per cent male and 28.9 per cent female respondents were against reservations. 51.0 per cent female and 19.2 per cent male respondents' preferred increase in reservations. The opinions for reservations by male and female respondents were not in agreement and were in opposite direction; male respondents opposing increase in reservations for women whereas female respondents seeking increase in reservations. Female respondents expressed a need to extend reservations to women in all activities supported by state such as scholarships, admissions, nominations, awards, curricular and co-curricular activities.

Table-5.20: Reservation for women in employment

Reservation for women in employment	**Male**		**Female**		**Male+Female**	
	N	**%**	**N**	**%**	**N**	**%**
Should be there, but reduced	42	35.0	30	20.1	72	26.8
Should be there, but increased	23	19.2	76	51.0	99	36.8
Should not be there	55	45.8	43	28.9	98	36.4
Number responded	120	100	149	100	269	100
No response	19		27		46	
Total students sample	139		176		315	

Fig-5.11: Reservation for women



Summary

1. About 85.1 per cent of female respondents had their education in schools located in urban areas as against 72.0 per cent male respondents. This supports the general feeling about growing urban character of the agricultural education. Women students with rural background are to be encouraged to join agricultural courses so as to increase the number of women graduates in agricultural development departments.
2. Majority of male respondents came from co-education schools whereas their female counterparts came from exclusive girls, schools. Greater per cent (49.9%) of female respondents came from private schools having English as medium of instruction whereas the majority of male students (54.6%) came from state-supported schools where the medium of instruction is in local languages.

3. At school level, female respondents showed better performance than their male counterparts. About 73.0 per cent of female respondents performed better at school by securing first class / division in comparison with 64.5 per cent male respondents.

4. About 86.3 per cent of respondents expressed that their parents were the most influential in the selection of career. Among the parents also, 58.3 per cent of female respondents pointed out to an overwhelming support from their mother whereas the male respondents indicated influence of mother and father as almost equal. On the other hand, the respondents did not have guidance or influence in choosing their specialisations at PG.

5. Agricultural science is the second best preference to all the respondents whereas medicine being the first. The preference shown to agriculture by female respondents was rather low (18.5%) as compared to their male counterparts (30.3%).

6. The place of stay has great influence on the education opportunity. About 67.4 per cent male respondents stayed in the hostel as against 52.0 per cent female respondents. Contrary to this, 44.1 per cent women respondents and 27.0 per cent male respondents stayed with their parents. This reflects greater mobility of male students as compared to female students.

7. There was no significant difference between male and female respondents' academic performance at college level. Majority of the respondents was top rankers at their college education; 87.6 per cent of the respondents were in the top 25 per cent of their class at graduation.

8. Rural work experience programme, encompassing gender specific issues, should be made compulsory in agriculture education which has unique feature of field work during the period of graduation. About 10.8 per cent male and 12.7 per cent female respondents indicated experiencing some difficulty in the fieldwork at college due to lack of practical training and guidance, physical strain and non-agricultural background.

9. The curriculum for agricultural education at graduation level in all streams must be revamped and gender-sensitized.

10. Both the male and female student respondents closely agreed on the criteria for admission into PG course; the responses indicated 37 per cent weightage for marks at qualifying degree, 42 per cent weightage for entrance test and 21 per cent weightage for interview.

11. Equal percentage of male and female respondents (around 40%) indicated better professional prospects as the main reason for pursuing PG course. As most jobs available at graduation level were field-based, more and more agricultural graduates of both the sexes were pursuing PG course which not only increases professional prospects but also increases opportunities for urban jobs.

12. Nearly two-thirds respondents desired reservations for women in education and all curricular and co-curricular activities like scholarships, awards, admissions etc.

Chapter – VI

Work environment

Physical facilities at work place

Some information on organisational arrangements about the physical facilities near or around the work place like school, creche, health, transport, wash rooms, accommodation and also some physical processes like grant of leave and flexibility in working hours were collected.

Employees' welfare is of low priority in most state-supported agricultural organisations. However, in the recent past, the importance of these facilities are well acknowledged, and there are certain guidelines from central government in this regard. In order to assess the availability of various physical facilities, the respondents were asked to reflect on the status of certain facilities in their work places. As the status of physical facilities is more relevant to working personnel and very little to students, the latter were not asked to respond to these questions as these questions were not pertinent to them. The actual responses received out of 983 individuals (668 females and 315 males) only are discussed below.

Creche

One of the important facilities sought by working women, having young children, is creche near the work place. The status of creche facility, as reflected by the respondents, is presented in Table-6.1.

Table-6.1: Creche facility provided by the employers

Status of creche	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	183	83.6	405	82.7	588	82.9
Un-satisfactory	13	5.9	26	5.3	39	5.5
Satisfactory	23	10.5	59	12.0	82	11.6
Number responded	219	100.0	490	100.0	709	100.0
No response	96		178		274	
Total graduate sample	315		668		983	

N = Number of respondents

Both the male and female respondents were in agreement on the availability of this facility; only 17.1 per cent indicated having this facility, but 5.5 per cent cited it as not in satisfactory condition. Nearly 82.9 per cent respondents indicated absence of

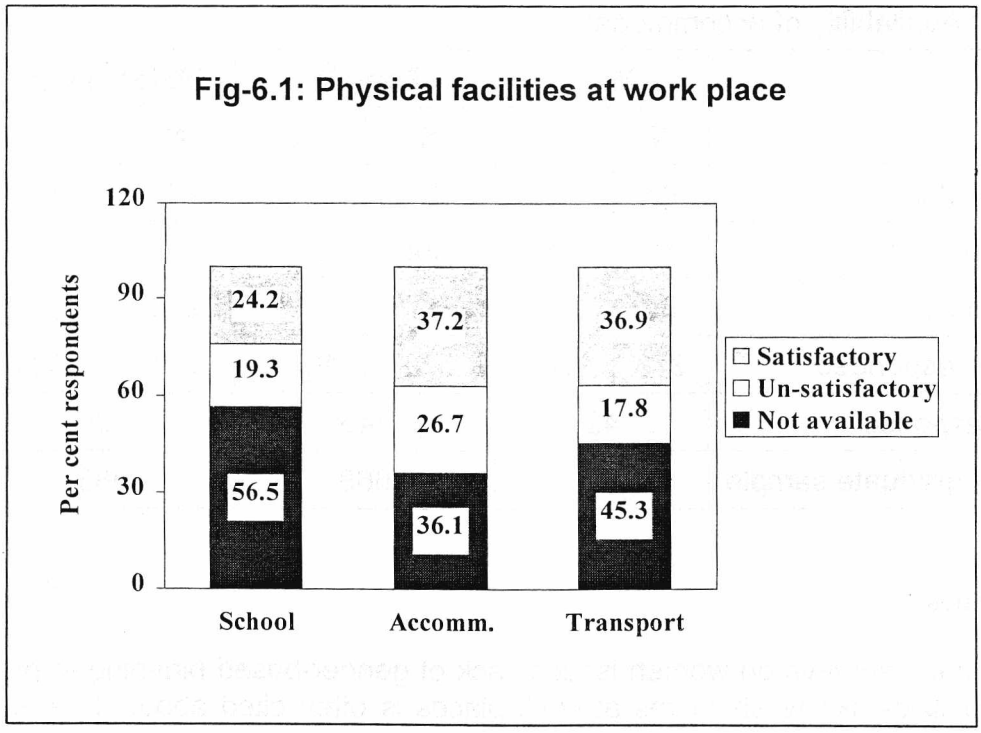
this facility. About 96 males and 178 females did not respond to this query. Relatively high response from female respondents and low response from male respondents shows that female respondents are more concerned about this critical facility.

School

School is yet another important factor from the employees' welfare point of view. School has become a basic need to all working personnel and, hence, this is an important determinant in judging the overall health and satisfaction of the employees. The responses on school facility near their work place are presented in Table-6.2 and Fig-6.1.

Table-6.2: Availability of school near place of work

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	133	52.4	295	58.5	428	56.5
Un-satisfactory	62	24.4	84	16.7	146	19.3
Satisfactory	59	23.2	125	24.8	183	24.2
Number responded	254	100.0	504	100.0	757	100.0
No response	61		164		226	
Total graduate sample	315		668		983	



About 43.5 per cent respondents indicated availability of school near the work place but 19.3 per cent were not satisfied with the available school. Nearly 56.5 per cent respondents indicated non-availability of school in their organisation or near their work place. About 226 persons did not respond. It should be kept in mind that this question is not relevant to nearly one fourth of the total respondents who worked in small offices, self-employed and unemployed. One striking feature on this issue is that there was good agreement between the male and female responses indicating it as a concern to both. As a matter of fact, one of the biggest problems for middle-aged agricultural professionals is about school facility. By and large, agricultural organizations do not have their own schools, and good number of institutions are located in such places where school facilities are inadequate. This is the biggest problem in deployment of professional graduates to agricultural institutions across the country.

Accommodation

Although housing is not a major need, at some places it becomes a very critical factor. There is, in general, a great demand for accommodation near work place. The status of accommodation availability is shown in Table-6.3. Nearly two-thirds of the respondents expressed availability of accommodation; 26.7 per cent cited the accommodation as satisfactory and 37.2 per cent cited it as unsatisfactory. Another 36.1 per cent of respondents opined non-availability of accommodation. 189 respondents did not express any opinion. The status on accommodation is similar to that with other facilities discussed above in that the organisations provide limited accommodation to their employees and the rest depend on other sources.

Table-6.3: Availability of accommodation

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	96	35.1	191	36.6	287	36.1
Un-satisfactory	78	28.6	134	25.7	212	26.7
Satisfactory	99	36.3	197	37.7	295	37.2
Number responded	273	100.0	522	100.0	794	100.0
No response	42		146		189	
Total graduate sample	315		668		983	

Wash rooms

In many surveys on women issues, lack of gender-based planning in providing physical facilities like wash rooms at work places is often cited about. This is widely

acknowledged and, therefore, an effort was made to identify the status of this facility in the reach of working agricultural graduates. The data in Table-6.4 show that only 9.4 per cent respondents expressed lack of non-availability of wash room facility. Of the available facility, 45.8 per cent expressed satisfactory and 44.8 per cent as unsatisfactory. The responses of male and female respondents did not show much variation. Thus, the facility available to female personnel is as good or as bad as that available to their male colleagues, and on the whole the situation is not as bad as depicted in the women surveys. It is prudent to say that the facilities in most agricultural institutions are rather planned with due care to gender.

Table-6.4: Wash room facility at work place

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	24	8.6	54	9.8	78	9.4
Un-satisfactory	121	43.2	252	45.6	373	44.8
Satisfactory	135	48.2	247	44.6	381	45.8
Number responded	280	100.0	553	100.0	832	100.0
No response	35		115		151	
Total graduate sample	315		668		983	

Transport

One more critical factor in favour of employees' welfare is availability of transport to work place. It is often cited that though transport is needed to both the genders, its need is more for female employees than for the male employees as there is security and punctuality with organised transport provided by the employer. The responses on the status of transport are given in Table-6.5. As expected, only 36.9 per cent respondents expressed satisfactory transport whereas 17.8 expressed it as unsatisfactory transport and 45.3 per cent cited total absence of any transport. There was little difference based on gender but lack of this facility is a point of concern to both genders.

Another important aspect related to transport is about the availability of transport for working late or beyond office hours or on holidays. The data shown in Table-6.6 show that satisfactory transport was provided in case of 22.4 per cent respondents only. About 23.4 per cent expressed unsatisfactory transport and 54.2 per cent expressed total absence of such facility. The data shown in Table-6.6 do not reflect any gender dependence on this. However, as agricultural graduates are expected to work in difficult situations, lack of this facility is a serious constraint and the organisations will not be able to use the trained manpower effectively in the absence of this facility.

Table-6.5: Transport to work place

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	115	42.8	248	46.5	363	45.3
Un-satisfactory	53	19.7	90	16.9	143	17.8
Satisfactory	101	37.5	195	36.6	296	36.9
Number responded	269	100.0	533	100.0	802	100.0
No response	46		135		181	
Total graduate sample	315		668		983	

Table-6.6: Transport while working beyond office hours

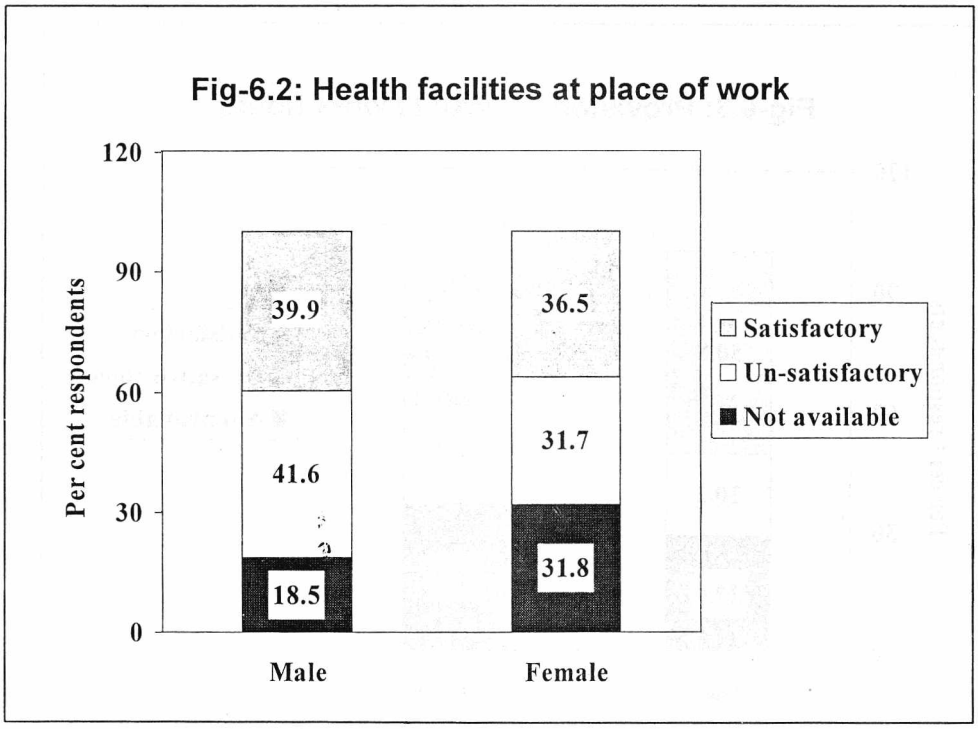
Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	147	55.9	279	53.3	426	54.2
Un-satisfactory	59	22.4	125	23.9	184	23.4
Satisfactory	57	21.7	119	22.8	176	22.4
Number responded	263	100.0	523	100.0	786	100.0
No response	52		145		197	
Total graduate sample	315		668		983	

Health facilities

The data on health facilities, indicated by the employees, are shown in Table-6.7 and Fig-6.2. Nearly two-third respondents (72.7 per cent) indicated availability of health facility but nearly half of these respondents expressed the facility as unsatisfactory. 27.3 per cent indicated non-availability of health facility. More female respondents (31.8 per cent) expressed the non-availability of health facilities as compared to male respondents (18.5 per cent). This emanates from the fact that at many places single doctor hospitals have male doctors. Even in urban areas, the health-support available to female personnel is restricted. On the whole the responses reflect the nature of the persons' place of work.

Table-6.7: Health facilities at place of work

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	52	18.5	172	31.8	224	27.3
Un-satisfactory	117	41.6	171	31.7	288	35.1
Satisfactory	112	39.9	197	36.5	308	37.6
Number responded	281	100.0	540	100.0	820	100.0
No response	34		128		223	
Total graduate sample	315		668		983	

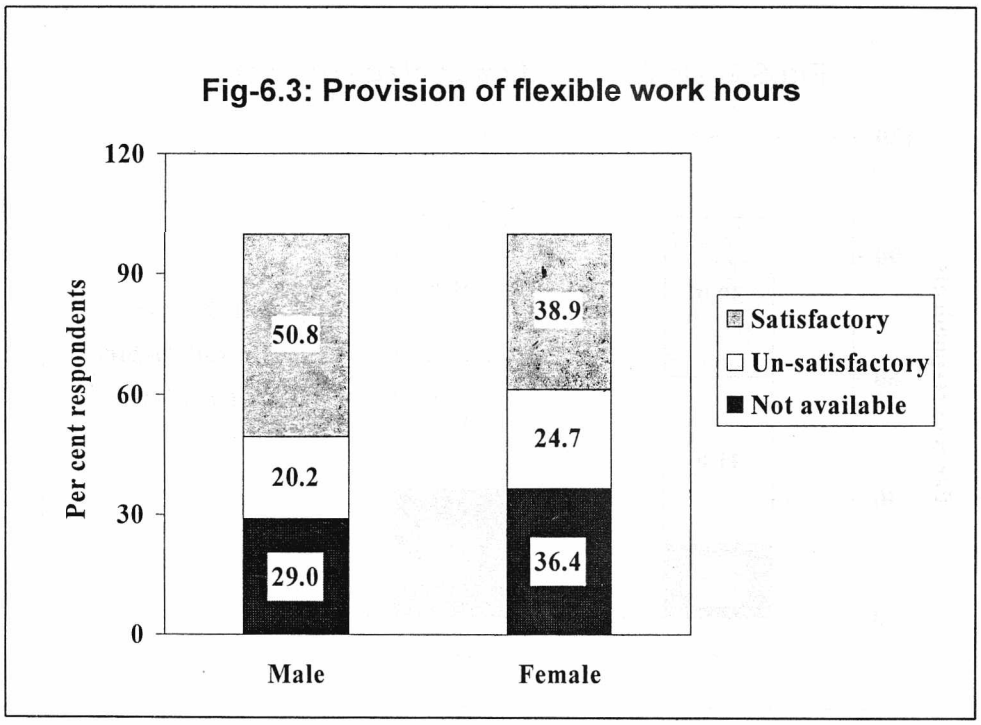


Flexible work hours

The data on provision for flexible working hours are given in Table-6.8 and Fig-6.3. Nearly one third respondents indicated absence of flexible work option. However, 42.9 per cent respondents indicated satisfactory status, and another 23.2 per cent as available but unsatisfactory. Amongst the two gender groups, 36.4 per cent females and 29.0 per cent males expressed its absence in their system. Flexible working hours and part-time working options are needed to working women with family responsibilities.

Table-6.8: Provision of flexible work hours

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	79	29.0	190	36.4	269	33.9
Un-satisfactory	55	20.2	129	24.7	184	23.2
Satisfactory	138	50.8	203	38.9	340	42.9
Number responded	272	100.0	522	100.0	793	100.0
No response	43		146		190	
Total graduate sample	315		668		983	



Leave granting

One of the simple demands of most working women is flexibility in grant of leave so as to enable them to do justice to their family and job responsibilities. The responses in this context are given in Table-6.9. A majority (90.7%) of the respondents indicated ease in grant of leave though 19.2 per cent mentioned it as unsatisfactory. Only 9.3 per cent respondents indicated difficulty in leave sanction. The responses from male and female respondents were not greatly different on this issue and the overall situation is satisfactory. It should be noted that most agricultural graduates

begin their career in reasonable good starting position as junior executives, and they are unlikely to be treated as subordinate staffs who are subjected to such restrictions.

Table-6.9: Flexibility in grant of leave

Status	Male		Female		Male+Female	
	N	%	N	%	N	%
Not available	28	10.2	48	8.9	76	9.3
Un-satisfactory	42	15.3	114	21.2	156	19.2
Satisfactory	205	74.5	377	69.9	582	71.5
Number responded	275	100.0	539	100.0	814	100.0
No response	40		129		169	
Total graduate sample	315		668		983	

Facilities for students

In addition, some students had also expressed lack of physical facilities like hostels and common facilities for curricular and extra-curricular activities. With increasing number of students seeking admission to agricultural courses, the existing facilities are inadequate and there is strong demand to enhance this facility. The participation of female students in extra and co-curricular activities is almost insignificant as most universities do not have exclusive facilities for them.

Summary

One striking feature from the data on various physical facilities shown above is that there is no much variation in the responses of male and female respondents regarding such facilities. The major findings on various facilities are summarised below.

1. More than 80 per cent of respondents indicated absence of creche near the work place, which is one of the important facilities sought by working women having young children.

2. Nearly 56.5 per cent respondents indicated non-availability of school in their organization or near their work place, which is a basic need to all working personnel. 19.3 per cent respondents (out of 329), who indicated availability of school near the work place, were also not satisfied with the available school.

3. Nearly two-thirds of the respondents expressed availability of accommodation near work place, out of which 37.2 per cent cited the same as satisfactory and 26.7 per cent as not satisfactory.

4. Both male and female respondents agreed on the status of the wash room facility at the work place. About 9.4 per cent respondents expressed lack of this facility, 45.8 per cent expressed satisfactory and 44.8 per cent as unsatisfactory

5. Organized transport facility in any organization is considered not only to maintain punctuality but also provides security. Only 45.3 per cent respondents expressed non-availability of this facility. But 54.2 per cent respondents indicated absence of office transport for the people who work late or on holidays. There was no gender difference on this aspect.

6. Nearly 72.7 per cent respondents indicated availability of health facility but nearly half of them expressed the facility as unsatisfactory. Relatively more number of female respondents indicated non-availability of health facility, as the health clinics at most places had male doctors only.

7. About 36.4 per cent female respondents and 29 per cent male respondents expressed absence of flexible working hours in their system. However, on the whole, two third respondents indicated having this provision, which is needed to working women with family responsibilities.

8. Flexibility in grant of leave is one of the simple demands of most working women who are to cope with both family and job responsibilities. Majority of (71.5%) respondents indicated ease in grant of leave though 19.2 per cent mentioned it as unsatisfactory. Only 9.3 per cent respondents indicated difficulty in leave sanction. There is no great difference in the responses of males and female respondents on this issue.

Chapter – VII

Career information

General information on career of agricultural graduates is the focus of this chapter. Employment details, nature of job, occupational preference, participation in employees and professional associations, training and preferences in choice of co-workers are examined. Relationship with co-workers is a critical factor and therefore it has been examined in great detail. This section is aimed at assessing employment status of women graduates as compared to the status of the male graduates.

Employment details

The employment details of the respondents are given in Table-7.1. The data in Table-7.1 pertain to 983 graduates out of the total 1,298 respondents, i.e., excluding 315 students.

Table-7.1: Employment details

System	Male		Female		Male+Female	
	N	%	N	%	N	%
SAUs	193	42.5	312	36.9	505	38.9
General universities	2	0.4	24	2.8	26	2.0
ICAR	47	10.3	67	7.9	114	8.8
Central departments	9	1.9	15	1.7	24	1.8
State departments	44	9.6	148	17.5	192	14.8
Private institutions	10	2.3	36	4.2	46	3.5
Financial institutions	3	0.6	10	1.1	13	1.0
Others *	7	1.5	56	6.6	63	4.9
Students	139	30.6	176	20.8	315	24.3
Total sample	454	100.0	844	100.0	1298	100.0

N = Number of respondents

* Others include unemployed and housewives.

The employment details (Table-7.1) reveal that 53.7 per cent of the respondents were employed in SAUs and state government departments. About 2.0 per cent of the respondents were employed in general universities, 3.5 per cent employed in private sector, 8.8 per cent in ICAR institutions and 1.8 per cent in

central departments. Only a mere 1.0 per cent respondents were employed in banks and financial agencies. Out of the 983 respondents (excluding 315 students), 63 persons were unemployed. Gender-wise it was observed that more number of male respondents was absorbed in the SAU system (42.5%) as against 36.9% of the female respondents. However, it is interesting to note that 2.8 per cent female respondents were employed in general universities as against only 0.4 per cent for the male respondents.

Time lag in getting job

The time lag between the completion of education and joining in the first job is given in Table-7.2.

Table-7.2: Time lag between the completion of education and joining in job

Time lag	Male		Female		Male+Female	
	N	%	N	%	N	%
No time lag	151	49.0	276	41.3	427	46.4
1 year	83	27.0	191	28.6	274	29.8
2 years	38	12.3	73	10.9	111	12.1
3 years	20	6.5	36	5.4	56	6.1
4 years	7	2.3	21	3.1	28	3.0
5 years	5	1.6	6	0.9	11	1.2
6 years	2	0.7	7	1.0	9	1.0
7 years	2	0.7	2	0.3	4	0.4
Number responded	308	100.1.0	612	91.5.0	920	100.0
Others*	7		56		63	
Total graduates sample	315		668		983	

* Others include unemployed and housewives

Relatively more number of male respondents (49.0%) were able to get job without any time lag as compared to female respondents (41.3%). On the whole 43.4 per cent of the respondents could secure job without any time lag, 27.9 per cent had to wait for a year and the rest 23.3 per cent had to wait for more than a year. Though the time to secure employment appeared to be same for both male and female respondents, more number of female respondents were employed in temporary or short-term jobs (Table-9.6). This is further substantiated by the relatively more number of female respondents working in low-salary jobs as compared to male respondents (Table-4.11).

Location of work place

Location of work place of male and female respondents is presented in Table-7.3. Bulk of the respondents, i.e. 68.5 per cent were from headquarters, 17.9 per cent from major centre and 13.6 per cent from field station. Amongst those responded, it was found that 73.6 per cent male respondents and 65.9 per cent female respondents were from the headquarters of an institution and another 16.6 per cent males and 18.5 per cent females were from major centers of an institution.

As majority of the respondents were from headquarters, the location of work place might have positively influenced in having better access to information / communication within and outside organization, having more opportunities to get challenging assignments thereby being more successful in profession as compared to other male and female colleagues similar in age, qualification and experience.

Table-7.3: Location of work place of male and female respondents

Location	Male		Female		Male+Female	
	N	%	N	%	N	%
Headquarters	226	73.6	398	65.9	624	68.5
Major center	51	16.6	112	18.5	163	17.9
Field station	30	9.8	94	15.6	124	13.6
Number responded	307	100.0	604	100.0	911	100.0
No response	8		64		72	
Total graduates sample	315		668		983	

Nature of job

The data on male and female respondents' perception regarding fieldwork in job are presented in Table-7.4. It was found that 57.5 per cent of both male and female respondents had jobs that required frequent field visits, whereas 42.5 per cent of respondents had jobs that did not require frequent field visits. The respondents, both male and female, who indicated participation in field visits had similar experience, and, both categories claimed that they spend around 14 days a month for field visits in performing their job activities. It should be noted that 42.5 per cent of the respondents did not have field based-jobs and hence all the jobs available to agricultural professionals need not be treated as field based.

Table-7.4: Respondents perception regarding field work in job

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
Frequent field visits	185	59.5	346	56.4	531	57.5
No frequent field visits	126	40.5	267	43.6	393	42.5
Number responded	311	100.0	613	100.0	924	100.0
No response	4		55		59	
Total graduates sample	315		668		983	

Participation in employee associations

The data on status of participation in employees associations are given in Table-7.5. The data in Table-7.5 suggest that 68.0 per cent of the respondents' organizations have employee associations/ unions. Only 32.0 per cent of the respondents' had indicated lack of such associations. The employee associations are means to discuss and exchange views not only on professional issues but also on various job-related and developmental issues for the good of its members. As a matter of fact, every organization has employee associations, perhaps cadre-wise and region-wise too. But, in most places, they are not functional and therefore some employees fail to see their presence. In the light of this, it is not surprising to note that one-third respondents had indicated absence of any such associations.

Table-7.5: Response on status of employee associations

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Associations exist	215	72.6	405	65.7	620	68.0
No associations	81	27.4	211	34.3	292	32.0
Number responded	296	100.0	616	100.0	912	100.0
No response	19		52		71	
Total graduates sample	315		668		983	

From gender-wise response, it could be noticed that 34.3 per cent of the female respondents had no employee associations whereas it was 27.4 per cent in the case of male respondents. This reflects that either more number of female employees are distancing from such associations or they are not being encouraged.

This aspect will be further resolved from the responses to other questions on this aspect discussed below.

The respondents who indicated positively on having employee associations (from Table-7.5) were asked to further specify whether they are members of any such associations so as to assess their active participation. The responses for this are given in Table-7.6. Out of 620 respondents who had acknowledged the existence of employee associations, 88.2 per cent had indicated their membership. About 11.8 per cent were not members but acknowledge their existence. This is expected since membership in such associations is voluntary. The responses of both male and female respondents were similar on this issue.

Table-7.6: Membership in employee associations

Response on membership	**Male**		**Female**		**Male + Female**	
	N	**%**	**N**	**%**	**N**	**%**
Yes, as a member	185	88.5	345	88.0	530	88.2
Not a member	24	11.5	47	12.0	71	11.8
Number responded	209	100.0	392	100.0	601	100.0
No response	6		13		19	
Total eligible sample	215		405		620	

Participation in management of employee associations

The response to the question whether the respondent is an office bearer or not is given in Table-7.7.

Table-7.7: Participation in management of employee associations

Response on management of employee associations	**Male**		**Female**		**Male + Female**	
	N	**%**	**N**	**%**	**N**	**%**
Yes, as office bearer	31	19.7	44	20.0	75	19.9
No	126	80.3	176	80.0	302	80.1
Number responded	157	100.0	220	100.0	377	100.0
No response	58		185		243	
Total eligible sample	215		415		620	

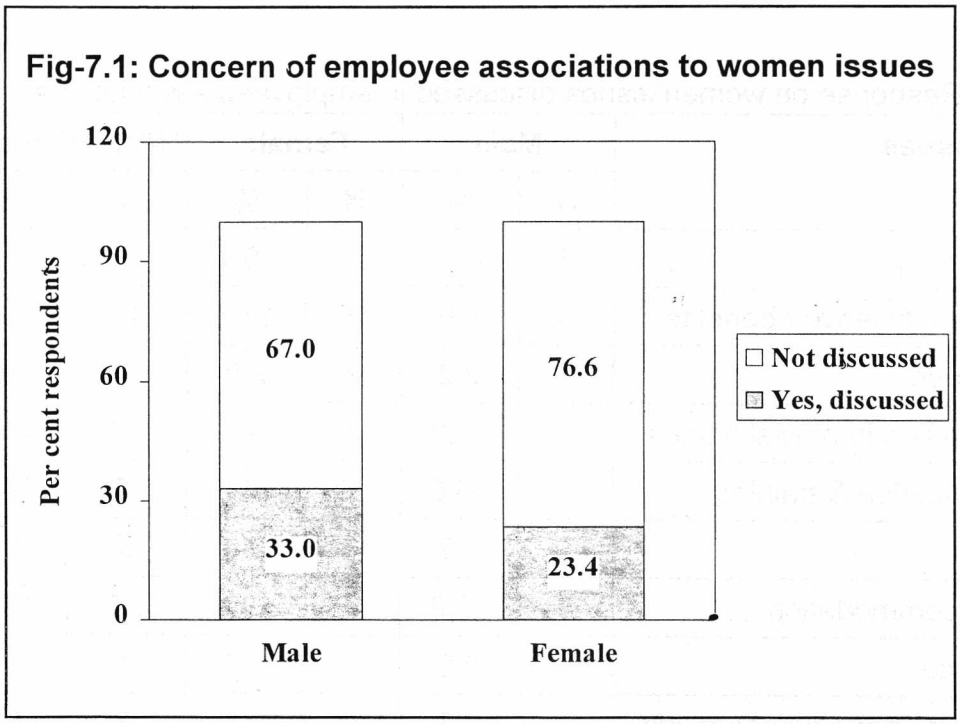
Only 19.9 per cent of the respondents were office bearers and the remaining 80.1 per cent were not office bearers. The responses of both male and female respondents were alike. The representation in management of associations was fairly good as nearly one fifth of the members were office bearers and it may not be exaggeration to say that it is on the higher side. It is a common practice in all such associations to have large number of sub-committees or groups to look into specific issues thereby allowing good number of members to participate actively in the association activities. However, 243 out of 620 respondents left this question blank. Considering the high response level to the earlier question on membership (Table-7.6), it may be possible that majority of the 243 respondents were not members in the management committees and hence refrained from answering this question. Considering all the non-respondents as mere members only might not alter the gender-wise representation but could scale down the per cent representation in management of associations from 19.9 to 12.0 per cent.

Concern of employee associations to women issues

Data on concern of employee associations to women issues are given in Table-7.8 and Fig-7.1. The data in Table-7.8 and Fig-7.1 indicate response to the question 'whether women issues are raised in their respective associations or not'. This question was answered by 550 out of 620 respondents who had indicated existence of employee associations in their organizations. It is a matter of concern that about 73.3 per cent (both male and female respondents) attributed that women issues were not discussed. Gender-wise, the female respondents, who are the target population of this study, were highly disappointed over this issue as 76.6 per cent indicated absence of any dialogue on their issues as against 67.0 per cent by male respondents. Since women issues were not discussed, it may possibly account for the lack of interest shown by female respondents for participation in the employee associations.

Table-7.8: Data on concern of employee associations to women issues

Response on discussion of women issues	Male		Female		Male + Female	
	N	%	N	%	N	%
Yes, discussed	63	33.0	84	23.4	147	26.7
Not discussed	128	67.0	275	76.6	403	73.3
Number responded	191	100.0	359	100.0	550	100.0
No response	24		46		70	
Total eligible sample	215		415		620	



Women issues discussed in employees associations

The responses on type and nature of women-related issues, discussed in employee associations, are given in Table-7.9 and Fig-7.2. It is alarming to note that only 114 respondents out of 620 had responded to this question. But it should be noted that only 147 (26.7% respondents from Table-7.8) indicated positively on discussion of women issues in the employee associations. The issues listed by the 114 respondents were grouped in to eleven broad categories and are presented in Table-7.9.

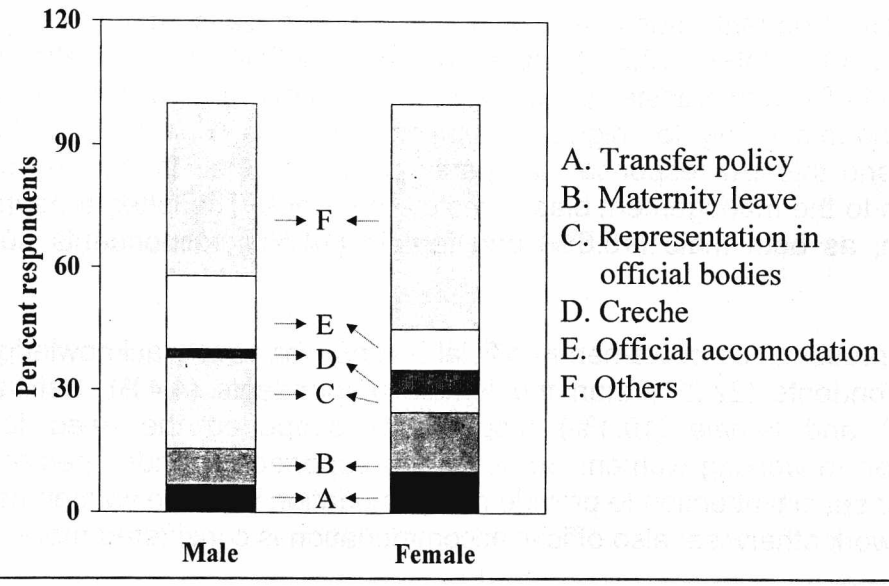
The most important issues discussed are higher education and training (14.9%) followed by accommodation (13.2%), maternity leave (12.3%), representation in official committees (11.4%) and transfer policy (8.8%). As shown elsewhere, the per cent female respondents going for higher education was less than that of their male counterparts and this low response may partly be due to their family responsibilities and partly due to the management bias to male employees. The latter appears to be a strong reason, as both male (15.6%) and female (14.5%) respondents support it equally.

Low representation of women in official bodies was widely acknowledged more by male respondents (22.2%) than the female respondents (4.4%). Similarly, both male (17.8%) and female (10.1%) respondents supported the need for official accommodation to working women. Some of the respondents made specific mention of the need for special attention to provide accommodation to single women as it would be difficult to work otherwise; also official accommodation is considered more safe.

Table-7.9: Response on women issues discussed in employees associations

Women issues	Male		Female		Male+Female	
	N	%	N	%	N	%
Transfer policy	3	6.7	7	10.1	10	8.8
Long maternity leave /-benefits	4	8.9	10	14.5	14	12.3
Special leave	1	2.2	2	2.9	3	2.6
Representation in official bodies	10	22.2	3	4.4	13	11.4
Higher education & training	7	15.6	10	14.5	17	14.9
Creche	1	2.2	4	5.8	5	4.4
Official accommodation	8	17.8	7	10.1	15	13.2
Conveyance	1	2.2	1	1.5	2	1.7
Inappropriate behaviour/ security	1	2.2	4	5.8	5	4.4
Policy for flexible working hours	2	4.4	4	5.8	6	5.3
Others	7	15.6	17	24.6	24	21.0
Number responded	45	100.0	69	100.0	114	100.0
No response	18		15		33	
Total eligible sample	63		84		147	

Fig-7.2: Women issues discussed in employee associations



Some respondents had given brief description of the nature of issue discussed in the employees associations. Some select issues are given below:

1044 Provision of accommodation to single women on the institute premises, opening of crèche for children. (Female scientist, 29)

1641 They should be provided accommodation facility on priority and may be given lighter jobs. (Male scientist, 58)

1072 Conveyance to be provided to women employees to work place from main institute/ office. (Male manager, 37)

1086 While changing the working time, the interest of women teachers was considered. (Female teacher, 59)

1334 Separate toilets and also provision of recreation facilities in the office. (Female Agricultural officer, 36)

1182 Security for women in lonely places. (Female researcher, 32)

1575 Women be posted or given opportunity to work at places where their husbands work or vice versa. (Male teacher, 39)

1746 Reservation of 33 per cent in promotions also. (Female teacher, 55)

2728 Home science subject must be included in the IAS / IFS exams as large number of women pursuing home science will be benefited to appear in these exams. (Female student, 21)

In a specific study by Saroja Krishnaswamy (1998), the women graduates of University of Agricultural Sciences, Dharwad, strongly recommended the need for women forum to address issues specific to women; the details of this study are given as a case in Annexure-15. Women working in other organizations have expressed similar concerns as well.

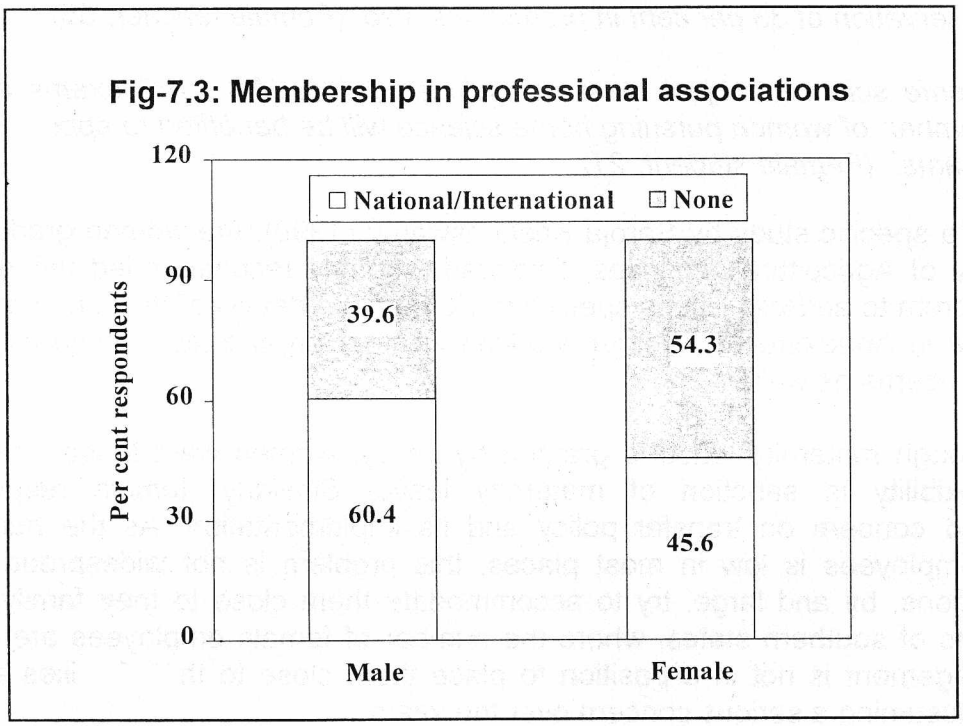
Though maternity leave is granted by policy, women want longer leave and more flexibility in sanction of maternity leave. Similarly, female respondents expressed concern on transfer policy and its implementation. As the number of female employees is low in most places, this problem is not widespread as the organizations, by and large, try to accommodate them close to their family. But in most parts of southern states, where the number of female employees are on rise, the management is not in a position to place them close to their families and this issue is assuming a serious concern over the years.

Association with professional societies

The data on membership in various national and international professional societies are given in Table-7.10 and Fig-7.3. Out of the total sample of 1,298, nearly half the respondents did not have membership in any professional society and about 11 per cent had association with international societies. Almost all the respondents, having membership in international societies, were members of at least one national-level professional body. In the gender wise representation, association of female respondents is less than that of their male colleagues in both national and international societies. Only 45.6 per cent of female respondents had membership in either national or international society as against 60.4 per cent of male respondents

Table-7.10: Membership in national and international professional associations

Association category	Male		Female		Male + Female	
	N	%	N	%	N	%
National	272	59.9	379	44.9	651	50.1
International	72	15.9	71	8.41	143	11.0
Either	274	60.4	385	45.6	659	50.8
None	180	39.6	459	54.3	639	49.2
Total sample	798	100.0	1294	100.0	2092	100.0



The data in Table-7.10 comprise responses from students also. In case of responses exclusively from students, only 20 per cent could participate as against 60 per cent for others (excluding students). Low participation from students reflects that

the professional societies in agriculture do not give sufficient role to students and the universities and professional societies do not subsidize and support student participation.

The data on average number of memberships per individual respondent in national and international professional societies are shown in Table-7.11.

Table-7.11: Average membership in national and international professional societies

Society type	Male		Female		Male+Female	
	S	Avg	S	Avg	S	Avg
National	648	2.4	905	2.4	1553	2.4
International	92	1.3	91	1.3	183	1.3
Both	740	2.7	996	2.6	1736	2.6

S = Sum of societies associated as member
Avg= Average is calculated as ratio between sum and number of respondents

Table-7.11 data reveal that the average participation of male and female respondents was almost the same. The average participation was 2.4 per person in national societies, 1.3 per person in international societies and 2.6 per person in either of the two. This clearly indicates that most respondents who happened to have membership in professional societies possessed membership in 2 or 3 societies. Membership in professional societies reflects concern to discipline and profession, and gives an opportunity to share and exchange ideas and views on professional matters. Though the overall situation reflects a healthy trend, absence of half the sample needs attention. The organizations may have to encourage and support all the employees to enroll their membership with at least one professional society.

The responses of the 659 individuals, who had association with national and international societies, for participation in management of the professional societies as office bearer are presented in Table-7.12.

Table-7.12: Participation in management of professional societies as office bearer in national and international professional societies

Society type	Male		Female		Male+Female	
	N	%	N	%	N	%
National	45	16.4	45	11.7	90	13.7
International	2	0.7	2	0.5	4	0.6
Either	46	16.8	47	12.2	93	14.1
None	228	83.2	338	87.8	566	85.9
Total eligible sample	274	100.0	385	45.6	659	50.8

The data in Table-7.12 reveal that nearly 14.1 per cent of the respondents were office bearers of national and international professional societies. The gender-wise differences were small and it was 16.7 per cent for male respondents as against 12.2 per cent for female respondents. For both sexes, the participation in international societies was moderate (0.6%), but was quite high in national societies (13.7%). This indicates that national societies are either small in size or encourage large number to figure in the management.

The data on average participation in management of professional societies per individual is shown in Table-7.13.

Table-7.13: Average participation in management of professional societies

Society type	Male		Female		Male+Female	
	S	Avg	S	Avg	S	Avg
National	64	1.4	60	1.3	124	1.4
International	2	1.0	4	2.0	6	1.5
Both	66	1.4	64	1.4	130	1.4

S = Sum of societies participated
Avg= Average is calculated as ratio between sum and number of respondents

The responses of the 93 individuals who had association with management of national or international societies (from Table-7.12) are reflected in Table-7.13. Average participation in management of the professional societies as office bearer in either national or international societies by both male and female respondents was nearly same and it was about 1.4 per person. This indicates that those individuals associated with any one management of society are likely to be associated with more than one.

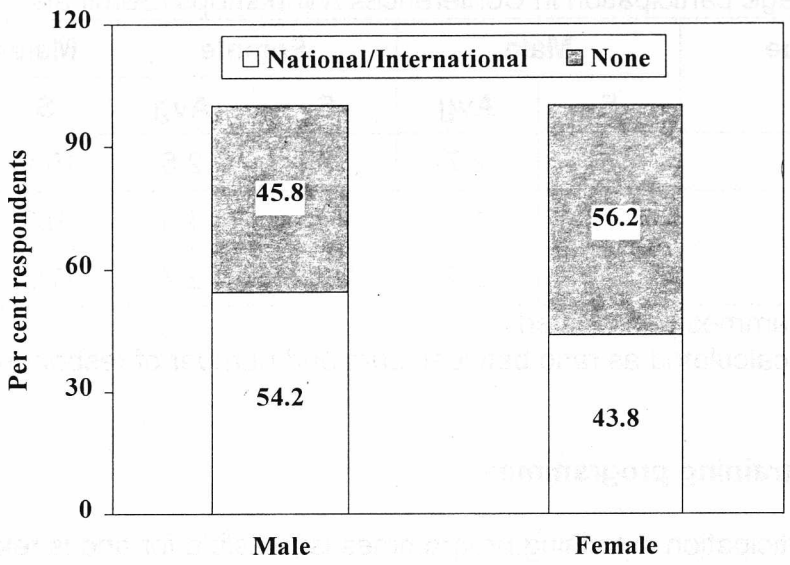
Participation in professional programmes

The data on responses to participation in conferences, workshops and seminars are shown in Table-7.14 and Fig-7.4.

Table-7.14: Participation in Conferences /Workshops /Seminars

Programme type	Male		Female		Male+Female	
	N	%	N	%	N	%
National	237	52.2	356	42.2	593	45.7
International	55	12.1	77	9.1	132	10.2
Either	246	54.2	370	43.8	616	47.5
None	208	45.8	474	56.2	682	52.5
Total sample	746	100.0	1277	100.0	2023	100.0

Fig-7.4: Participation in conferences / workshops / seminars



The data bear one-to-one correspondence with the data in Table-7.6 on association with professional societies. Since majority of such professional programmes is organized by the professional bodies, the response is on expected lines. A comparison of the data in Table-7.10 and Table-7.13 give interesting observation. The number associated with professional societies (659) was more than the number participated in conferences, workshops and seminars (616) and this holds true both for male as well as female respondents.

The data on average number of participation per individual in professional programmes are shown in Table-7.15. The average participation of male and female respondents was not much different. The average participation was 2.6 per person in national level programmes, 1.4 per person in international programmes and 2.8 per person in either of the two. This is similar to the data in Table-7.11 on average association with professional societies. This indicates that most respondents, who happened to participate in technical programmes, had opportunity to participate in 2 or 3 programmes on an average. Since the data belong to two consecutive years, the average would be more than one programme.

Table-7.15: Average participation in Conferences /Workshops /Seminars

Programme type	Male		Female		Male+Female	
	S	Avg	S	Avg	S	Avg
National	631	2.7	899	2.5	1530	2.6
International	79	1.4	103	1.3	182	1.4
Either	710	2.9	1002	2.7	1712	2.8

S = Sum of programmes participated
Avg= Average is calculated as ratio between sum and number of respondents

Participation in training programmes

As the participation in training programmes is possible for and is relevant to only working personnel, the responses to questions relating to training were sought from respondents other than the students. The responses received from 983 individuals, i.e. 668 female and 315 male respondents, are discussed below.

Participation in training programmes during 1996 & 1997 is given in Table-7.16. Among the respondents 27.5 per cent could not get a chance to attend any training programme in a two-year period. Of the rest, 42.7 per cent could attend one programme, 18.5 per cent could attend two programmes and 11.3 per cent could attend more than two programmes. On annual basis nearly half the respondents had a chance to attend a training programme.

Table-7.16: Participation in training programmes in two-year period (1996 & 1997)

Number of training programmes attended	Male		Female		Male+Female	
	N	%	N	%	N	%
1	145	46.0	275	41.2	420	42.7
2	57	18.1	125	18.7	182	18.5
3	13	4.1	58	8.7	71	7.2
4	8	2.6	21	3.1	29	3.0
5	2	0.6	9	1.3	11	1.1
1 to 5	225	71.4	488	73.0	713	72.5
0	90	28.6	180	27.0	270	27.5
Total graduate sample	315	100.0	668	100.0	983	100.0
Average *	1.08		1.24		1.19	

* Average number of programmes attended per person

The average number of training programmes attended by female respondents (1.24 per person) was more than that of their male colleagues (1.08 per person). But for such minor difference, the data on participation in training programmes does not reveal marked differences across male and female respondents.

The training subject is broadly classified into technical or professional and general management types. The data in Table-7.17 shows that about 95.2 per cent of the training were in technical areas and 4.8 per cent were in management areas. The per cent female trained in management (4.0%) was less than that for male respondents (6.5%) and this relates to the number of female respondents in management cadres. Ithough the importance of training in technical areas cannot be denied but it is equally important to train the manpower in certain managerial aspects like personal management, organizational development, financial management and the like.

Access to training opportunities is closely related to place and institution where training is being provided. The details of training locations corresponding to the responses given in Table-7.14 to Table-7.16 are as follows: 24.1 per cent within the organization, 71.8 per cent within the country but at different organization and the rest 4.1 per cent abroad. Most of the training within organization was by and large in the same place of work and training in other organizations was in other locations.

Table-7.17: Distribution of respondents by area of training

Training area	**Male**		**Female**		**Male+Female**	
	N	**%**	**N**	**%**	**N**	**%**
Technical/ Professional	202	93.5	459	96.0	661	95.2
Management/ General	14	6.5	19	4.0	33	4.8
Total	216	100.0	478	100.0	694	100.0
No response	9		10		19	
Total eligible sample	225		488		713	

The data on institutions where the training was received is given in Table-7.18. The data in Table-7.18 have very little gender-specificity. The per cent trained within the organization had more females (25.8% as against 20.2% males) whereas the per cent female respondents trained abroad (2.7%) was less than that of the male respondents (7.5%). In most agencies, training opportunities are provided based on the length of service as one of the criteria. The number of female employees in the senior positions is low and hence relatively less opportunity for training abroad. On the other hand, for training within the country, the data do not show gender dependence.

Table -7.18: Details of training institutions

Training place	Male		Female		Male+Female	
	N	%	N	%	N	%
Same organization	38	20.2	107	25.8	145	24.1
Another national organization	136	72.3	296	71.5	432	71.8
Abroad	14	7.5	11	2.7	25	4.1
Number responded	188	100.0	414	100.0	602	100.0
No response	37		74		111	
Total eligible sample	225		488		713	

In general, the respondents felt the need to incorporate gender dimension in all the training programmes offered by and for scientific and technical staff. In order to facilitate better professional competence, there should be more opportunities to expose women to the latest technologies and also involvement in creative activities. More women professionals should be encouraged to become members/ office bearers in professional societies and more opportunities should be given to participate in conferences and training programs.

Occupational preferences

Occupational preferences are formed over time during the graduation based on the job opportunities in various organizations. Such job preferences also reflect the graduates' perception on the working culture, prestige, upward growth and professional interests. The graduates and students responses are presented in Table-7.19.

The four most organizations preferred by male and female graduates in descending order were : research and education sector (62.7%) followed by state departments (14.7%), financial agencies (8.5%) and international organizations (6.7%). The per cent preferring private sector job (2.6%) or self-employment (4.0%) were rather low. Nearly two-third of the respondents preferred research and education sector.

As a matter of fact, 6.7 per cent respondents indicated their preference for a job in international organizations though the opportunities are limited. The agricultural education system has been designed to meet the trained manpower needs in various government departments and hence there is hardly any motivation for self-employment.

Amongst male and female graduates, the differences in job preferences were subtle but revealing. Relatively higher per cent of female respondents preferred jobs in research and education and finance sectors whereas male respondents preferred jobs in state development departments and international agencies.

Table-7.19: Jobs/occupations preferred at the time of graduation

Sector	Male		Female		Male+Female	
	N	%	N	%	N	%
Research & Education	261	58.8	546	64.8	807	62.7
State development departments	85	19.2	104	12.3	189	14.7
Finance sector	30	6.8	79	9.4	109	8.5
Private sector	13	2.9	21	2.5	34	2.6
Self-employment	17	3.8	34	4.0	51	4.0
International organizations	37	8.3	49	5.8	86	6.7
House-hold	1	0.2	10	1.2	11	0.8
Number responded	444	100.0	843	100.0	1287	100.0
No response	10		1		11	
Total sample	210		201		211	

N = Number of respondents
Per cent with respect to gender wise total response

Perception on professional education in agricultural disciplines

The respondents were asked to state their advice to other young women as to take up professional education in agriculture and allied disciplines, and the responses are given in Table-7.20.

Table-7.20: Perception on professional education in agriculture and allied disciplines

Advice on choosing agriculture discipline	Male		Female		Male+Female	
	N	%	N	%	N	%
Recommend	267	60.7	512	61.8	779	61.4
Recommend when no other option is available	117	26.6	241	29.1	358	28.2
Do not recommend	56	12.7	75	9.1	131	10.4
Number responded	440	100.0	828	100.0	1268	100.0
No response	14		16		30	
Total sample	454		844		1298	

The responses of both male and female respondents indicated that 61.4 per cent of female had highly positive attitude regarding agriculture profession as they had indicated that they would advise women to take up professional education. Only about 28.2 per cent of the total respondents - 26.6 per cent male and 29.1 per cent female respondents - indicated that agriculture, as a profession can be preferred provided there is no other option. At the other extreme, nearly one tenth of the respondents (12.7% males and 9.1% female respondents) did not recommend agriculture profession.

Positive reasons for recommending agriculture profession

The data on positive reasons for recommending agriculture profession are provided in Table-7.21. The main reasons given for preferring agriculture as a profession, by both the male and female respondents in the order of importance, are good job opportunities followed by importance of agriculture to the country's economy, individual choice and professional satisfaction. There were no differences in the reasons given by male and female respondents.

Table-7.21: Positive reasons for recommending agriculture profession

Specific positive reasons for recommending agriculture profession	Male		Female		Male+Female	
	N	Rank	N	Rank	N	Rank
Good job opportunities	78	I	185	I	263	I
Agrarian economy	44	II	52	II	96	II
Individual interest	13	III	43	III	58	III
Professional satisfaction	12	IV	39	IV	51	IV

Selected quotes from individual responses, recommending agriculture, are given below:

1018 *Compared to women, men have better opportunity to grow in this field, because of tedious work nature especially in private companies. It doesn't mean that women cannot come up. Any one who is sincere and hardworking, irrespective of gender, can grow in this field like other fields. (Female researcher, 32)*

1042 *Since job security is there for agricultural students and there is a upliftment by ARS, NET and other competitive exams, it is worth & valuable and they can utilize their knowledge in their respective disciplines. (Female technician, 42)*

2822 *Agricultural sciences study is interesting, challenging, no mind boggling, not hurting, innovative, easy going. (Female student, 29)*

1144 I am one example wherein the study during the degree was very smooth(Not as difficult as in other degrees). Even getting the job was at the very first attempt. These days the options are wide in Nation. (Female technician, 25)

1832 Because as much as I am concerned, a degree in veterinary science and animal husbandry now in Kerala can give us a very respected and financially sound job as soon we pass out from the college. (Female veterinary officer, 30)

1065 As a teacher, I am seeing the girl students doing very well even in practical classes of veterinary education; so they can do a better job if they come out of inhibitions. (Male teacher, 41)

1177 To have better contacts & co-ordination with women folk of rural India, especially for agricultural extension, health & hygiene is concerned. (Male development officer, 41)

1234 The role of young women to take the knowledge of modern family to the doorstep of the farmers is known by all. With this view it is desirable to advise other young women to take up professional education in agriculture. (Female agricultural officer, 32)

1762 Since a lot of women are farmers, women agricultural scientists can do a lot to uplift the status of the woman farmer, alleviate drudgery from their lives, and help in empowering them in various ways. (Female teacher, 37)

1924 Women can convince both men and women whereas men can convince only men (in our social situation) Women do not have too many avocations so that they can concentrate on work. (Female development officer, 33)

1944 *Because Indian Agricultural Activities (farms) mostly depend on women, so an agricultural professional woman can transfer technology from laboratory to land easily and effectively. (Male sales executive, 31)*

1973 Acquiring education in agricultural sciences will definitely be a boon to teach, and change the attitudes of the rural women folk, who often make decision related to farm operations. If you make a rural women educated and impart farm innovations. It will certainly create a conducive climate to receive new technique. (Male researcher, 35)

Reasons for not recommending agriculture profession

The data on reasons for not recommending agriculture profession are presented in Table-7.22. Difficulty in carrying out fieldwork in agricultural jobs, limited employment opportunities and discrimination in private sector were the three most important reasons cited for not recommending agriculture profession to women.

Table-7.22: Reasons for not recommending agriculture profession

Specific negative reasons for not recommending agriculture profession	Male		Female		Male+Female	
	N	Rank	N	Rank	N	Rank
Difficulty in field work	31	I	50	I	81	I
Limited employment opportunities	19	II	20	II	39	II
Private sector job discrimination	5	III	5	III	10	III

Selected quotes from individual responses, not recommending agriculture profession, are given below:

1009 *Because the scope of employment opportunities is considerably less. Barring Government Jobs, women graduates are not preferred in private sectors or banks (because of immobility). Scope for self-employment is remote in this profession. (Female researcher, 33)*

1036 *For Home Science students the job opportunities are very less. In case of other sciences they can be absorbed in schools, private colleges, tutorials, etc. (Female teacher, 35)*

1099 *The opportunities, chances and choices for career development are less for agricultural graduate women, since the private sector is preferring men. (Female officer, 24)*

1101 *Our job is not acknowledged. People are giving more importance and respect to other professions like medicine, engineering and banking. (Female officer, 31)*

1154 *There is no job guarantee for agricultural graduates, even after doing doctorate degrees. So I strongly advise others not to join this field, especially women. (Female researcher, 21)*

1447 *Agriculture, as professional education, has only limited opportunities for self-employment. If at all, it involves high capital investment. (Female researcher, 28)*

1235 *The maximum amount of job opportunities available for professionals in agriculture and allied courses are extension-oriented and all cannot do justice*

to the extension job with the family responsibilities. (Female agricultural officer, 34)

1325 Professional education in agriculture involves a lot of field work causing fatigue which, in turn, affects the domestic activities, since an employed woman has to play double role. (Female officer, 26)

1022 Because, in agriculture or allied disciplines, field work is necessary, which can disturb married life of a woman. (Female officer, 22)

1046 Because in agricultural profession young women had to face many people, frequent field visits, stay out-of-station for long time, accommodation, etc with not so good remuneration. Instead, there are many fields where a woman can earn much with fewer efforts and more comforts. (Female researcher, 23)

1073 I personally believe that women are more suitable for laboratory-oriented jobs, either in agriculture or other fields, which do not involve hectic physical activity, touring, etc. (Male scientist, 48)

1746 At present, agricultural graduates are employed as district workers, expected to go to villages and remote places; which, in my opinion, is not suitable for women. (Female teacher, 55)

1823 Since agriculture subject needs the persons to be present in the field early in the morning, women may find difficulty in fulfilling household requirements as well as professional requirements. (Female teacher, 35)

1919 For girls it is very difficult to do veterinary science because they are weak persons than male. It is difficult to handle animals. If they don't get medical or engineering, then to save themselves they can enter into the above field because something is better than nothing is. (Female farm supervisor, 28)

1105 Women have to take each and every step in this profession as challenge to get equal professional recognition, especially in veterinary science, where women are discriminated most in field job. It is a long way to go. But women should not lose heart; stick to it determinently and confidently. (Female veterinary officer, 26)

1149 Because a woman will have to put in double the amount of effort than a man to get same level of recognition. (Female scientist, 28)

1491 Most of the men in agricultural universities have a rural background. So they cannot tolerate a woman competitor and they just cannot accept a woman being successful. Basically, they do not respect women in this profession. (Female teacher, 33)

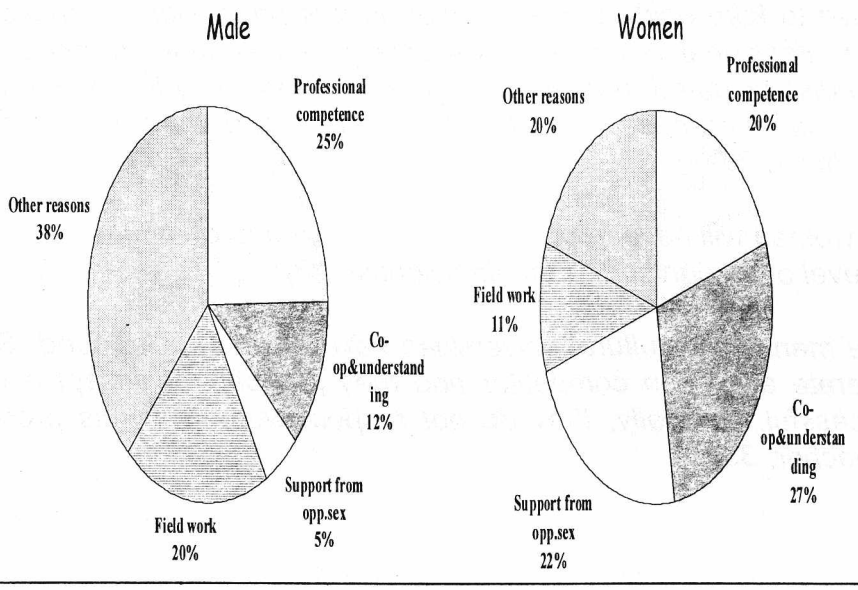
Preferences for choice of supervisor

The responses of male and female professionals on the preferences for their colleagues (male or female) that they would like to work with are given in Table-7.23 and Fig-7.5 for supervisors and Table-7.27 for subordinates. 25.3 per cent respondents preferred male supervisor and 15.1 per cent preferred female supervisor. The rest 59.6 per cent did not indicate any preference for male or female supervisor. Both male and female respondents showed preference to male supervisor. 14.0 per cent male and 15.6 per cent female respondents preferred female supervisors.

Table-7.23: Responses on preferences for supervisor

Preferred supervisor	Male		Female		Male+Female	
	N	%	N	%	N	%
Male	134	29.7	187	22.9	321	25.3
Female	63	14.0	128	15.6	191	15.1
No preference	253	56.3	503	61.5	756	59.6
Number responded	450	100.0	818	100.0	1268	100.0
No response	4		26		30	
Total sample	454		844		1298	

Fig-7.5: Reasons for preferring male supervisor



The reasons specified by the respondents on their preference to male or female colleagues were subjected to content analysis and the reasons were grouped under five broad contents. The responses are given in Table-7.24 to Table-7.25. A significant majority (59.6%) indicated gender-neutrality in the choice of their supervisor.

Data in Table-7.24, on reasons for preferring male supervisor, show that the main reasons for gender preference, given by the male and female respondents, were based on professional competence, and cooperation and understanding. However, male and female responses differed. About 22.9 per cent female respondents and 29.7 per cent male respondents (from Table-7.23) indicated preference to male supervisors over the female supervisors, which subscribes to the traditional viewpoint of patriarchal power structure.

Table-7.24: Reasons for preferring male supervisor

Reason	Male		Female		Male+Female	
	N	%	N	%	N	%
Professional competence	20	24.7	22	19.6	42	21.8
Cooperation & Understanding	10	12.3	31	27.8	41	21.2
Support from opposite sex	4	5.0	25	22.3	29	15.0
Field work	16	19.7	12	10.7	28	14.5
Other reasons	31	38.3	22	19.6	53	27.5
Number responded	81	100.0	112	100.0	193	100.0

The main reasons for preference, given by the female respondents (Table-7.24), were better human understanding/ cooperation (27.8%), followed by opposite sex being more considerate (22.3%) and competence (19.6%). For male respondents, the preference was based mainly on competence (24.7%) and field of work (19.7%). Expectations of males for support from opposite sex was less(5%).

The main reasons for preferring female supervisors are presented in Table-7.25 and Fig-7.6. Data in Table-7.25, on reasons for preferring female supervisors, show that the main reasons for preference are based on cooperation and understanding, and being systematic and responsible. However, male and female responses differed. About 14.0 per cent male respondents and 15.6 per cent female respondents (from Table-7.23) indicated preference to female supervisors.

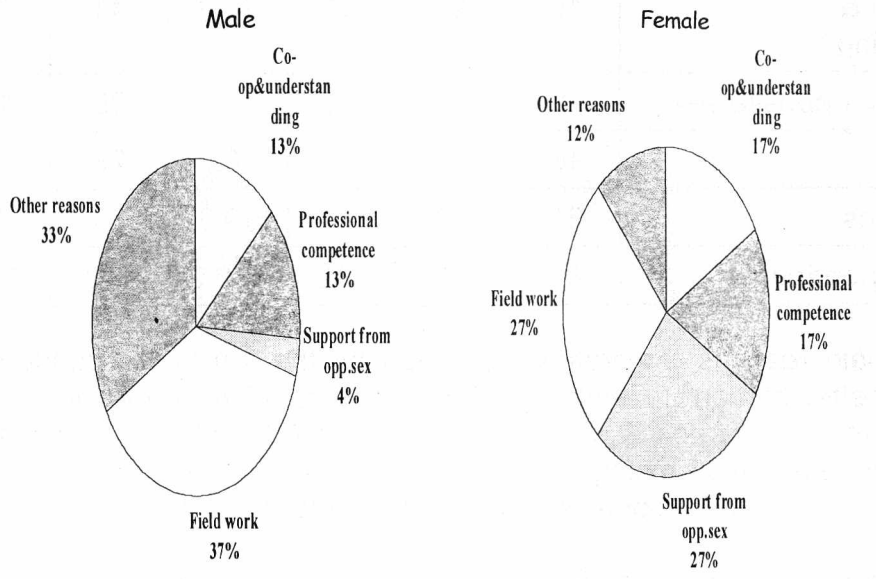
The main reasons for preference given by the female respondents (Table-7.25) were better understanding & cooperation (54.0%), followed by systematic and responsible behavior (19.1%) and competence (6.7%). For male respondents, the preference was based on two attributes of equal importance, viz. systematic and responsible behaviour (37.2%) and cooperation & understanding (32.5%).

Preference to females did not include professional competence as an important reason by both the gender groups.

Table-7.25: Reasons for preferring female supervisor

Reason	Male		Female		Male+Female	
	N	%	N	%	N	%
Cooperation & understanding	14	32.5	48	54.0	62	47.0
Systematic and responsible	16	37.2	17	19.1	33	25.0
Professional competence	7	16.3	6	6.7	13	9.8
Other reasons	6	14.0	18	20.2	24	18.2
Number responded	43	100.0	89	100.0	132	100.0

Fig-7.6: Reasons for preferring female supervisor



Data in Table-7.26 show that gender neutrality of work (45.1%) and competence (38.2%) as the main reasons for preference to supervisors. However, male and female responses did differ. About 61.5 per cent female respondents and 56.3 per cent male respondents (from Table-7.23) did not indicate any preference to supervisors, based on gender. The main reasons for not showing any preference by the female respondents (Table-7.26) were due to gender-neutrality of work (46.9%) and competence (34.7%). For male respondents, the response was 41.3 per cent and 45.6 per cent for the same two reasons.

Table-7.26: Reasons for **not** preferring supervisor based on gender

Reason	Male		Female		Male+Female	
	N	%	N	%	N	%
Professional competence	63	45.6	102	34.7	165	38.2
Work is gender neutral	57	41.3	138	46.9	195	45.1
Cooperation & Understanding	7	5.0	34	11.6	41	9.5
Other reasons	11	7.9	20	6.8	31	7.2
Number responded	138	100.0	294	100.0	432	100.0

Preferences for choice of subordinate

The preference for subordinate shown in Table-7.27. The preference for subordinate are just the reverse of the preferences for supervisors, i.e. 17.3 per cent preferred male and 19.5 per cent preferred female subordinates. But a majority (63.2%) indicated gender-neutrality in the choice of their subordinate. Male respondents preferred more female subordinates (23.9%) as compared to their preference to male subordinates (18.6%). It is quite interesting to note that male respondents preferred more male supervisors but more female subordinates. In case of female respondents, though they indicated preference for male supervisors, they did not reflect specific preference to female subordinates. In fact, females showed nearly same preference to both male (16.5%) and female (17.2%) as subordinates.

Table-7.27: Preferences for subordinate

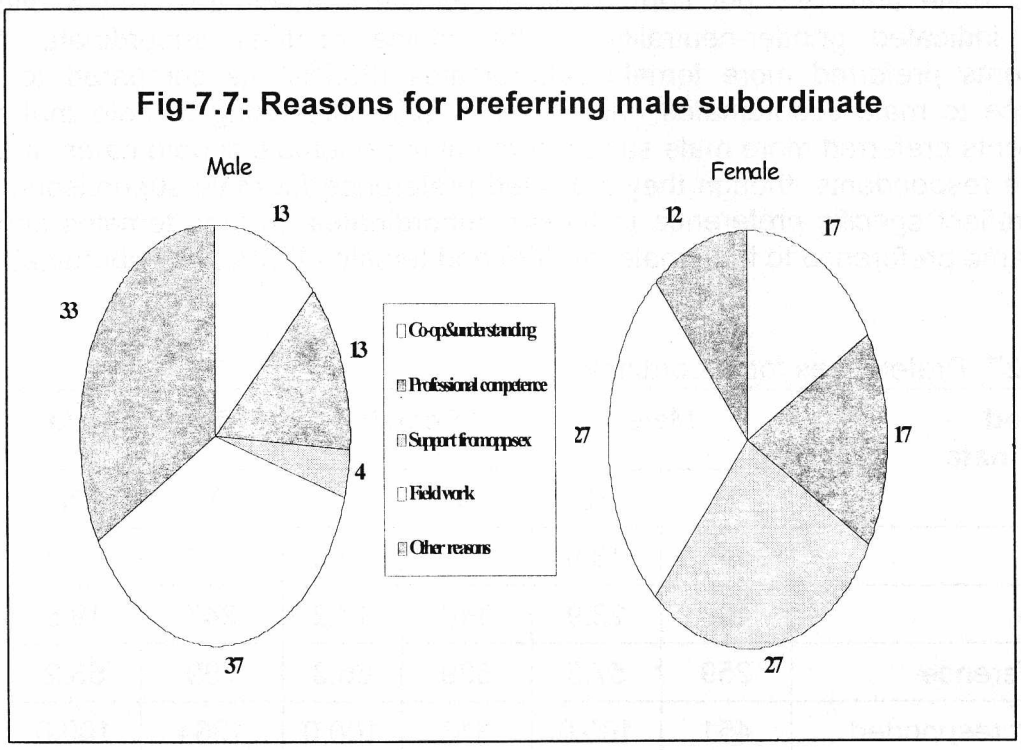
Preferred subordinate	Male		Female		Male+Female	
	N	%	N	%	N	%
Male	84	18.6	134	16.5	218	17.3
Female	108	23.9	140	17.2	247	19.5
No preference	259	57.5	539	66.3	799	63.2
Number responded	451	100.0	813	100.0	1264	100.0
No response	3		31		34	
Total sample	454		844		1298	

The reasons for preference to male subordinate are given in Table-7.28 and Fig-7.7. 18.6 per cent males and 16.5 per cent females indicated their preference to male subordinates (Table-7.27). The main reasons for preferring male as subordinate are fieldwork (31.0%), better support from opposite sex (18.2%) and with an equal weightage of 15.2 per cent to both competence and cooperation attributes.

Table-7.28: Reasons for preferring male subordinate

Reason	Male		Female		Male+Female	
	N	%	N	%	N	%
Cooperation & Understanding	7	13.0	13	16.7	20	15.2
Professional competence	7	13.0	13	16.7	20	15.2
Support from opposite sex	2	3.7	22	28.2	24	18.2
Field work	20	37.0	21	26.9	41	31.0
Other reasons	18	33.3	9	11.5	27	20.4
Number responded	54	100.0	78	100.0	132	100.0

Fig-7.7: Reasons for preferring male subordinate



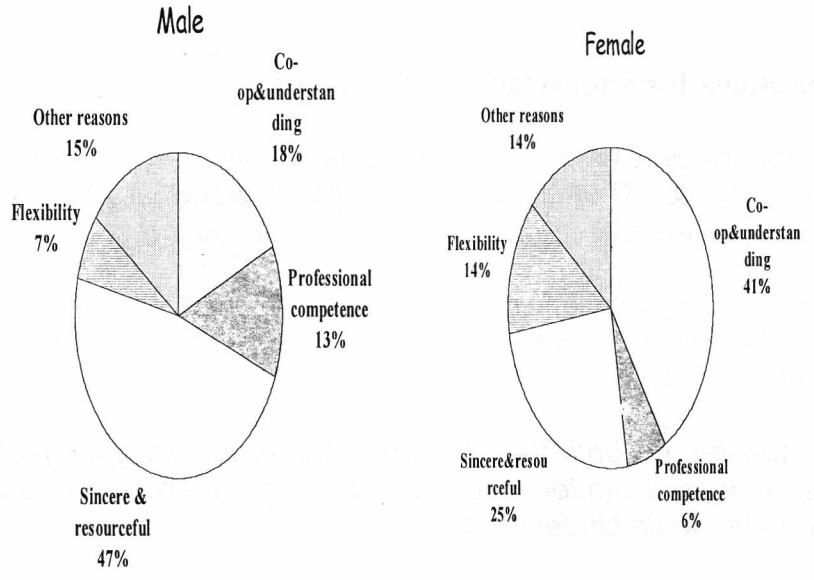
Male respondents (37.0%) preferred male subordinates because of the field work that they were expected to do. Female professionals, who indicated preference to male subordinates, expected better cooperation from subordinates of the opposite sex (28.2%) and support in fieldwork (26.9%).

The reasons for preference to female subordinates are given in Table-7.29 and Fig-7.8. About 23.9 per cent males and 17.2 per cent females indicated their preference to female subordinates (Table-7.27). 17.2 per cent female respondents preferred female subordinates mainly for having better cooperation & understanding (41.2%) and their sincerity and resourcefulness (25.0%). On the other hand, 23.9 per cent male respondents preferred female subordinates mainly for their personal attributes such as sincerity and resourcefulness (47.5%) and cooperation and understanding (18.0%).

Table-7.29: Reasons for preferring female subordinates

Reason	Male		Female		Male+Female	
	N	%	N	%	N	%
Cooperation & Understanding	11	18.0	33	41.2	44	31.2
Professional competence	8	13.1	5	6.2	13	9.2
Sincere and resourceful	29	47.5	20	25.0	49	34.8
Flexibility	4	6.6	11	13.8	15	10.6
Other reasons	9	14.8	11	13.8	20	14.2
Number responded	61	100.0	80	100.0	141	100.0

Fig-7.8: Reasons for preferring female subordinates



Data in Table-7.30 show the reasons for not preferring subordinate based on gender. Almost 63.2 per cent of the male and female respondents had no gender preferences for subordinates (Table-7.27). The reasons given by both the male and female respondents (Table-7.30) were gender-neutrality of work (45.5%) and professional competence (38.6%).

able-7.30: Reasons for not preferring subordinate based on gender

Reason	Male		Female		Male+Female	
	N	%	N	%	N	%
Cooperation & Understanding	6	4.5	36	12.8	42	10.1
Professional competence	64	47.8	96	34.2	160	38.6
Work is gender neutral	57	42.5	132	47.0	189	45.5
Other reasons	7	5.2	17	6.0	24	5.8
Number responded	134	100.0	281	100.0	415	100.0

In general, both male and female respondents did not prefer their supervisor or subordinate based on their gender alone, as they felt the work is gender-neutral and the preference should be based on competence/ performance. Female respondents' preference to either male or female supervisors or subordinates was mainly for better human relations as compared to competence, whereas male respondents preferred male or female supervisors for competence and subordinates for field type of work.

Individual preferences for supervisor / subordinate

The individual responses give interesting insight into the reasons for choice of supervisor or subordinate. Though the quotes given below are from isolated few individuals, the reasons are based on their experience in their respective system.

1041 At this stage of career, the gender preference don't carry much weightage; rather it is the behaviour and intelligence of individual that matters. (Female scientist, 46)

2528 Because, now-a-days both the sex can or rather should get equal preference and I feel it doesn't matter much whether the supervisor or subordinate is male or female. (Male student, 23)

1221 Difficulties in field work, and if subordinate is a woman it is easier to extract work from them than from a male (Female Veterinary officer, 30)

1255 *In extension, we have to work with rural women folk and they do not feel comfortable with men folk. (Female extension officer, 51)*

1319 *So far I have not had a lady as my supervisor, hence I cannot indicate the preference. By my experience, unlike men, women dedicate office hours to office work and they also have lesser tendency to escape from work as compared to men. (Female development officer, 29)*

1740 *Women are less problematic except for their leave taking. (Female manager, 40)*

2631 *When we direct a woman, we can get more perfection in the job completed and she can be easily manipulated and managed. (Male student, 24)*

2819 *A woman supervisor is more likely to understand the stress and pressure of managing a house as well as a career. (Female student, 24)*

1618 *Although a woman should be respected, personally I am unable to accept her as my supervisor. (Male engineer, 47)*

1646 *Women subordinates often do not perform satisfactorily due to their family obligation. They may find hard to work long hours or start weeping when their poor performance is brought to their notice (Male teacher, 47)*

1223 *Women supervisors will follow the rules and regulations thoroughly and subordinate must be a man as he can work in the odd hours also. (Female agricultural officer, 34)*

1850 *Women generally cannot think above a certain level. Failure of woman starts when she starts behaving like a man. (Male teacher, 60)*

1963 *I did Ph.D under a lady professor. I saw narrow mentality, no space for adjustment in profession, bias and prejudice in women. After certain age, women tend to think more about their children's education, etc. (Male scientist, 31)*

2598 *Prefer men as supervisor. Because women can't do hard work, they can't be a leader. (Male student, 22)*

1272 *I prefer a man as my supervisor because I think they are more powerful and they are more cooperative. (Female teacher, 31)*

1304 *Prefer male subordinate. As I work in the field of Dairying, whenever I go home at 5.30 p.m., my male subordinate can attend shift duty / round the clock. (Female veterinary officer, 34)*

1346 *Handling of animals can be done better by men. (Female scientist, 41)*

1511 *Prefer men. They can supplement my drawbacks for instance like travel to far off places for information. (Female teacher, 37)*

1672 *Usually men have greater exposure to various situations, places suitable for any work conditions to guide subordinates effectively. (Male scientist, 33)*

1713 *I would prefer a man as my subordinate because I can get more work out of my subordinate and in a field job like mine, an aged woman with children may be less active particularly to work in odd hours for instance. (Female development officer 25)*

1772 *Men and women are different biologically which does reflect in their behaviour, ideas, thinking capacity, etc. So I prefer a man, as my supervisor to compete with whom is totally a different personality. The basic feelings of every woman will almost be same. (Female student, 23)*

2604 *I think men are more cooperative and can present good competition so as to improve our skills and improve us over all. (Female student, 20)*

1723 *A man would be more liberal as supervisor and he might be less tough to deal with a woman subordinate. (Female officer, 29)*

2707 *Because men will be helpful and kind, and generally no jealous feeling with men. (Female student, 25)*

2747 *Because man as compared to a woman is less bossy, more co-operative and on the top of all not jealous. (Female student, 25)*

1044 *A male subordinate does not carry out the task given which may be because of ego problems. Moreover, interaction is limited with a male subordinate. (Female scientist, 29)*

1235 *I have seen that men behave as if they are doing me a favour rather than their job as subordinates. (Female dietician, 34)*

1919 *I prefer woman as supervisor because women are more responsible than men and in case of subordinates I would like to extract heavy work from man. (Female farm supervisor, 28)*

2534 *As Subordinate, efficiency of women is more. They are neat & clean than men. They maintain office files and other things clean and neat. As for Supervisor, I prefer a man because a man can be ready for any work at any time. (Male student, 22)*

2734 *Men are broad-minded and they do not have jealousy. For a subordinate, female is preferable as she provides better company than men (Female student, 25).*

1129 *As for supervisor, no preference is given as it depends upon the merit of the particular individual. For subordinate, a man is preferred as he will be more appropriate for fieldwork. (Female veterinary officer, 30)*

2531 *I prefer supervisor by knowledge, skill and attitude. Supervisor may be a woman or man. I prefer woman as a subordinate because I can work with her at my best. (Male student, 22)*

2642 *If my work is good then no matter who the superior will be, If a right person is there; and as subordinate, I would prefer a woman because we would work together in a better way by understanding each other. (Female student, 21)*

1935 *Because I am yet to come across an intellectually superior woman, I would prefer man as a supervisor. As subordinates too I would prefer a man as they work harder, are more flexible and are easy to work with. (Male scientist, 43)*

1976 *No doubt a woman can work hard but thinks little. Male persons will be generous. Sometimes it is easy and convenient to work with them. It is easy to order and draw more work from women subordinates. (Female researcher, 27)*

2516 *Work and communication is easier with men than women. As a subordinate, it is easier to work with women. (Male student, 26)*

1706 *With a woman as subordinate I will have to make emotional compromises like granting leave, permission to go early, etc. No preference for supervisor as I can adjust to both woman and man, as I am competent enough. (Female veterinary officer, 28)*

Summary

1. Majority of the respondents was employed in state agricultural universities (38.9%) followed by state departments (14.8%).

2. While 46.4 per cent of the respondents secured job without any time lag, 29.8 per cent had to wait for a year and the rest 23.8 per cent had to wait for more than a year.

3. About 68.5 per of the respondents, both male and female worked at or near headquarters of their organizations. The belief that most women are placed at headquarters is not correct.

4. The nature of work done by both male and female employed respondents was alike. 57.5 per cent respondents' jobs involved frequent fieldwork.

5. Nearly one-third respondents, both male and female, had indicated the absence of employee associations. The awareness of employee associations

was relatively low in female respondents. However, both male and female respondents, who were members of such associations, took part equally in their management. Majority of male and female respondents (73.3%) agreed on the failure of such associations in taking up women issues. Accommodation, higher education and training, maternity leave and representation in official bodies were some of the issues discussed in such associations.

6. Nearly half the female respondents were not members of any professional societies/ associations, whereas the other halves were members in more than two societies. Only 20 per cent of the students' respondents were members in professional societies. In order to facilitate better professional competence, more women professionals should be encouraged to become members/ office bearers in professional societies and more opportunities to be given to them to participate in conferences and training programs.

7. Less than half the respondents indicated participation in professional programs like conferences/ workshops; female participation (43.8%) was less than that of male colleagues (54.2%).

8. There was no marked difference in participation in training by male and female respondents. 27.5 per cent of the respondents did not get any opportunity for training in the past two-year period; 42.7 per cent respondents attended one training and the remaining 29.8 per cent attended more than one training. HRD programmes for professional women in agriculture need proper planning in timing and duration, keeping in view the dual responsibility of women.

9. Although most of the training programmes (nearly 95%) were organized within the country, the training abroad showed gender-inequity; it was 2.7 per cent females as against 7.5 per cent males.

10. Both the gender groups preferred jobs in R&D sector (62.7%) followed by, state departments (14.7%). In comparative terms, female respondents' preference to R&D and finance sectors was higher than that of the male respondents for state departments and international agencies.

11. Majority of both male and female respondents (61.4%) recommended agriculture education due to good job opportunities whereas a small minority (10.4%) did not recommend it due to difficulty in fieldwork. To place more women graduates in TOT programmes, there had to be special consideration in their placement, provision of transport, accommodation and spouse employment

12. There was no perceptible difference in the choice of supervisor or subordinate by both gender groups, where more than 60 per cent respondents did not indicate any gender preference. Most respondents indicated preferred co-

worker on the basis of professional competence and cooperative spirit. Nearly half the respondents felt that the work is gender-neutral.

13. The specific reasons cited for preferring male supervisor was due to professional competence, whereas female supervisor was preferred due to cooperation and understanding nature of women. On the other hand, a male subordinate was preferred for carrying out fieldwork, whereas female subordinate was preferred due to their sincerity and cooperative spirit.

Chapter - VIII

Career opinions and perceptions

This chapter is devoted to the analysis of career on career-related issues and perceptions on sources of satisfaction in the respondents' personal and professional lives. The data, analysis and inferences drawn on the basis of the responses are presented below.

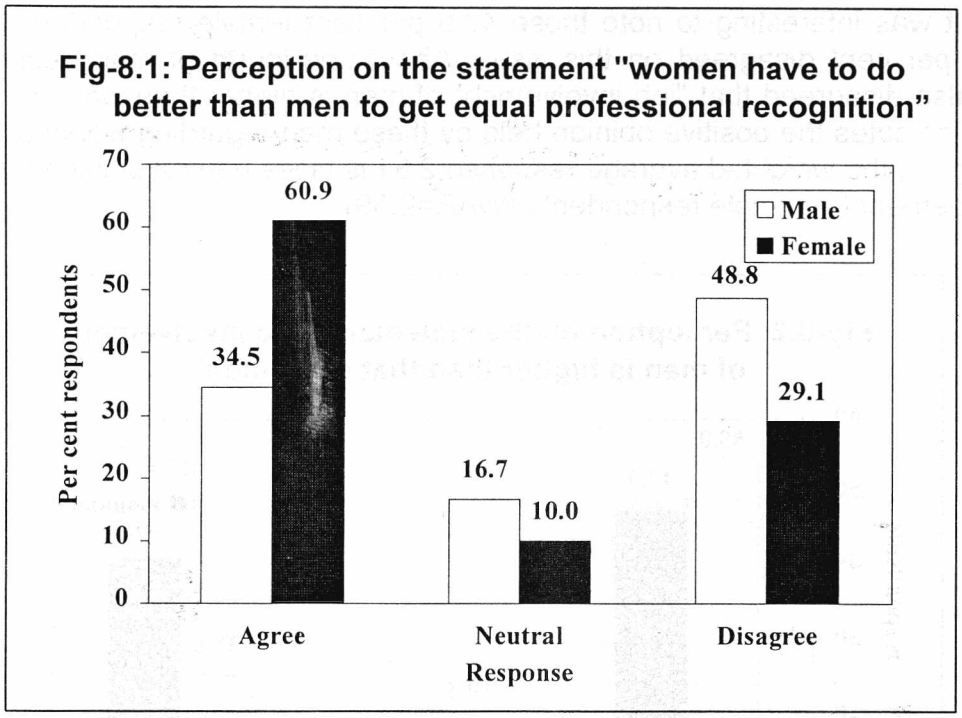
Professional recognition

Perception of male and female respondents on the statement "women have to do better than men to get equal professional recognition" is given in Table-8.1 and Fig-8.1. 51.7 per cent of the male and female respondents agreed, 36.0 per cent disagreed and 12.3 per cent remained neutral. Amongst the gender groups, 60.9 per cent female agreed with this as against 34.5 per cent of male respondents. Thus, the responses of the male and female respondents seemed to be swinging in the opposite direction as shown by the weighted average response of 3.16 by males, indicating more towards disagreement and 2.48 by females, indicating more towards agreement.

Table-8.1: Perception on the statement "women have to do better than men to get equal professional recognition"

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	155	34.5	511	60.9	666	51.7
Neutral	75	16.7	84	10.0	159	12.3
Disagree	219	48.8	244	29.1	463	36.0
Number responded	449	100.0	839	100.0	1288	100.0
No response	5		5		10	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	3.16		2.48		2.72	

*WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement
N = Number of respondents



Job involvement

The responses regarding job involvement by gender are given in Table-8.2 and Fig-8.2.

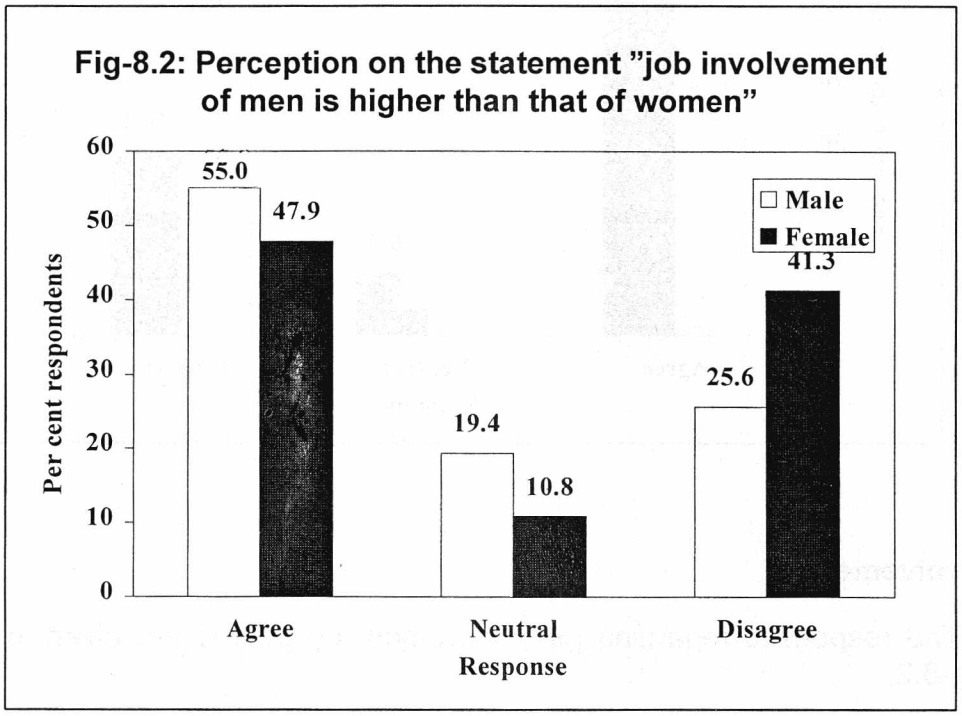
Table-8.2: Perception on the statement "job involvement of men is higher than that of women "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	247	55.0	399	47.9	646	50.4
Neutral	87	19.4	90	10.8	177	13.8
Disagree	115	25.6	344	41.3	459	35.8
Number responded	449	100.0	833	100.0	1282	100.0
No response	5		11		16	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	2.59		2.93		2.81	

*WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

It was found that 50.4 per cent of both male and female respondents felt that the job involvement of men is higher than women. Predictably, a higher percentage of

male respondents (55.0%) held the above view than the women respondents (47.9%). It was interesting to note those 47.9 per cent female respondents agreed and 41.3 per cent disagreed on this issue. About one-fourth of male respondents (25.6%) also disagreed that "job involvement of men is higher than women ", which indirectly indicates the positive opinion held by these men regarding working women. On the whole, the weighted average response 2.81 is close neutral opinion but with a weak agreement from male respondents (WAR=2.59).



Professional acceptance

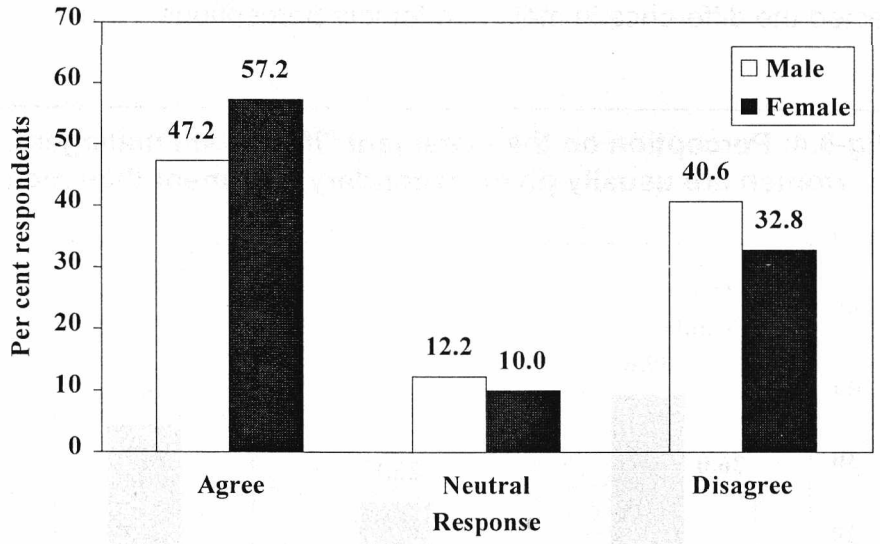
The responses shown in Table-8.3 and Fig-8.3 indicate that 53.7 per cent respondents agreed that "compared to a man, it is harder for a woman to be accepted fully into a professional working group", but 35.5 per cent disagreed. There was a subtle and significant difference between the perception of male and female respondents. Though the respondents were divided for both agreement and disagreement, higher proportion of females (57.2%) than males (47.2%) agreed on this issue. This reflects upon the male dominance value of patriarchal society. The weighted average response of 2.79 reflects mild agreement to the above statement. These results compliment with the observations that female respondents have to work hard or better than men to get equal recognition.

Table-8.3: Perceptions on the statement "compared to a man, it is harder for a woman to be accepted fully into a professional working group "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	212	47.2	478	57.2	690	53.7
Neutral	55	12.2	83	10.0	138	10.8
Disagree	182	40.6	274	32.8	456	35.5
Number responded	449	100.0	835	100.0	1284	100.0
No response	5		9		14	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	2.92		2.72		2.79	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Fig-8.3: Perception on the statement "compared to a man, it is harder for a woman to be accepted fully into a professional working group"



Treatment in profession

Majority of the respondents (42.7%) in Table-8.4 and Fig-8.4, disagreed with the statement that "male managers would usually give secondary treatment to women than men". But the responses of male and female respondents for this statement were at variance.

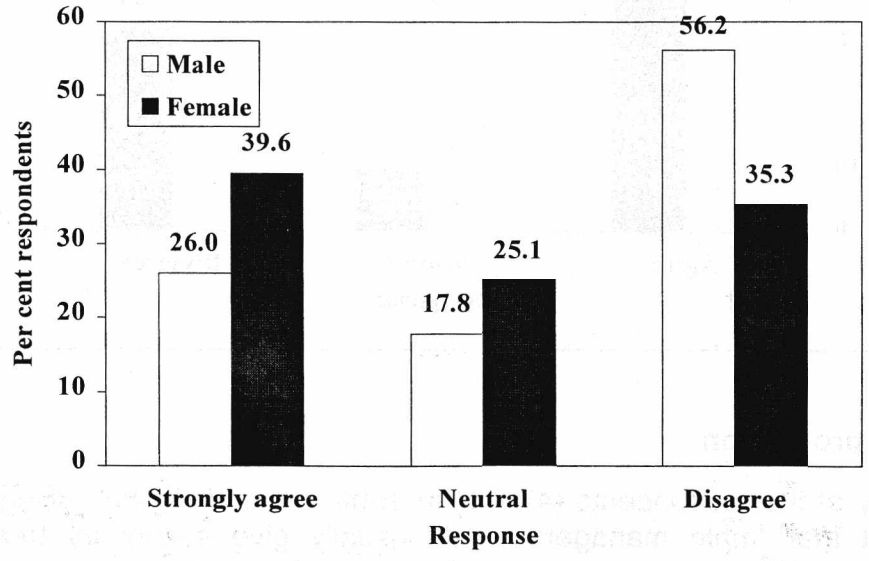
Table-8.4: Perception on the statement " if men are managers, women are usually given secondary treatment than men. "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	117	26.0	328	39.6	445	34.8
Neutral	80	17.8	208	25.1	288	22.5
Disagree	253	56.2	293	35.3	546	42.7
Number responded	450	100.0	829	100.0	1279	100.0
No response	4		15		19	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	3.38		2.91		3.08	

*WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Whereas majority of female respondents agreed (39.6%) that they would be subjected to secondary treatment by men managers, 56.2 per cent male respondents disagreed on this. When the responses of both male and female respondents were taken together, it was found that the value of WAR of 3.08 indicated a neutral opinion to the statement that there is differential treatment by men managers with respect to women. The difference in the magnitude of WAR of 3.38 for males and 2.91 for females reflected the difference in male and female perceptions.

Fig-8.4: Perception on the statement "if men are managers, women are usually given secondary treatment than men"



Career Vs Family

Perceptions of male and female respondents on career Vs family responsibilities of a married woman are given in Table-8.5. Both male and female respondents were found to have mixed opinion on the above value statement, i.e. 52.4 per cent agreed and 33.0 per cent disagreed. Amongst the gender groups, 51.6 per cent male and 52.9 per cent female respondents felt that career would have to take a secondary position to family responsibilities for a married woman. Whereas 34.1 per cent of male respondents and 32.3 per cent of female respondents disagreed with the above statement, and 14.3 per cent male and 14.8 per cent female respondents were neutral. These responses were in confirmation with the other results wherein happy family life was indicated as primary source of satisfaction in personal life for both male and female respondents.

Table-8.5 : Perception on the statement "for a married woman, a career should be secondary to her responsibilities as a wife and mother "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	230	51.6	440	52.8	670	52.4
Neutral	64	14.3	123	14.8	187	14.6
Disagree	152	34.1	269	32.3	421	33.0
Number responded	446	100.0	832	100.0	1278	100.0
No response	8		12		20	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	2.7		2.67		2.69	

* Weighted Average Response (WAR) calculated from responses on 1 to 5 scale 1=Strong agreement and 5=Strong disagreement

Career Vs Motherhood

Perceptions of male and female respondents for the statement "a woman who is really interested in her career should not have children" are given Table-8.6. Weighted average response (WAR) of 3.82 indicated that both the male (3.81) and female (3.88) disagree with the statement. About 71.7 per cent male and 75.4 per cent female respondents disagree with the statement that the women interested in her career should not have children. Only 16.0 per cent respondents agreed with the statement. There was no perceptual difference between both the respondent categories on the realization that women need not sacrifice children for having a better career.

Table-8.6: Perception on the statement "a woman who is really interested in her career should not have children "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	72	16.0	134	16.0	206	16.0
Neutral	55	12.3	72	8.6	127	9.9
Disagree	323	71.7	633	75.4	956	74.1
Number responded	450	100.0	839	100.0	1289	100.0
No response	4		5		9	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	3.81		3.88		3.82	

*WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Responsibilities of working mothers

For the statement "small children suffer when mother work full time", the responses are presented in Table-8.7.

Table-8.7: Perception on the statement "small children suffer when mothers work full time"

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	396	88.4	754	89.9	1150	89.3
Neutral	27	6.0	42	5.0	69	5.4
Disagree	25	5.6	43	5.1	68	5.3
Number responded	448	100.0	839	100.0	1287	100.0
No response	6		5		11	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	1.77		1.71		1.73	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

An overwhelming majority of both male (88.4%) and female (89.9%) respondents agreed that small children suffer when mothers work full time in office. Weighted average response of 1.73 pointed out a strong and unanimous agreement by both male and female respondents. This expresses a concern among all the

agricultural professionals for the issue and the need for making the present situation better.

Family support for successful career

An overwhelming majority of (84.6%) respondents, both male (82.8%) and female (85.6%), were of the opinion that the family support is very crucial for a woman to have a successful career (Table-8.8).

Table-8.8: Perception on the statement "unless the family/husband provides a supporting role, a woman cannot have a successful career "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	370	82.8	719	85.6	1089	84.6
Neutral	26	5.8	37	4.4	63	4.9
Disagree	51	11.4	84	10.0	135	10.5
Number responded	447	100.0	840	100.0	1287	100.0
No response	7		4		11	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	1.99		1.85		1.9	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

There was a general agreement from both groups, as reflected by the weighted average response of 1.9 (1.99 for males and 1.85 for females). The disagreement by 10.5 per cent respondents reflects the changing trend of values in the society in recognizing the needs of working families. Moreover this change is in conformity with the observation of male respondents in supporting their spouse in household work.

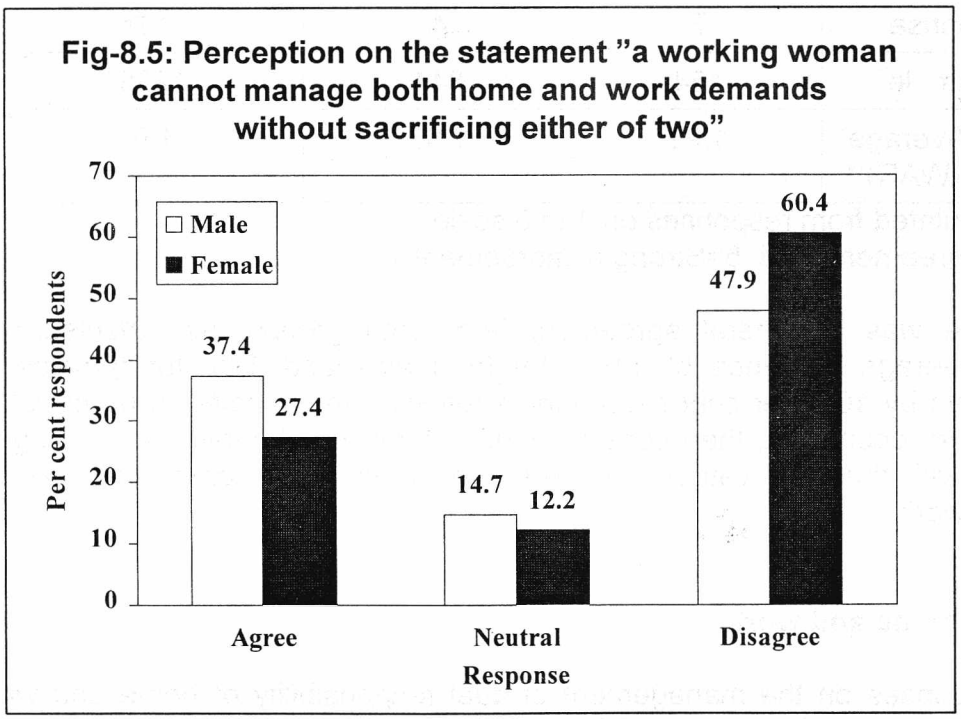
Balancing home and work

Responses on the management of dual responsibility of home and work by women are given in Table-8.9 and Fig-8.5. The results indicate that the responses varied with gender. Nevertheless, it was found that majority of male (47.9%) and female respondents (60.4%) disagreed with the statement that the working women cannot manage both home and work demands without sacrificing one of them. In the combined analysis 56.0 per cent respondents disagreed and 31.0 per cent agreed with the statement. However, the weighted average response of 3.32 reflect a weak disagreement, and the proportion of female respondents disagreeing (60.4%) was more than that of the male respondents (47.9%).

Table-8.9: Perception on the statement "a working woman cannot manage both home and work demands without sacrificing either of two "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	168	37.4	231	27.4	399	31.0
Neutral	66	14.7	102	12.2	168	13.0
Disagree	215	47.9	508	60.4	723	56.0
Number responded	449	100.0	841	100.0	1290	100.0
No response	5		3		8	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	3.09		3.44		3.32	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement



Effect on married life

Perception of male and female respondents on the statement "career and work affects woman's married life " is given in Table-8.10. It was found that 51.6 per cent respondents supported the statement that "career and work affect woman's married life" and there was a weak agreement from the entire sample as reflected from the WAR value of 2.72. There was no perceptual difference in the opinion of

majority of male (53.6%) and female (50.5%) respondents on this. It can be further seen that about one-third male (30.6%) and female (29.4%) respondents disagreed that career/work strains woman's married life. As it could be seen, both the categories of respondents were primarily drawing satisfaction in their personal life from happy family life.

Table-8.10: Perception on the statement "career and work affects (strains) woman's married life "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	241	53.6	421	50.5	662	51.6
Neutral	71	15.8	168	20.1	239	18.6
Disagree	138	30.6	245	29.4	383	29.8
Number responded	450	100.0	834	100.0	1284	100.0
No response	4		10		14	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	2.71		2.73		2.72	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Husband's career Vs Wife's career

Perception on preference to career by gender is given in Table-8.11.

Table-8.11: Perceptions on the statement " in a conflict between a husband's career and a wife's career, the husband's career comes first "

Response	Male		Female		Male +Female	
	N	%	N	%	N	%
Agree	230	51.5	495	59.4	725	56.6
Neutral	96	21.5	159	19.1	255	20.0
Disagree	121	27.0	179	21.5	300	23.4
Number responded	447	100.0	833	100.0	1280	100.0
No response	7		11		18	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	2.68		2.51		2.57	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Data in Table-8.11 show that more than half the respondents, i.e. 56.6 per cent respondents agreed (51.5% male and 59.4% female) with the statement. However, the weighted average response of 2.57 indicated a weak agreement. This means there is agreement from both gender groups that in a conflict between a husband's and a wife's career, the husband's career comes first. This follows from the traditionalistic view of a patriarchal society that a husband's career is more important than a wife's career. Nevertheless, 27.0 per cent males and 21.5 per cent females disagreed with this view, which reflects the changing values in the society.

Work structure and dual role

The responses to the statement that the present work structure should be modified to enable a woman to combine career, child rearing and work without a break are given in Table-8.12 and Fig-8.6.

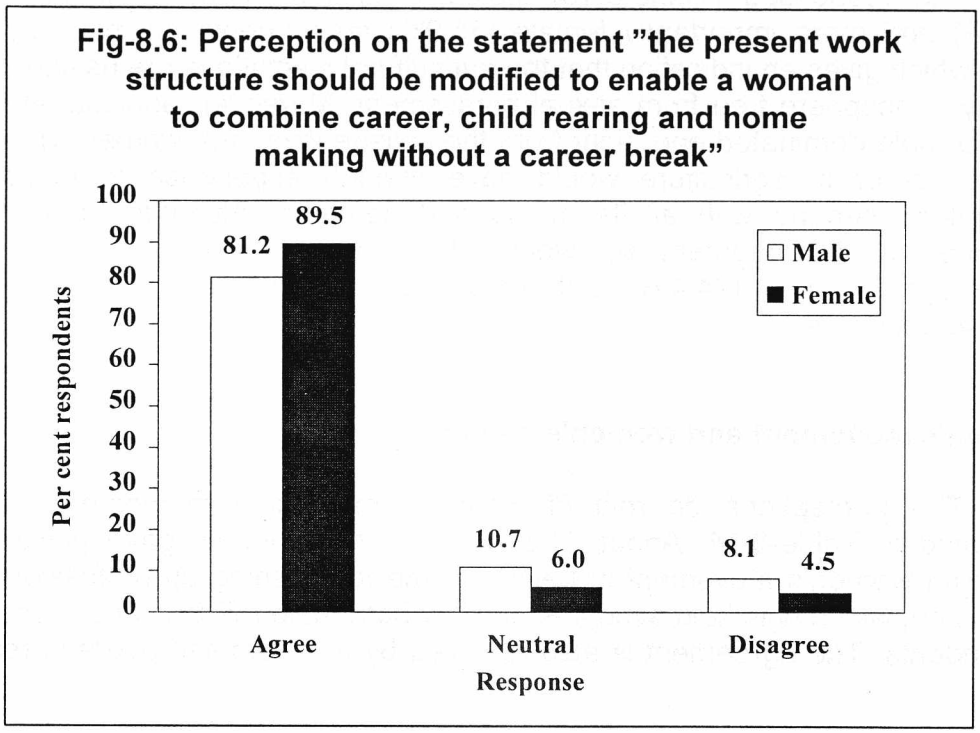
Table-8.12: Perception on the statement " the present work structure should be modified to enable a woman to combine career, child rearing and home making without a career break "

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
Strongly agree	363	81.2	751	89.5	1114	86.6
Neutral	48	10.7	50	6.0	98	7.6
Disagree	36	8.1	38	4.5	74	5.8
Number responded	447	100.0	839	100.0	1286	100.0
No response	7		5		12	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	1.89		1.62		1.71	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Of all the value/ opinion statements, an overwhelming majority of 86.6 per cent respondents, both male (81.2%) and female (89.5%) respondents agreed with the statement. WAR of 1.71 showed an agreement to this. This reflects a changing value of the present society, which gives much importance to a woman's career along with other prime responsibilities of child rearing and home-making.

It is apparent that both male and female agricultural professionals were of the opinion that the working woman could effectively balance both home and work demands. As there was a strong opinion built up for the change in work environment, it is essential that any measure for the improvement of work atmosphere should first address the above issues before going into other issues for the overall satisfaction of women, which will eventually affect their performance, career and family life.



Harassment at work place

Perceptions of male and female respondents on the statement "working women often have to deal with sexual advances from men they work with" are given in Table-8.13.

Table-8.13: Perception on the statement "working women often have to deal with sexual advances from men they work with "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	109	24.4	181	22.3	290	23.0
Neutral	99	22.0	177	21.8	276	22.0
Disagree	240	53.6	453	55.9	688	55.0
Number responded	448	100.0	811	100.0	1259	100.0
No response	6		33		39	
. Total sample	454		844		1298	
Weighted Average Response (WAR) *	3.45		3.56		3.52	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

The responses (Table-8.13) indicated disagreement by majority of male (53.6%) and more importantly female (55.9%) respondents on this very sensitive issue, which gives an indication that the agricultural institutions are having a relatively healthy atmosphere free from sexual harassment. Moreover, agricultural profession being a male dominated one, right from the college level, the women who wished to pursue career in agriculture would have enough experience to manage male-dominated scenario with all its merits and demerits. Although both the groups confirmed a disagreement by weighted average response of 3.52, a small percentage of male (24.4%) and female (22.3%) respondents felt that sexual harassment exists.

Women's movement and women's career

The perceptions on role of women's movement in women's career are presented in Table-8.14. About 61.6 per cent respondents gave positive opinion regarding women's movement in being a force for opening up professional careers for women, which was held almost equally by both male (57.8%) and female (63.6%) respondents. The agreement is also reflected by the weighted average response of 2.39.

Table-8.14: Perception on the statement " the women's movement has been a major force in opening up professional careers for women "

Response	Male		Female		Male + Female	
	N	%	N	%	N	%
Agree	255	57.8	527	63.6	782	61.6
Neutral	98	22.0	192	23.2	290	22.8
Disagree	88	20.0	109	13.2	197	15.6
Number responded	441	100.0	828	100.0	1269	100.0
No response	13		16		29	
Total sample	454		844		1298	
Weighted Average Response (WAR) *	2.56		2.30		2.39	

* WAR calculated from responses on 1 to 5 scale
1=Strong agreement and 5=Strong disagreement

Satisfaction in placement

The data on satisfaction of male and female respondents on placement of women agricultural employees in an organization are given in Table-8.15. There was no significant difference in the level of satisfaction of male and female respondents regarding the placement of women employees in the organizations. On the whole 79.5 per cent of both the categories of respondents were satisfied with the present

status of women in organizations whereas the rest 20.5 per cent seemed to be dissatisfied.

Table-8.15: Data on level of satisfaction on placement of women agricultural employees

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
Satisfied	357	81.7	595	78.3	952	79.5
Dissatisfied	80	18.3	165	21.7	245	20.5
Number responded	437	100.0	760	100.0	1197	100.0
No response	17		84		101	
Total sample	454		844		1298	

The main reason given by the male respondents (18.3 %) for not being satisfied with placement of women employees was the fieldwork. On the other hand, 21.7 per cent of female respondents indicated the main reasons for dissatisfaction due to 'subordinate jobs' and 'disproportionate man-woman ratio in organizations'. It is desirable to mitigate the cause of dissatisfaction by providing jobs of challenging nature or leadership to women and also reduce the disproportional ratio of men and women in the organizations.

It can be seen that resentment in placement arise due to traditional non-acceptability of women in their profession. The following specific quotes from some select responses illustrate this point.

1537 *Woman are considered weaker and soft in all spheres and are thus posted at stations of their choices on the cost of some really deserving candidates who should have been in their places. (Male scientist, 31)*

1740 *We are considered as a burden to the organization and some feel that we got this job out of their mercy. They do not give a thought for our intelligence/ qualification or capabilities. (Female manager, 40)*

1101 *Being in a transferable job forces to stay away from spouse. Frequent transfers disturb both physically and mentally. (Female manager, 31)*

1204 *Women are being employed in places where the sex discrimination is very high. People do not even know how to address a women government servant. Toilets are not provided in any field station. (Female veterinary officer, 26)*

1486 *Women are still shy to speak out in meetings which are male dominated. Men usually are patronising in their attitude. Therefore, placements are sometimes biased. (Female teacher, 39)*

1048 While assigning duties to the employees, gender should not be given primary consideration. Rather capabilities should be considered. (Female scientist, 21)

Field station placement

The data to the question on when a women can work in a field station where infrastructure facilities are generally poor are given in the Table-8.16.

Table-8.16: Stage at which women can work in a field station where infrastructure facilities are generally poor

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
Initial entry point	93	29.6	193	35.5	286	33.4
Mid career	41	13.1	67	12.4	108	12.6
Never	46	14.6	69	12.7	115	13.4
Others	134	42.7	214	39.4	348	40.6
Number responded	314	100.0	543	100.0	857	100.0
No response	140		301		441	
Total sample	454		844		1298	

Majority of both male (29.6%) and female (35.5%) agricultural professionals who responded felt that a woman can work in a field station with generally poor infrastructure facilities only at the entry or initial level. They might have opined so probably because the number of commitments/ responsibilities might not be very pressing at the initial stage and hence they would be in a better position to endure difficulties in work situation. About 13.1 per cent male and 12.4 per cent female respondents felt that women can work in field situation at middle age - may be because of the perception that by that age majority of personal responsibilities would have being fulfilled, thereby they would be able to take up jobs in field station. The rest 14.6 per cent male and 12.7 per cent female respondents felt that women can never work in a field station where infrastructure facilities are generally poor, at any stage of their career.

Specific remarks listed below, made by some respondents on this issue, are noteworthy.

1689 There is no such stage of career. It is better to get acquainted with and used to the poor infrastructure facilities in the field in the first place. We will stop complaining then. (Female veterinary officer, 26)

2762 As government is spending a lot on a student in professional education, she should work from the starting stage of her career. (Female student, 24)

1044 *When she has established herself in her field and has the influence to get things done out of her personal contacts. (Female scientist, 29)*

1034 *Any time in life if she has adequate child care support at home; otherwise when her children become independent. (Female teacher, 47)*

1112 *Before marriage and after the children grow up. Mothers' attention is required for the growing children for their education and character build-up and therefore at these stages they should be available in the house. (Male teacher, 42)*

1295 *When I got married, I preferred this station even though the infrastructure facilities were poor because I wanted to stay with my family. (Female teacher, 42)*

1430 *After forty years of her age, when she is relieved of her household responsibilities, i.e. upbringing of her children. (Female teacher, 44)*

1073 *A woman can work in a field station at an young age (before marriage / before child birth) so that she can bring out the best in her while working with limited resources / infrastructure facilities. (Male scientist, 48)*

1163 *Only when she is a single women without any other commitment. (Female researcher, 28)*

1271 *At the very early stage of the career a woman can work in a field station where infrastructure facilities are poor, because at that time, the woman is young, can adapt more and thus can work better. (Female, 26)*

1527 *It is difficult in all the stages to work where infrastructure facilities are generally poor, which I am facing in day-to-day life now. (Female teacher, 36)*

1901 *When the infrastructure facilities are poor, field work is difficult for both men and women; but it will be more difficult for women because of the physical build-up of women and social evils. (Male scientist, 31)*

1322 *Extension work, without having transport facilities, is difficult. As a basic level field worker, it is very difficult for women employees to work in field as extension officer. (Female agricultural officer, 51)*

The policy implication of the above responses is that, if a woman had to be placed in a regional/ field station, it is better to be done at initial stage when they enter the service, than at later stages when their commitments are many.

Influence of agricultural profession on marriage prospects

The response on influence of agricultural profession on marriage prospects of male and female respondents is briefed in Table-8.17. About one third of the respondents (33.6% males and 27.7% females) indicated no impact of agriculture

profession on their marriage prospects. Nearly 59.8 per cent of the male respondents and 64.0 per cent of female respondents indicated that their profession in agriculture had a positive impact on marriage prospects, whereas 6.6 per cent males and 8.3 per cent females responded that it had adverse impact on their marriage prospects. This indirectly indicates that agricultural professionals are accorded with high status in the society, and this profession is regarded as a prestigious occupation.

Table-8.17: Influence of agricultural profession on marriage prospects

Influence on marriage prospects	Male		Female		Male+Female	
	N	%	N	%	N	%
Very positively	123	29.3	240	31.7	363	30.8
Some what positively	128	30.5	245	32.3	373	31.7
No effect	141	33.6	210	27.7	351	29.8
Somewhat adversely	22	5.2	52	6.9	74	6.3
Very adversely	6	1.4	11	1.4	17	1.4
Number responded	420	100.0	758	100.0	1178	100.0
No response	34		86		120	
Total sample	454		844		1298	

Career motivation by family

For married persons, the most influencing motivating factor in pursuing a career comes from their immediate family members. The responses of married persons on career motivation from family members are summarized in Table-8.18 and Fig-8.7.

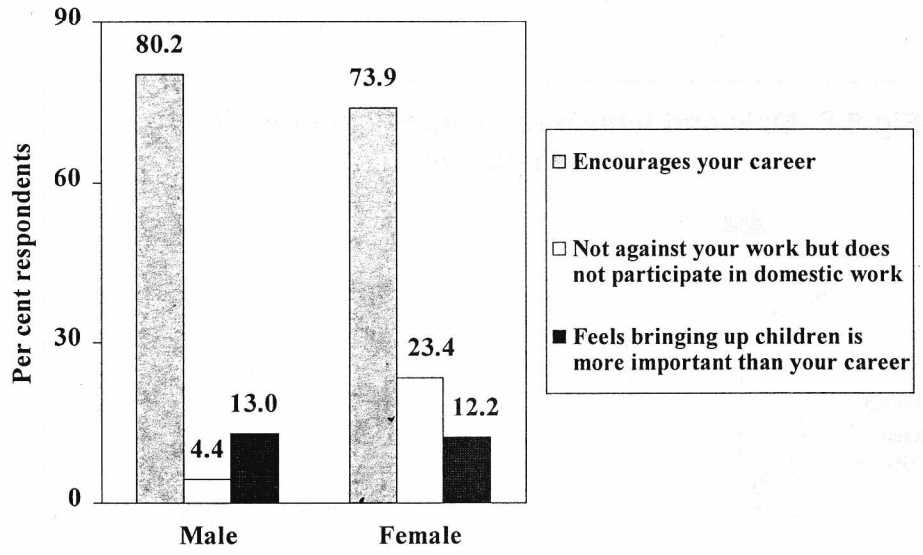
Table-8.18: Motivation of married career persons

Spouse	Male		Female		Male+Female	
	N	Rank	N	Rank	N	Rank
Encourages your career	235	I	381	I	616	I
Not against your work but he/she does not participate in domestic work	13	III	121	II	134	II
Feels bringing up children is more important than your career	38	II	63	III	101	III
Other reasons	7	IV	13	IV	20	IV
Total married respondents	273		516		789	

Note: As some respondents have indicated more than one reason the respective column totals are more than the actual number of married respondents.

The responses inTable-8.18 are well in agreement with other such surveys on working women issues (Parikh & Sukhatme, 1992; Premlata Singh, 1993; Radha chakraborthy, 1994). The comparison with male response has some interesting dimensions. Both male and female respondents agree that the encouragement from spouse as the most influencing motivating factor for married persons. But there was a significant difference in the response towards participation in domestic work as a motivating factor; it was ranked second by females and third by male respondents. However, number of female respondents who lack motivation to their career from their spouses is small (13 out of 273). Moreover, more number of male respondents felt that bringing up children is more important than their spouses career (II rank).

Fig-8.7: Response on reasons for motivation of married career persons



Family support for household work

The data on the perception of male and female respondents on household help are presented in Table-8.19 and Fig-8.8. There was a major perceptual difference between male and female respondents regarding household help.

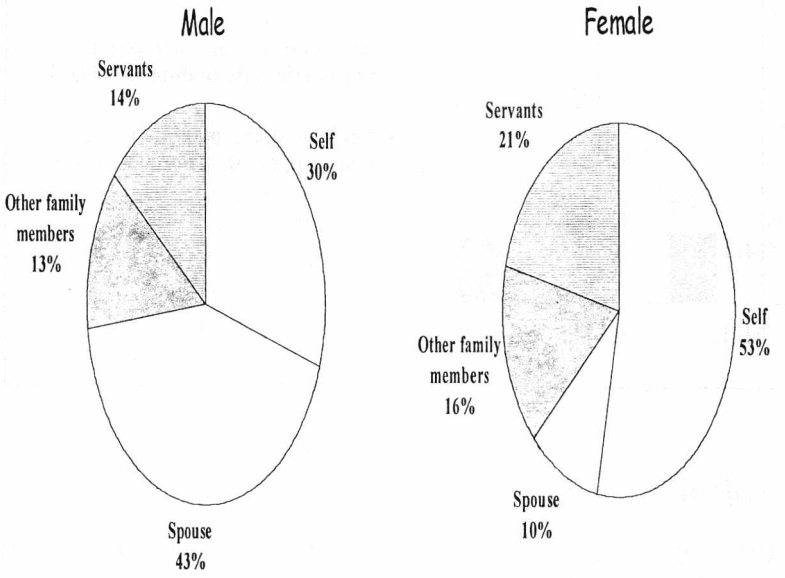
Male respondents opined that 30 per cent of household work was done by themselves, 43 per cent work is done by their spouse and the rest 27 per cent work is done by servants and other family members. On the other hand, female respondents felt that major portion of the household work (53%) is done by themselves, 21 per cent work is done by the servants, 16 per cent by other family members, and a mere 10 per cent by their spouse. The difference in the extent of household work done by male members as perceived by male and female respondents was too large. It may be possible that the housework, as perceived by male members, may be different to that seen by their spouse and hence the variation. On the whole, agricultural women

professional get domestic help for household work as they do 53 per cent work and the rest 47 per cent work is shared by others.

Table-8.19: Perception on household help

Household work done by	Per cent time spent for house hold work by		
	Male	Female	Male+Female
Self	30.0	53.0	45.0
Spouse	43.0	10.0	21.5
Others family members	13.0	16.0	15.0
Servants	14.0	21.0	18.5
All sources	100.0	100.0	100.0
Number responded	306	650	956

Fig-8.8: Male and female respondents perception on household help



Success in profession

The data on comparison of male and female respondents with women of same age, qualification and experience having better success in profession are given in Table-8.20. The male and female responses were in close agreement indicating little or no gender difference in comparison of ones success with that of successful women. The results (Table-8.20) indicated that there was no perceptual difference between male and female respondents with respect to their comparison with their

women counterparts. It was found that majority of both male and female respondents felt that, compared to the women professionals of same age, qualification and experience, they had better success in profession (weighted average 2.4), better opportunities in getting challenging assignments (weighted average 2.6) and better access to information within and outside organization (weighted average 2.5). But majority of both male and female respondents were neutral to the statement that they do less soft, repetitive and easy jobs as compared to their women counterparts (weighted averages 3.2). From the above it can be inferred that as compared to their women colleagues, the respondents had better success in jobs, better access to information/communication and better opportunities in getting challenging assignments.

Table-8.20: Comparison of success in profession of male and female respondents with **WOMEN** of same age, qualification and experience having better success

Compared to women of same age, experience and qualification the respondent	**Male**		**Female**		**Male+Female**	
	N	**W**	**N**	**W**	**N**	**W**
is more successful in professional career	286	2.3	631	2.4	917	2.4
had better opportunities in getting challenging assignments	280	2.5	617	2.7	897	2.6
does soft, repetitive or easy jobs	283	3.1	612	3.3	895	3.2
has easy access to information / communication within and outside the organization.	276	2.6	606	2.5	882	2.5

W = Weighted average response on scale 1-5: 1=Strong agreement, 5=Strong disagreement

The data on comparison of male and female respondents with men of same age, qualification and experience having better success in profession are presented in Table-8.21. The male and female responses were in close agreement were indicating little or no gender difference in the comparison of the success of females with that of successful men.

The results in Table-8.21 indicate that majority of male and female respondents had better access to information/ communication (weighted average 2.8) within and outside the organization and did less soft, repetitive and easy jobs (weighted average 3.4). The gender differences were perceptible in their response to having more success in career (weighted average 2.3 for males and 2.7 for females) and also in having better opportunities in getting challenging assignments (weighted average 2.5 for males and 2.9 for females) as compared to male counterparts of same age, qualification and experience. Although the difference in the responses of the male and female respondents were not greatly different, their relative magnitude indicated that female respondents were relatively less successful than their male counterparts.

Table-8.21: Comparison of success in profession of male and female respondents with **MEN** of same age, qualification and experience having better success

Compared to men of same age, experience and qualification the respondent	**Male**		**Female**		**Male+Female**	
	N	**W**	**N**	**W**	**N**	**W**
is more successful professional career	300	2.3	607	2.7	907	2.6
had better opportunities in getting challenging assignments	287	2.5	595	2.9	882	2.8
does soft, repetitive or easy jobs	287	3.4	587	3.3	874	3.4
has easy access to information / communication within and outside the organization	285	2.7	575	2.8	860	2.8

W = Weighted average response on scale 1-5 : 1=Strong agreement, 5=Strong disagreement

The responses in Table-8.20 and Table-8.21 reveal that both male and female respondents felt that they were more successful in profession, had better access to information/communication, did less soft/ repetitive jobs and got more opportunities for challenging assignments as compared to their female colleagues than their male colleagues. As shown earlier in Table-7.3 in Chapter-VII, majority of the respondents were from headquarters and the location of work place might have positively influenced in having better access to information / communication within and outside organization. This may have helped them in having more opportunities in getting challenging assignments, and thereby, being more successful in profession as compared to other male and female colleagues.

Change in treatment / opportunities in career

The respondents were asked to write their perceptions on changes and opportunities that occurred since their graduation in job-related treatment of women as compared to men. The responses of both male and female respondents are given in Table-8.22.

- **Perception on promotions**

The data on perception of individuals on promotions are given in Table-8.22. The weighted average response of both male and female respondents agreed on some change for better in promotions (2.11 by both on 1 to 4 scale where 1=significant change and 4=deterioration). The intensity of change, perceived by male respondents (2.08), indicates relatively more change than the corresponding female respondents' value of 2.28. The difference in the response arose largely from their rating to significant change perceived by male and female respondents; 25.6 per cent males agreed on significant change as against the value 14.6 per cent for females.

➢ **Salary and fringe benefits**

The responses on salary and fringe benefits were same as that in promotions, i.e. both groups agreed on small change for better over the years, with weighted average scores being 2.14 by males, 2.23 by females and 2.20 by both.

Table-8.22 : Responses on perceptions on job-related treatment of women

Perception on	Weighted Average Response		
	Male	Female	Both
Promotion	2.08	2.28	2.11
Salary and fringe benefits	2.14	2.23	2.20
Work related decisions	1.97	2.00	1.99
Access to professional job opportunities	1.86	1.93	1.90
Travel assignments	2.34	2.30	2.31
Inclusion in formal work related social activities	2.22	2.17	2.19
Women decisions acceptance by male colleagues	2.01	2.06	2.04
Recognition of duties and accomplishments	1.96	2.06	2.03
Opportunity to move in to higher management	1.98	2.12	2.07
Competence given more importance	2.00	1.94	1.96

Scale 1-4; 1=significant change and 4=deterioration

➢ **Work related decisions**

The weighted average response of 1.97 by males and 2.00 by females, and 1.99 by both on the issue of important work related decisions indicated a positive change, as perceived by both male and female respondents.

➢ **Access to professional job opportunities**

The weighted average response of 1.90 from both the respondents on the issue of access to professional job opportunities indicated a positive change. However, both groups differed in the magnitude of change, as it was rated as 1.86 by males and 1.93 by females.

➢ **Travel assignments**

Both the male and female respondents closely agreed on little or no improvement in the travel assignments being given to female employees. However, the weighted average response of 2.30 indicated a marginal change.

- **Inclusion in informal groups**

Though men and women participate in social activities, it is often cited by many women studies that the segregation of men and women leads to communication barriers. In most organizations, significant amount of information exchange takes place in informal groups such as canteen, lunch groups and the like. The weighted average response of 2.19, by both male and female respondents, indicated a marginal change in this regard.

- **Women judgments acceptance by male colleagues**

There is some definite change in acceptance of women judgments and decisions by male colleagues, as both male (2.01) and female (2.06) closely agreed on this issue.

- **Recognition of duties and accomplishments**

There has been some improvement in the formal recognition of duties and accomplishments of women, as reflected by the overall weighted average response of 2.03. Male respondents (1.96) perceived this change relatively higher than the female respondents (2.06).

- **Opportunity to move into higher management**

It is well known that the number of women in higher management are too few and women writers often cite resistance in some organisations against women in higher management positions. However, the situation has been changing and the systems are being tuned to make judgements by competence and not by gender. The weighted average response of 2.07 confirmed such change. However, the quantum of change as that perceived by male respondents (1.98) was higher than that perceived by female respondents (2.12).

- **Competence given more importance**

Both the male and female respondents perceived some change on giving competence more importance than gender, as reflected by the weighted average response of 1.96. The response from male and female group to this query was in reverse order when viewed against their responses to the above cited queries on opportunity to move into higher management and recognition of accomplishments. Female respondents perceived this change more strongly with a weighted average score of 1.94 as compared to 2.00 by male respondents.

Summary

1. An overwhelming majority of both male and female respondents (85.8%) were of the opinion that the present work structure should be modified to enable a woman to combine career, child rearing and home making without a career break.

2. The opinion that 'Women have to do better than men to get equal professional recognition" was held by a majority of 60.5 per cent female respondents as compared to only 34.1 per cent male respondents.

3. Job involvement has no gender bias, as both male and female respondents considered job involvement of either gender groups satisfactory.

4. Nearly half the respondents, 56.6 per cent female respondents and 46.7 per cent male respondents, were of the opinion that "compared to man, it is harder for a woman to be accepted fully into a professional working group".

5. Whereas 39 per cent women were of the opinion that men managers give secondary treatment to women, 56 per cent male respondents disagreed with this.

6. Almost half of both male and female respondents felt that family concerns are primary and career should be secondary for women.

7. There was no perceptual difference between the opinion of the male and female respondents on the issue that "a career woman need not sacrifice having children for having a better career".

8. An overwhelming majority of both male and female respondents (88.6%) were of the opinion that "small children suffer when mothers work full time".

9. Majority of male and female respondents (83.9%) agreed that "family/husband should provide supporting role for a woman to have successful career".

10. Majority of the female respondents (60.2%) were of the opinion that "working women can manage both home and work without sacrificing either one" whereas lesser per cent (47.4%) of male respondents concurred with this. However, about 50 per cent of the female respondents felt that "career and work strain woman's married life".

11. Most female and male respondents (55.8%) held traditionalistic view that 'husband's career is more important than wife's career'. However, 23.1 per cent disagreed with this view reflecting the changing values in society.

12. A relatively 'healthy atmosphere free from sexual harassment for women employees' was perceived by 53.4 per cent respondents, whereas 22.3 per cent respondents perceived the opposite.

13. About 60.3 per cent respondents opined that the women's movement had been a positive force for opening up professional careers for women.

14. Majority of female (78.3%) and male (81.7%) respondents were satisfied with the placement of women employees in agricultural organizations. Dis-satisfaction of a few (21.7%) female respondents was due to the subordinate jobs and disproportionate gender-ratio in organizations.

15. About 33.4 per cent of both male and female respondents felt that women can work in field stations where infrastructure facilities are poor only at initial entry

point of their career and 13.4 per cent felt that they can never work in field stations with poor infrastructure at any stage in their career.

16. Nearly 62.5 per cent of the respondents agreed that the profession in agriculture has positive impact on marriage prospects.

17. About 78.1 per cent of male and female respondents agreed on the main motivating factor of 'spouse encouraging their career'.

18. There was a perceptible difference between the views of the male and female respondents on household work. Female respondents mentioned that 10 per cent of their household work is done by their spouses whereas male respondents indicated doing 30 per cent of the household work.

19. Majority of both male and female respondents (87%) indicated the reason for success in career due to easy access to information and less soft/ repetitive jobs than their male and female counterparts. However, some female respondents felt that their male counterparts had more opportunities of getting challenging assignments.

20. Both the male and female respondents acknowledged the changes in job-related treatment of women to be better. They agreed that over the years, women are getting better opportunities in terms of promotions, access to jobs, recognition to competence, job accomplishments and acceptance of judgments by males.

Chapter – IX

Career problems

Though, in general, unemployment among professional agricultural graduates is low, the responses given in the preceding chapters establish the fact that women have problems in getting a job, placement and also in sustaining the job. The mobility is restricted and job opportunities are limited in a mid-career. This chapter focuses on the issues related to getting a job, changing the job, and leaving the job due to personal, social and professional reasons.

Reasons for not getting a job

The responses to the question on problems in getting a job are given in Table-9.1. The response of male and female graduates is same. Out of the 1188 responses received for this, three fourth mentioned that there are no problems in getting a job. The rest one fourth expressed facing some problems. Out of 305 respondents who mentioned facing problems in getting a job, about 263 have specified the reasons, and they are shown in Table-9.2.

Table-9.1 : Problems in getting a job

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
There are problems in getting a job	109	25.1	196	26.0	305	25.7
No problem in getting a job	325	74.9	558	74.0	883	74.3
Number responded	434	100.0	754	100.0	1188	100.0
No response	20		90		110	
Total eligible sample	454		844		1298	

N= Number of respondents

From the data in Table-9.2, it is evident that the most important reasons cited for not getting jobs, based on the responses of both male and female respondents in the order of decreasing rank, were general unemployment followed by not getting satisfactory job in the field of interest, competition, and bias in selection procedure.

Both male and female respondents agreed on general unemployment as the primary reason for not getting a job. However, their responses differed on other reasons to different degrees. Male respondents' response on bias in selection procedure (17.2 %) was relatively more as compared to female respondents' response of 7.6 per cent. On the other hand a significant proportion of female respondents (13.5%) stated selective preference for men, as a reason for not getting job as compared to a mere 1.1 per cent from male respondents. Likewise 7.1 per cent of the female respondents cited the job being not a convenient or preferred place as the

reason for not getting a job or losing job opportunities as against the response of 3.2 per cent from male respondents.

Table-9.2: Reasons for not getting a job

Reasons	Male		Female		Male+Female	
	N	%	N	%	N	%
General unemployment	27	29.0	43	25.3	70	26.6
Not getting satisfactory job	14	15.0	22	12.9	36	13.7
Competition for limited jobs	11	11.8	23	13.5	34	12.9
Bias in selection procedure	16	17.2	13	7.6	29	11.0
Selective preference for men	1	1.1	23	13.5	24	9.1
Reservation policies	8	8.6	9	5.3	17	6.5
No job in preferred place	3	3.2	12	7.1	15	5.7
Lack of practical experience	1	1.1	5	2.9	6	2.3
Low qualification to apply	1	1.1	4	2.4	5	1.9
Private sector discrimination	2	2.2	2	1.2	4	1.5
Family & Health problems	0	0.0	4	2.4	4	1.5
Background	1	1.1	1	0.6	2	0.8
Married women not preferred	0	0.0	1	0.6	1	0.4
No reason	8	8.6	8	4.7	16	6.1
Number responded	93	100.0	170	100.0	263	100.0
No response	16		26		42	
Total eligible sample	109		196		305	

Reservation policies of government were also cited as one of the reasons. Such a reaction is naturally expected due to the unemployment and stiff competition in the job market. Lack of practical experience and inability to pursue higher studies were also considered as low-ranking reasons by 2.9 per cent and 2.4 per cent female respondents, respectively as against 1.1 per cent for each from the male respondents.

In our personal discussions and during brainstorming sessions, women had expressed the lack of women involvement in key decision making. It may be necessary to associate at least one woman member in all committees such as selection panels for recruitment/ promotion, grievances, etc. so as to minimise the discrimination meted out to women, purely on gender basis.

Some typical quotations picked up from the responses, on reasons for not getting a job are given below:

1058 Being a village background, I was not having good contacts / guidance. (Male teacher, 54)

1095 After marriage I resigned from my job at .... to move to .... , where I had to wait long for a vacancy at the local university. (Female teacher, 44)

1499 I had been refused a job which requires a lot of field work just because I am a female. (Female researcher, 25)

1740 I was called for interview by .... Oilseeds growers federation. After waiting from morning to evening, when my chance came to face the interview, I was just asked to leave because I was a lady candidate. (Female manager, 40)

2708 For the post of training associate in one KVK, I was rejected for being a woman, as they think that I cannot do the field work and females will leave the job after getting married. (Female student, 26)

1593 As I studied in three states, there was a problem for getting domicile certificate. Due to non-availability of domicile certificate I was rejected for many jobs, though selected. (Male scientist, 45)

1819 Due to a gap of 8 years, it is difficult to equip with the latest know-how leading to a harder competition. (Female unemployed, 29)

Refusal of a job

Responses indicated that there were many reasons for not accepting a particular job and the same are presented in Table-9.3.

Table-9.3: Responses for refusal of job

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
Yes, refused a job	148	34.3	244	31.8	392	32.7
Never refused a job	284	65.7	524	68.2	808	67.3
Number responded	432	100.0	768	100.0	1200	100.0
No response	22		76		98	
Total sample	454		844		1298	

Nearly one-third of the respondents had indicated (Table-9.3) of having refused a job whereas the other two-third respondents indicated that they never refused a job offered in their career. The difference in the response between male and female respondents was small with the male respondents showing slightly higher rejection (34.3%) than the female respondents (31.8%). Of the 98 respondents, who did not give any response, 64 were students who might not have tried for a job as they are still at

university pursuing higher studies. The respondents who had occasion to refuse a job were asked to specify the reasons for the job refusal and their responses are briefed in Table-9.4.The reasons for refusal of job by both male and female respondents who had refused job offer (from Table-9.3) are presented in Table-9.4.

Table-9.4: Reasons for refusal of job

Reasons for job refusal	Male		Female		Male+Femal	
	N	%	N	%	N	%
Low salary	50	26.4	58	17.7	108	20.9
Cannot leave family	21	11.1	54	16.5	75	14.5
Not allowed by parents/ spouse	30	15.9	40	12.2	70	13.5
Lack of hostel / accommodation	12	6.3	53	16.2	65	12.5
Not economical to have separate establishment	17	9.0	21	6.4	38	7.4
Children too young	2	1.1	21	6.4	23	4.4
Health reasons	2	1.1	9	2.7	11	2.1
Children's education	6	3.2	4	1.2	10	1.9
Others	49	25.9	68	20.7	117	22.6
Total eligible sample	189	100.0	328	100.0	517	100. 0

Low salary appears to be an important reason for refusing a job, by both male (26.5%) and female (17.7%) respondents. The difference in the magnitude of response by male and female respondents indicates that women probably accepted relatively less-paid jobs than their male counterparts. To be distant to the family (16.5%) and lack of accommodation or hostel at place of work (16.2%) were the next important factors for female respondents whereas the male respondents considered them relatively low (11.1% and 6.3% respectively). The differences in the response to accommodation issue indicate that this limitation provided unequal opportunities to male and female respondents and this possibly restricts the upward growth and mobility of female employees.

There were instances of refusing a job in order to satisfy the wishes of family members. About 15.9 per cent of the male respondents and 12.2 per cent female respondents indicated that job refusal as deference to their family. The same trend was seen for the response on job rejection for economic reasons, where 9 per cent of the male and 6.4 per cent female respondents indicated job refusal on this count. In addition, female respondents had indicated more concern to young children at home and health considerations than their male colleagues. The responses from the males

appeared to give more importance to economic reasons whereas the female responses were guided more by the concern to the family and accommodation.

In addition, some women got jobs but could not accept them due to some specific reasons. These are illustrated in the following quotes.

1308 *Whenever I got a job, the place of working is in the remote areas. I wait for better location. (Female student, 22)*

1299 *Because, at most places, there are no living facilities for women and parents are not allowing me to live alone. (Female engineer, 25)*

Job changes

The data on number of job changes by respondents grouped organization-wise, are given in Table-9.5. The job changes were maximum for employees working in SAUs (37.0%) followed by 25.4 per cent in state government departments, 12.0 per cent in general universities and 9.1 per cent in private sector. Gender-wise, the data were similar in most organizations excepting for those working in SAUs and general universities. The per cent leaving SAUs were more in case of male respondents (42.7%) as compared to 34.5 per cent for female respondents. Reverse was the case with general universities, as 15.3 per cent female respondents left the system as against 5.0 per cent male respondents. The reasons for changing jobs are discussed in the next section. Others included self-employment, household work, part-time jobs, etc.

Table-9.5 : Change of jobs by the respondents

Organization prior to change	Male		Female		Male + Female	
	N	%	N	%	N	%
SAU	103	42.7	177	34.5	280	37.0
ICAR	13	5.4	33	6.5	46	6.1
State government	63	26.1	129	25.0	192	25.4
General universities	12	5.0	79	15.3	91	12.0
Central government	12	5.0	24	4.7	36	4.8
Private sector	26	10.8	43	8.3	69	9.1
Banks	5	2.1	11	2.1	16	2.1
International agencies	4	1.7	7	1.3	11	1.5
Others	3	1.2	12	2.3	15	2.0
Number responded	241	100.0	515	100.0	756	100.0
Total graduates sample	315		668		983	

Reasons for job changes

The data on number of job changes grouped according to the important reasons for leaving the job are given in Table-9.6.

Table-9.6: Data on reasons for job changes

Reasons	Male		Female		Male + Female	
	N	%	N	%	N	%
Job security	22	8.7	41	7.8	63	8.1
Marriage	4	1.6	40	7.6	44	5.7
Better professional prospects	102	40.6	181	34.4	283	36.5
Pregnancy	1	0.4	17	3.2	18	2.3
Better emoluments	18	7.2	22	4.2	40	5.2
Children's education	1	0.4	5	1.0	6	0.8
Transfer not acceptable	3	1.2	7	1.3	10	1.3
Transfer of spouse/father	2	0.8	22	4.2	24	3.1
Family reasons	10	4.0	35	6.7	45	5.8
Academic pursuit	28	11.1	33	6.3	61	7.9
Overall dissatisfaction	15	6.0	17	3.2	32	4.1
Health	-	-	5	1.0	5	0.6
Stress due to family & job	3	1.2	5	1.0	8	1.0
Accommodation	1	0.4	5	1.0	6	0.8
Sexual misbehaviour	-	-	2	0.4	2	0.2
Others	7	2.8	9	1.7	16	2.1
Departmental policy	29	11.6	41	7.8	70	9.0
Job/project terminated	5	2.0	38	7.2	43	5.5
Number responded	251	100.0	525	100.0	776	100.0
Total eligible sample	241		515		756	

Note: number responded is greater than total eligible sample as some respondents have given two reasons of equal importance.

As some respondents had cited more than one reason, the sum of number responded (in Table-9.6) was greater than the total eligible sample of 756 as given in Table-9.5. The data clearly showed that better professional prospect was the most important reason given by both male and female respondents. The number of respondents citing other reasons were less than 10 per cent, for each case, but some of the reasons were worth noting. Marriage was one of the reasons for job change, more

so for female employees (7.6%) as compared to male employees (1.6%). Similarly, transfer of spouse or father, pregnancy and family reasons were the next important reasons for female respondents, which were given low priority by male respondents. On the other hand, better professional prospects (40.6%) and academic pursuit (11.1%) were considered more important reasons for job change by the male respondents as compared to 34.4 per cent and 6.3 per cent by the female respondents, respectively.

It is remarkable to notice that both male and female respondents did not indicate much importance to sexual harassment or health or accommodation. This is in quite contrast to the experiences of working women in other organisations. The working atmosphere in most agricultural organisations is quite professional and healthy too.

Married women felt that it would be convenient if both husband and wife could work in the same organization or nearby places. But there are no policies to support spouse employment and a good number of women had to wait long or remain unemployed, especially when they were to shift their residence due to marriage or transfer of spouse.

1338 *As a married woman, when I want to join in the same organization where my spouse is working, I had to forego a period of five years due to non-recruitment of persons in my discipline. (Female teacher, 34)*

On the whole, the responses of female respondents reflected concern to family-related issues as reasons for job change whereas it was professional and academic reasons in case of male respondents.

Quitting job

The respondents were asked whether they would like to give up their career and if so at what stage of their career and for what reasons. The responses for these queries are given in Table-9.7 and Table-9.8, respectively. About twenty per cent of the male and female respondents indicated possibility for leaving the job and the rest eighty per cent of both the sexes were firm in continuing their job. The question of leaving job was primarily raised to verify the veracity of assumption raised in certain circles that women would like to give up their career once the family has financial security.

Table-9.7: Response on quitting job

Response	Male		Female		Male+Female	
	N	%	N	%	N	%
Yes, to give up job	84	19.8	154	20.3	238	20.0
No, to give up job	341	80.2	606	79.7	947	80.0
Number responded	425	100.0	760	100.0	1185	100.0
No response	29		84		113	
Total sample	454		844		1298	

Reasons for quitting job

The reasons for quitting the job by the respondents are given in Table-9.8. The responses of both male and female respondents (Table-9.8) indicate a similarity in magnitude but the reasons were not the same for the two sexes. The specific reasons for quitting job, as indicated by both male and female respondents together, in the order of importance were: displacement of family (27.5%) followed by self-employment (15.5%), professional dissatisfaction (14.5%), financial security (11.1%) and after attainment of family responsibilities (10.1%). The reasons specified by the male and female respondents were distinctly different. Female respondents rated the displacement of family as the most important reason with 39.6 per cent response as against a mere 5.5 per cent response by male respondents. This reveals that in family displacement, particularly after marriage, the female respondents have to leave the job if it does not suit to the spouse family. On the other hand, male respondents indicated self-employment or for better prospects (32.9%) as the most important reason, which was given a low priority by the female respondents (6.0%). Professional dissatisfaction was considered an important reason by both sexes. However, it was given relatively more importance by 16.4 per cent male respondents as against 13.4 per cent female respondents.

Table-9.8: Reasons for leaving job

Reasons for job refusal	**Male**		**Female**		**Male+Female**	
	N	**%**	**N**	**%**	**N**	**%**
Displacement of family after marriage	4	5.5	53	39.6	57	27.5
Consultancy/ part-time employment	24	32.9	8	6.0	32	15.5
Professional dissatisfaction	12	16.4	18	13.4	30	14.5
Financial security	6	8.2	17	12.7	23	11.1
After family responsibilities are over	5	6.8	16	11.9	21	10.1
For higher studies/ abroad	12	16.4	6	4.5	18	8.7
No reason	4	5.5	7	5.2	11	5.3
After middle age	3	4.1	5	3.7	8	3.9
Health reasons	2	2.7	4	3.0	6	2.9
To get good name and fame	1	1.4	0	0.0	1	0.5
Number responded	73	100	134	100	207	100
No response	11		20		31	
Total eligible sample	84		154		238	

Some respondents had narrated specific situations under which they might quit their job. Few such quotes are illustrated below.

1583 *When and if juniors are promoted over me, and I am forced to work under them or when my immediate supervisor is difficult to deal with. (Female teacher, 54)*

1018 *When there is no job satisfaction and, when the family life is getting affected badly. (Female researcher, 32)*

1143 *If there is no one to look after children then I think I shall give up career and after a break I shall start my career again. (Female dietician, 26)*

1030 *I might give up my career for my marriage. My job is nontransferable. So if the person is settled somewhere outside, I might give up my career. (Female teacher, 42)*

1181 *Depending on spouse's placement and keeping in view children's education at any stage. (Female agricultural officer, 33)*

1308 *After my marriage. If my in-laws and my spouse do not support me and if they are against my job and if I fail to manage both home and work demands, then I would like to give up my career. (Female student, 22)*

2747 *I will give up my career if it will be at the cost of my family's happiness. (Female student, 25)*

2822 *When I have children. Because, bringing them up is the prime concern and duty to me. (Female student, 29)*

Yet, some respondents had expressed their deep anguish at being discriminated and out of sheer frustration they would like to quit their job. Typical quotation given below establishes this fact:

1740 *I have put in 13 years of service in the bank. Still my competence and professional qualifications are not recognized by the persons for simple reason I being lady and strong male egoism. (Female manager, 38)*

Though financial security and family responsibilities were considered as valid reasons by both sexes, more so by female respondents, together they accounted as reason to leave the job by one fourth of the female respondents. However, the magnitude does not justify the myth that women like to leave the job after settlement of the family. On the other hand, displacement turned out to be the singular most important reason for leaving the job by female respondents. Female respondents opined that leave without break in service, consideration in spousal employment and provision of contract jobs would enhance their mobility.

Outstation tours

The problems relating to outstation travel are presented in Table-9.9. Non-

student category respondents responded this question only as it is not applicable to students. The three most important problems, common to both male and female respondents, cited were travel, accommodation and domestic-related. However, the ranking of the problem by male and female respondents varied. The gender-wise differences in the responses are discussed in the following.

Though 26.8 per cent respondents indicated no problems in their outstation tours, the per cent response from the female respondents (18.8%) was much lower than the male respondents (43.1%). Relatively the female respondents face more problems and this obvious from their responses to specific travel related problems.

Table-9.9 : The problems associated with outstation tours

Travel related problems	**Male**		**Female**		**Male+Female**	
	N	**%**	**N**	**%**	**N**	**%**
No problem	132	43.1	116	18.8	248	26.8
Travel itself	73	23.9	115	18.6	188	20.3
Accommodation	31	10.1	159	25.7	190	20.6
Domestic reasons	37	12.1	133	21.5	170	18.4
Health	5	1.6	10	1.6	15	1.6
Personal safety	2	0.7	7	1.1	9	1.0
Not applicable	26	8.5	78	12.5	104	11.3
Number responded	306	100.0	618	100.0	924	100.0
No response	9		50		59	
Total graduates sample	315		668		983	

Travel itself, i.e. in making travel arrangements, the type of transport and their physical endurance to sustain, was considered an important problem by both groups, but the male response (23.9%) was surprisingly higher than the female response (18.6%). Thus, the purported statement on dislike of travel-related jobs by women is a myth, and is certainly not due to poor travel arrangements. Accommodation and domestic reasons are the two most serious constraints that go against the outstation tours by female employees. Though male respondents (10.1% for accommodation and 12.1% for domestic reasons) reflect this problem, they were relatively of low intensity as compared to the female response of 25.8 per cent and 21.5 per cent, respectively. Health and personal safety were considered as low priority. Considering the above facts, it is apparent that women do not avoid out station tours for any personal reasons and the two important factors that need to be considered are travel and accommodation arrangements. A small fraction could avoid outstation tours due to social or domestic reasons but this may also change once the physical infrastructure, associated with outstation tours, are improved.

Summary

1. Three fourth of the respondents did not have any problem in securing a job. General unemployment in the country was considered the most important reason and gender prejudice in selections was cited as the second most important reason for not getting job by female respondents.

2. Women graduates accepted relatively less-paid jobs than male graduates. Low salary, work place away to residence and lack of accommodation were cited as some of the important reasons for refusal of job by women graduates. In general, female respondents showed concern to family and accommodation issues whereas male respondents gave importance to economic reasons.

3. Both male and female respondents changed or quitted the jobs for better professional prospects. However, displacement of family, marriage, pregnancy and family reasons were also cited as important reasons by some female respondents.

4. In order to increase mobility, female respondents opined that policies aiming at easy grant of leave without break in service, consideration in spousal employment and provision of contract jobs are needed.

5 The most important problem faced by both male and female employees in outstation tours related to travel, accommodation and domestic reasons. Thus, the myth that women do not undertake outstation tours is incorrect. Though travel related problems are not gender-specific, some women avoid outside tours due to problem in accommodation and domestic pressures, which might change if the infrastructure facilities associated with tours are improved.

Chapter X

Brainstorming workshop

As a part of the project, a brainstorming workshop was organized during November 18-20, 1997 to discuss about the issues of professional graduate women in agriculture. Since the information generated from the study can, at best, be described as preliminary, there is a need for a comprehensive debate to arrive at some kind of consensus agenda for future policy, planning and action. In pursuance of this and recognizing the importance of this subject, NAARM initiated this workshop in collaboration with National Commission for Women (NCW) and Department of Science & Technology (DST).

The workshop goal was to identify the issues and constraints in effective and efficient utilization of trained women graduates to meet the challenging social demand for agricultural development. The areas of focus of the workshop were:

- Role of women graduates in transfer of technology
- Entrepreneurship development for agricultural women
- Sustainable agriculture and role of graduate women
- Management issues of agricultural women graduates
- Professional performance of women graduates

The workshop aimed at deliberating on project information related to various issues of women in agriculture and then converts the generic recommendations into specific action plans. The programme and the list of participants of the workshop are given in Annexure-13.

Recommendations

A number of issues have emanated from the study which relate to education, employment, mobility, career expectations, values, problems and contribution to agriculture and development. The recommendations / suggestions are classified into structural and procedural actions. Sector-specific recommendations are made for future action so as to provide policy guidance for future development of national agricultural research system. The sector specific recommendations are listed below;

Education

- Special diploma and certificate courses to be introduced by agricultural educational institutions for women from rural areas.

- The curriculum for agricultural education at graduation level in all streams must be revamped and gender-sensitized.

- More number of HRD programmes to be planned for professional women in agriculture. Gender dimension to be incorporated in all the HRD programmes offered by and for scientific and technical staff of SAUs and ICAR.

- The agricultural graduates to be made to undergo compulsory rural work experience, prepare a report on the impact of agricultural programmes, identify gender specific technologies and provide feedback to the R&D system.

- More seats to be reserved for rural students seeking admission to agricultural courses. This will increase the number of professional women graduates with rural back ground, who may take up extension-related jobs/ activities.

Managerial

- It must be made mandatory to associate at least one woman member in all committees such as selection panels for recruitment/ promotion, grievances, etc.

- There is a need to prepare directory of agricultural professional women at national level. This will help in networking of women professionals - both in public and private agencies.

- All organizations must maintain and provide data on gender-wise staff positions.

- Gender inequity is to be reduced in top positions.

- Leadership training for women professionals, on a regular basis, is to be imparted to enable them to take up executive positions at policy level.

- A research management group at national level is to be formulated to identify programmes aimed at women in agriculture with senior executives from funding agencies like DST, ICAR, DBT, IFWA, DANIDA, etc.

- There is a need for proportionate representation of women in overseas scholarships in science and technology.

- Women cells ought to be constituted and supported in all organizations and this cell be given responsibility and authority for gender equity evaluation, monitoring and reporting. National Council for Women can give the framework for this.

- Women reservations are to be extended to all activities supported by state such as scholarships, admissions, deputations, nominations to awards, and curricular and co-curricular activities.

- To encourage women workers, there is a need for recognition, support and rewards for achievements by women in their respective fields.

Entrepreneurship

- There is a need for special programmes/ schemes for women entrepreneurs.

- The simplified procedures with fewer restrictions on issues like collateral security, etc. are needed.

- Government may extend special tax incentive schemes for encouraging women entrepreneurs.

- Access to information, training in entrepreneurship and marketing should be improved to promote entrepreneurship in women.

- Vocational training and counseling is to be taken up through participatory approach to develop entrepreneurship. All R&D establishments and development agencies are to identify programmes aiming at women entrepreneurs.

Transfer of technology

- More women in agriculture need to be trained in extension, and be encouraged to take up extension jobs. Women graduates should be deployed to reach farm women in all TOT programmes.

- Women professionals are to be encouraged to handle the extension projects targeting farm women.

- NGOs may be involved in selection of women beneficiaries for developmental programmes.

Personnel policies

- Women job seekers may be given five years relaxation in recruitment

- Women having young children be given lean / flexi- working time.

- Employed women be given leave up to five years without break in service.

- Large organizations need to support spousal employment programmes.

- Pro-active search techniques using professional networks, NGOs and the internet may be authorised to seek qualified female candidates.

- Women extension functionaries should be provided with proper accommodation, transport and special incentives for outstation activities.

- There is a need to formulate policies which encourage mobility of professional women between various government or government-supported institutions.

Farm women issues

- The basic needs of rural women in the unorganized sector need to be incorporated in the agricultural bill, including social security, health and education facilities.

- Farm machinery and tools should be developed, tested and remodelled to suit the women so that they can handle them easily.

- There is a need to identify women activities that can be mechanised, and also to support programmes for improving implements and equipment traditionally used by women in villages.

- Documentation of successful indigenous technologies for women in rural areas is to be initiated/ taken up.

- Waste land be allocated to rural women folk to cultivate medicinal plants, fuel trees, etc.

Infrastructure

- On-site child care facilities and `elder care' services are to be established.

- Training institutes must have essential minimum infrastructure facilities (boarding, lodging, transport, toilets, etc.) for women.

Chapter – XI

Conclusions and recommendations

The major conclusion that can be derived from the study is: sustained role of graduate women in development demands transformation in three domains, namely,

1. Methods and procedures
2. Institutional cultures
3. Personal behaviour and attitudes

Above three are needed to reinforce one another and each presents points of entry for change. Of these, personal behaviour and attitude are crucial. Dominating behaviour inhibits participation whereas democratic behaviour enables and encourages participation.

The development in research or education does not happen just on its own and it has to be made to happen for which the role of professional women has to be recognised and government support is necessary. This study establishes clearly the need to deal with the issues of graduate women whose number is rapidly increasing in the recent past. Before discussing the actions for recommendation, some major findings of this study are presented in brief.

Major findings

- There were no major perceptual differences between male and female respondents regarding career issues.
- A higher per cent of women respondents belonged to younger-age category indicating the recent trend of growth of professional women in agricultural sector.
- Professional women came from elite educated families, most of them were urban based, from private english medium schools.
- Women were more influenced by mother for career preference.
- Women did better in college (majority in first 10%), and fieldwork was not perceived as a problem.
- Better professional prospects motivated to higher studies for both male and female respondents.

- Divided opinion regarding women reservation (35% against and 42% for higher reservation)

- Majority women/men preferred research and development jobs.

- About 45 per cent respondents were members in national-level professional societies.

- Only 12 per cent women were office bearers in professional societies.

- About half of both male and female professionals participated in conferences, mostly national-level and less than 10 per cent at international-level.

- About one-fourth of both male and female respondents did not participate in any training, one-half participated in at least one national training and the remaining one-fourth participated in more than one training.

- Physical facilities such as crèche, school, accommodation, health and washrooms were found inadequate by majority of the male and female respondents.

- Both male and female respondents indicated no gender preference for both supervisor and subordinate, as work is gender-neutral, and professional competence was the criteria for preference.

- Exposure to new techniques/technologies and involvement in creative activities were major sources of professional satisfaction for both male and female respondents.

- Happy family life was indicated as the major source of satisfaction for both male and female respondents.

- Both male and female respondents perceived to be more successful in career had easy access to information, and less soft and repetitive jobs as compared to their counterparts.

- Female respondents perceived that their male colleagues had better opportunities for challenging jobs.

- Majority satisfied with placement of women employees in agricultural organizations.

- Majority of female and male respondents opined no harassment in work place.

- One-third of both male and female respondents preferred posting women employees in field station at initial entry level.

- Professional women perceived very less household help from spouses (10%), whereas 30 per cent male professionals provided household help to their spouses.

- Majority of male and female respondents opined that work structure to be modified for professional women to combine career and home, and small children suffer when mothers work full time.

- One-fourth of the respondents faced problems in getting a job due to unemployment and competition.

- One-third of the respondents refused jobs, males for economic considerations and females due to family considerations.

- Around 20 per cent of males and females were ready to quit job due to better prospects (males) and displacement of family (female).

- Majority of males and females faced problems in outstation tours due to accommodation and travel.

Recommendations for action

Based on the above findings, the following recommendations are made, indicating the appropriate agency/ agencies for action.

Educational issues

1. The present agricultural education in the universities is not sensitive to gender issues. Gender, as an important dimension to agricultural development, is poorly inculcated in the education system. The system itself is, by and large, male-dominated, and the exposure to gender issues is limited to theoretical aspects in extension education and even this is absent in other disciplines. This aberration needs to be corrected. The curriculum for agricultural education at graduation level in all streams must be revamped and gender-sensitized.

2. The agricultural graduates can be made to undergo compulsory rural work experience. During this, they can prepare a report on the impact of agricultural programmes, identify gender-specific technologies and provide feedback to the R&D system. All the SAUs may be advised to introduce rural work experience programme at the graduate level with enlarged ambit of the programme substance with focus on gender aspects.

3. As admission to SAUs is merit-based, the proportion of students with urban background is increasing over the years. In the process, the agricultural education system has become urbane. The reluctance of urban graduates to serve in rural

areas is well known. If more number of rural students are admitted in the agricultural courses, a large number of them will be available to serve in the rural areas. Therefore, more seats may be reserved for rural students seeking admission to agricultural courses. As one-third seats are reserved for women, this will increase the number of professional women graduates with rural back ground, who may take up extension-related jobs/ activities.

4. All girls courses like home science should be discouraged. As women have to work in a mal-dominated society, they should be trained side-by-side with men. Professional education need to be considered in a wider perspective.

5. Though the number of female students in agriculture and allied courses is increasing, it is not uniform in all states. There is a need for special attention in such states and special incentives may be provided to attract female students till their number reaches a reasonable level. Since agricultural education is expensive, the participation of female students in agricultural courses is, at times, constrained due to financial problems. ICAR may encourage female students from all such states by providing more scholarships at graduation level.

(Action for issues 1-5 : SAUs and ICAR)

Transfer of technology issues

6. The number of women graduates working in the line departments is insignificant. The male extension personnel have not been able to reach women in rural areas. On the other hand, women extension workers are effective in communicating to women in rural areas. In view of the practical problems, related to job environment, women do not prefer extension discipline. To change this, the organizational climate in the line departments need to be made gender-friendly for more women to be trained in extension and encouraged to take up extension jobs. To place more women graduates in TOT programmes, there has to be special consideration in their placement. The women employees are to be provided necessary facilities and services like transport, accommodation and spouse employment. It may be made mandatory to all development agencies to identify definite proportion of their programmes aiming at women, and women officials may be encouraged to supervise them.

(Action : Development departments)

7. The extension projects have not been able to take gender perspective in its totality. As the number of extension women professionals are few at present, till such time sufficient women graduates are available in the system to handle extension projects, women graduates from other disciplines may be encouraged to handle the extension projects targeting farm women. As it is desirable to have multi-disciplinary team approach in all extension activities, at least one woman member may be associated in all such teams.

(Action : SAUs and ICAR)

R&D issues

8. Farm machinery and tools should be developed, tested and remodeled to suit the women so that they can handle them easily. There is a need to identify women activities that can be mechanised. R&D organizations may support programmes for improving implements and equipment traditionally used by women in villages.

(Action : SAUs and ICAR)

9. Documentation of successful indigenous technologies for women in rural areas is to be initiated/ taken up. This can be done by the National Research Center for Women in Agriculture under ICAR. There is a need for funding agencies to encourage and support these indigenous technologies further.

(Action : ICAR and Financial Institutions)

Managerial issues

10. The women involvement in key decision-making is low. Available women officials need to be associated in all managerial committees. It must be made mandatory to associate at least one woman member in all committees such as selection panels for recruitment/ promotion, grievances, etc. This may minimise discrimination met by certain women, purely on gender basis.

11. There is a need to prepare a directory of agricultural professional women at organisational and national level. This will help networking of women professionals - both in public and private sector agencies.

12. All organisations must maintain and provide data on gender-wise staff positions. Gender inequity is to be reduced at all levels, especially at top positions. The organizations must provide a perspective plan for personnel, stating the organizational goals to place women at different levels in the next twenty years.

(Action for issues 10-12 : All employers)

13. Women cells are to be constituted and supported in all organizations, and these cells have to be given responsibility and authority for gender-equity evaluation, monitoring and reporting. NCW can give the framework for this.

14. To encourage women workers, there is a need for recognition, support and rewards for achievements by women in their respective fields. NCW may initiate national-level awards in different fields. NCW may also encourage both men and women to work on women issues by giving national-level awards.

(Action for issues 10-14 : NCW and All employers)

Science and Technology issues

15. The women in science and technology are a minority and need special focus in availing the opportunities provided by the funding agencies. The funding agencies should earmark certain number of projects for funding in proportion to the number of women professionals in the country.

16. Women reservations are to be extended to all activities supported by State such as scholarships, admissions, deputations, nominations towards, and curricular and co-curricular activities.

17. There is a need for proportionate representation of women in overseas scholarships in all branches of science and technology.

18. A research management group at national level may be formulated to monitor S&T programmes aimed at women. The group may comprise senior executives from agencies like DST, ICAR, DBT, UGC, CSIR, HRM, IFWA, DANIDA, etc. so as to monitor and guide this activity. There is a need to share information on all women-related S&T issues by various S&T organisations. This can be made possible by creation of a management-cum-coordination group outside these organisations and responsible to the parliament. To fill this gap, NCW may take lead in the establishment of this group.

(Action for issues 15-18 : ICAR and S&T Ministry)

Entrepreneurship and training issues

19. Most of the women graduates are not in productive employment for various reasons. There is a possibility to encourage these qualified and trained graduates to contribute to the development. There is a need for special programmes/ schemes for women entrepreneurs. However, the procedures and rules are too complex and difficult for a woman. The simplified procedures with fewer restrictions on issues such as collateral security, etc., are needed. In addition, the financial institutions may also allocate certain proportion of funds for women graduates.

(Action : NABARD)

20. SAUs may encourage graduate women as partners in agri-based business ventures. Then, it would be easier for women to get finance from banks with university support to the technology.

(Action : SAUs and Banks)

21. Entrepreneurship among agricultural graduates is rather low, and there are hardly any specific programmes to support and encourage them. Government may extend special tax incentives for encouraging women entrepreneurs.

(Action : Finance Ministries of State & Central Govts)

22. Vocational training and counselling is to be taken up through participatory approach to develop entrepreneurship. Access to information on training in entrepreneurship and marketing should be improved to promote women entrepreneurs. All R&D establishments and development agencies are to identify certain definite proportion of their programmes aiming at graduate women entrepreneurs.

(Action : R&D Organisations)

23. There is a need for agricultural technologies to reach the educated unemployed women in rural areas. It is possible to bring a large number of women with school level education in rural areas into the agricultural stream by introducing special education. SAUs have large network of stations and they can be used to train the rural women. Therefore, SAUs can introduce skill-based special programmes and short courses for women from rural areas.

(Action : SAUs)

24. HRD programmes for professional women in agriculture need proper planning in timing and duration, keeping in view the dual responsibility of women. In addition, gender dimension may be incorporated in all the HRD programmes offered by and for scientific and technical staff.

(Action: SAUs and ICAR)

25. In order to facilitate better professional competence, there should be more opportunities to expose women to latest technologies and encourage involvement in creative activities. More women professionals should be encouraged to become members/ office bearers in professional societies and more opportunities to be given to participate in conferences and training programs.

(Action: Professional societies)

Personnel and infrastructure issues

26. Government has been formulating personnel policies for the benefit of women employees. However, these are not uniform across various government departments. There is a need for uniform implementation. Some of the women issues are:

- age relaxation in recruitment
- lean / flexible working time for women having children
- option for leave up to 5 years with out break in service
- contract jobs to permit mobility for working women
- support for spousal employment programmes
- mobility of professional women between various government or government-supported institutions
- on-site child care facilities
- facilities during outstation tours

- Essential minimum infrastructure facilities like boarding, lodging, transport, toilets, etc., exclusive for women at training institutes.

No single body or office can alone coordinate these activities in all the departments. There is therefore a need for coordination body (women cell) in each organisation. NCW may provide broad guidelines and insist for creation of a women cell in each organization to monitor the implementation of above policies.

(Action : NCW)

Chapter – XII

Annexures

Annexure-1

List of universities providing agricultural education

Agricultural Universities

1. Acharya N.G.Ranga Agricultural University (ANGRAU), Hyderabad
2. Assam Agricultural University (AAU), Jorhat
3. Bidhan Chandra Krishi Vishva Vidyalaya (BCKVV), Mohanpur
4. Birsa Agricultural University (BAU), Ranchi
5. Chandra Sekhar Azad University of Agriculture and Technology (CSAUAT), Kanpur
6. Y.S. Parmar University of Horticulture and Forestry (YSPUHF), Nauni
7. G.B.Pant University of Agriculture and Technology (GBPUAT), Pantnagar
8. CCS Haryana Agricultural University (HAU), Haryana
9. Himachal Pradesh Krishi Vishva Vidyalaya (HPKV), Palampur
10. Indira Gandhi Krishi Vishva Vidyalaya (IGKVV), Raipur
11. Jawaharlal Nehru Krishi Vishva Vidyalaya (JNKVV), Jabalpur
12. Kerala Agricultural University (KAU), Vellanikkara
13. Konkan Krishi Vidyapeeth (KKV), Dapoli
14. Mahatma Phule Krishi Vidyapeeth (MPKV), Rahuri
15. Marathwada Agricultural University (MAU), Parbhani
16. Narendra Dev University of Agriculture and Technology (NDUAT), Faizabad
17. Orissa University of Agriculture and Technology (OUAT), Bhubaneswar
18. Punjab Agricultural University (PAU), Ludhiana
19. Punjabrao Deshmukh Krishi Vidyapeeth (PDKV), Akola
20. Rajasthan Agricultural University (RAU), Bikaner
21. Rajendra Agricultural University (RAU), Pusa
22. Sher-e-Kashmir University of Agriculture and Technology (SKUAT), Srinagar
23. Tamil Nadu Agricultural University (TNAU), Coimbatore
24. University of Agricultural Sciences (UAS), Bangalore
25. University of Agricultural Sciences (UAS), Dharwad
26. Tamil Nadu Veterinary and Animal Sciences University (TNVASU), Madras
27. West Bengal University of Animal & Fishery Sciences, Calcutta
28. Central Agricultural University (CAU), Imphal

Deemed Universities

29. Central Institute of Fisheries Education (CIFE), Bombay
30. Indian Agricultural Research Institute (IARI), New Delhi
31. Indian Veterinary Research Institute (IVRI), Izatnagar
32. National Dairy Research Institute (NDRI), Karnal
33. Indian Institute of Technology (IIT), Kharagpur

General Universities

34. Aligarh Muslim University (AMU), Aligarh
35. Guru Nanak Dev University (GNDU), Amritsar
36. Maharshi Dayanand Saraswati University (MDSU), Ajmer
37. Annamalai University, Annamalainagar
38. Gandhigram Rural Institute (GRI), Gandhigram
39. University of Agra, Agra
40. University of Allahabad, Allahabad
41. Banaras Hindu University (BHU), Varanasi
42. Bundelkhand University, Jhansi
43. University of Gorakhpur, Gorakhpur
44. University of Kanpur, Kanpur
45. Ch. Charan Singh University, Meerut
46. Rohilkhand University, Bareilley
47. University of Calcutta, Calcutta
48. Visva Bharati, Santiniketan
49. Pondicherry University, Pondicherry
50. Poorvanchal University, Jaunpur
51. University of Bangalore, Bangalore
52. Cochin University of Science & Technology, Cochin
53. University of Rajasthan, Jaipur
54. North-Eastern Hill University, Shillong

Growth of students (male+female) outturn (Discipline-wise)

Year	Agricu-lture	Veteri-nary	Engin-eering	Fishe-ries	Home Science	Diploma	Total
1980-84	8013	1809	88	56	-	-	9966
1984-85	8519	1727	630	97	381	16	11370
1985-86	8604	1801	665	141	430	15	11656
1986-87	8941	1992	730	160	474	18	12315
1987-88	9108	2089	960	211	564	145	13077
1988-89	9830	2217	1081	218	682	366	14394
1989-90	10668	2331	1245	313	717	110	15384
1990-91	10463	2186	1215	265	644	1015	15788
1991-92	10545	2279	1008	206	587	1093	15718
1996-97*	11712	2531	1120	230	651	1214	17458

Source: Data for the period 1980-92 is from AGRIUNIS,1994
*Data for the year 1996-97 is based on the actual data of 16 SAUs and estimations for the rest of the universities based on 1991-92 data.

Growth of students passed (Degree-wise)

Year	Diploma	UG	PG	PhD	All
1980-84	-	7420	2044	502	9966
1984-85	16	7691	2950	713	11370
1985-86	15	7879	3026	736	11656
1986-87	18	8077	3336	884	12315
1987-88	145	8731	3471	730	13077
1988-89	366	9761	3651	616	14394
1989-90	110	10165	4155	954	15384
1990-91	1015	10114	3870	790	15788
1991-92	1093	10110	3725	790	15718
1996-97	1214	11230	4137	877	17458

Source: Data for the period 1980-92 is from AGRIUNIS (1994).
* Data for the year 1996-97 is based on the actual data of 16 SAUs and estimation for the rest of the universities based on 1991-92 data.

University-wise student outturn data in the year 1996-97
(Outturn of UG. PG and Ph.D students)

S.No	Name of the University	Total	Women	Per cent women
1	AAU,Jorhat	405	132	32.5
2	ANGRAU,Hyderabad	826	323	39.1
3	BCKVV,Mohanpur	115	13	11.3
4	PKV,Akola	813	100	12.3
5	GBPUAT,Pantnagar	588	121	20.6
6	CCSHAU,Hisar	519	192	36.7
7	HPKV,Palampur	131	46	35.1
8	JNKVV,Jabalpur	423	37	8.7
9	MAU,Parbhani	572	70	12.2
10	PAU,Punjab	680	273	40.1
11	SKUAT,Srinagar	133	6	4.5
12	TNAU,Coimbatore	673	359	53.3
13	TNVASU,Madras	315	91	28.9
14	UAS,Bangalore	790	121	15.3
15	UAS,Dharwad	398	64	16.0
16	YSPUHF,Nauni	95	12	12.5
	Sub-total for above16 SAUs	7476	1960	26.2
	Other universities	9982	1813	18.1
	All Universities	17458	3773	21.6

Sources:

1 Data for SAUs at S.Nos 1-16 is collected from the concerned SAUs directly.

2 For other universities (other than the 16 SAUs mentioned above), the estimation is based on the actual data available for the year 1991-92 from AGRIUNIS,1994.

Growth of trained manpower across science and technology sectors

Year	Stock of S&T personnel (millions)	Percent with respect to S&T total			
		Natural Sciences	Medicine	Agricultural Sciences	Engineering
1950	0.19	40.4	27.1	4.2	28.2
1960	0.45	47.4	16.8	5.3	30.5
1970	1.17	47.6	10.6	5.1	36.6
1980	1.78	54.3	9.4	5.4	30.9
1990	3.81	55.2	8.4	5.1	31.2
1996	6.31	59.9	5.8	3.9	30.5

Source: R&D Statistics, DST, 1995.

Faculty and scientific staff in universities providing agricultural education in India

S.No	Name of the University	Faculty & Scientific Personnel		
		Total	Women	%Women
1	AAU,Jorhat	720	67	9.3
2	ANGRAU,Hyderabad	1312	59	4.5
3	BAU,Ranchi	266	11	4.1
4	BCKVV,Mohanpur	324	4	1.2
5	GBPUAT,Pantnagar	499	28	5.6
6	HPKV,Palampur	462	54	11.7
7	IGKVV,Raipur	291	11	3.8
8	JNKVV,Jabalpur	1858	87	4.7
9	KKV,Dapoli	224	8	3.6
10	NDUAT,Faizabad	252	13	5.1
11	OUAT,Bhubaneswar	562	38	6.8
12	PAU, Ludhiana	1338	178	13.3
13	RAU,Bikaner	867	100	11.5
14	RAU,Pusa	1148	24	2.1
15	TNVASU,Madras	523	28	5.3
16	UAS,Bangalore	910	74	8.1
17	UAS,Dharwad	352	24	6.8
18	YSPUHF,Nauni	287	23	8.0
19	SKUAT, Kashmir	442	0	0.0
20	WBUAFS, Calcutta	84	3	3.6
21	CCSHAU, Hisar	870	139	16.0
22	TNAU, Coimbatore	1125	68	6.0
23	MAU, Parbhani	449	13	2.9
24	CSUAT, Kanpur	474	12	2.5
25	PKV, Akola	319	9	2.8

26	MPKV, Rahuri	299	-	-
27	GAU, Dantiwada	1012	-	-
28	KAU, Vellanikkara	793	-	-
	All SAUs	18062	1210	6.7
29	MDS University, Ajmer	45	0	0.0
30	GRI, Gandhigram	9	1	11.1
31	Calcutta University	8	0	0.0
32	Agra University	44	0	0.0
33	Allahabad University	61	3	4.9
34	Kanpur University	109	2	1.8
35	Meerut University	342	14	4.1
36	Rohilkhand University	34	3	8.8
37	Poorvanchal University	186	5	2.7
38	AMU, Aligarh	6	1	16.6
39	BHU, Varanasi	64	0	0.0
40	Viswa Bharati, Santiniketan	30	0	0.0
41	IIT, Kharagpur	34	0	0.0
42	Rajasthan University	11	0	0.0
	All Non-SAUs	983	29	2.9
	Grand Total	19045	1239	6.5

Notes:

1. " - " Indicates non-availability of data
2. Manpower data for universities at S.Nos 29-42 pertain to the year 1992 and taken from AGRIUNIS, 1994.
3. Total manpower data for SAUs at S.No. 1-28 was taken from "Accreditation for quality assurance in agricultural education", ICAR, 1998. The women data for the SAUs at S.Nos 21-25 was taken from AGRIUNIS, 1994 and for the SAUs at SNos 26-28 was not available and the per cent women was assumed to be same as that for the SAUs at S.Nos. 1-25, i.e., 6.7.

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Survey of Professional Women Holding Degrees in Agricultural Sciences
(for graduates)

The questionnaire is to be filled by professional graduates in the disciplines of Agriculture, Horticulture, Forestry, Coop. & Marketing, Vet. & Ani. Sci., Dairy, Fishery, Agri. Engg and Home Science and all such offered by SAUs.

I. PERSONAL/ FAMILY INFORMATION

01. Name : _____

02. Mailing Address _____

_____

_____

03. Year of Birth : _____

04. You belong to : SC/ ST/ BC/ OBC/ Others

05. Languages known (beginning with mother tongue) _____

_____

06. Number of brothers [ ] and sisters [ ]

07. Your birth order in the family [ ]

08. Marital Status (tick the right one)

a. Unmarried [ ]
b. Married [ ] Year of Marriage : _____
c. Divorcee/Widow/Others [ ]

09. Approximate annual income of yourself and also of your spouse, if married. (tick the right one)

	Yourself	Your spouse
Below Rs. 50,000	[ ]	[ ]
Rs.50,001- 1,00,000	[ ]	[ ]
Above Rs. 1,00,000	[ ]	[ ]

10. The occupation and highest qualification of your family members, if retired at the time of retirement. (use the occupation code listed below)

Relative	Occupation	Highest qualification
1. Mother	[ ]	_____
2. Father	[ ]	_____
3. Spouse	[ ]	_____
4. Mother-in-law	[ ]	_____
5. Father-in-law	[ ]	_____

Code	Occupation
a.	Research & Education(Govt./Autonomous)
b.	Development/Extension/Civil(Govt./Autonomous)
c.	Banks/Insurance/Finance(Govt./Autonomous)
d.	Private/NGOs
e.	Self-employment
f.	International Organization
g.	House hold
h.	Others (Specify)

11. Details of your children, if applicable.

S.No	Sex(M/F)	Age
1.	[ ]	[ ]
2.	[ ]	[ ]
3.	[ ]	[ ]
4.	[ ]	[ ]

12. Approximate annual income of your parents when you entered college. (tick the right one)

Below Rs. 10,000	[ ]
Rs.10,000- 50,000	[ ]
Above Rs. 50,000	[ ]

II. ACADEMIC INFORMATION

Note: Following questions (Nos. 13 to 19)pertain to your final year schooling, i.e., 12th class / Intermediate.

13. School location. (tick the right one)
    a. Village [ ]
    b. Town [ ]
    c. City [ ]

14. State in which the school was located _____

15. Medium of instruction in the school _____

16. Is it a co-educational? **[YES / NO]**

17. Type of school (tick the right one)

a.	Central supported (Kendriya Vidyalaya, etc)	[ ]
b.	State supported (Municipal,Z.P., etc)	[ ]
c.	Public	[ ]
d.	Christian missionary	[ ]
e.	Private	[ ]
f.	Others (specify)	[ ]

18. Your overall rank in the 12th class/ Intermediate (tick the right one)

a.	I Class	[ ]
b.	II Class	[ ]
c.	III Class	[ ]

19. Identify **TWO** individuals who have supported and influenced you in your choice of college education. (tick your choices)

a.	Mother	[ ]
b.	Father	[ ]
c.	Brothers	[ ]
d.	Sisters	[ ]
e.	Teachers	[ ]
f.	Classmates	[ ]
g.	Others (specify)	[ ]

20. What were your preferred courses after high school/ intermediate? Rank first three choices. (rank them as 1,2,3)

a.	Agricultural sciences	[ ]
b.	Medical	[ ]
c.	Engineering	[ ]
d.	Science	[ ]
e.	Social Sciences	[ ]
f.	Others (Specify)	[ ]

21. Where did you stay while studying at the college? (tick the right one)

a.	At home	[ ]
b.	At relatives home	[ ]
c.	At hostel	[ ]
d.	Any other (specify)	[ ]

22. Educational record, beginning with the highest degree.

Degree	University	Year of passing	Branch

23. Your overall rank/position in the college while passing out. (tick the right one)

a.	In the upper 10%	[ ]
b.	In the upper 10% to 25%	[ ]
c.	In the upper 25% to 50%	[ ]
d.	Rest	[ ]

24. Have you had any difficulties as a student in the college in obtaining field work/ field training? **[YES / NO]**

If YES, please elaborate _____

III. CAREER INFORMATION

25. Rank first three types of jobs/occupations/activities you preferred at the time of graduation. (rank them as 1,2,3)

a. Research & Education(Govt./Autonomous) [ ]
b. Development/Extension/Civil(Govt./Autonomous) [ ]
c. Banks/Insurance/Finance(Govt./Autonomous) [ ]
d. Private/NGOs [ ]
e. Self-employment [ ]
f. International Organization [ ]
g. House hold [ ]
h. Others(Specify) [ ]

26. Particulars of the jobs that you have held including the present job and promotions. Start with the first job. Indicate if there is break for more than 6 months.

Sl No	Name of employing organization	Designation	Period of service (in years)		Reasons for change* (Use code)
			From	To	

* Codes for "Reasons for changing/ leaving/ not-working"

Code	Description	Code	Description
a.	Job security	b.	Marriage
c.	Better professional prospects	d.	Pregnancy
e.	Better emoluments	f.	Children's education
g.	Transfer not acceptable	h.	Transfer of spouse/ father
i.	Family reasons	j.	Academic pursuit
k.	Not satisfied with previous job	l.	Health
m.	Stress due to family & job	n.	Accomodation
o.	Inappropriate behaviour of colleagues of other sex		
p.	Other (specify) _____		

27. In how many National and International Professional Societies/ Associations you are a Member and Office bearer?
(Give numbers in the brackets)

	National	International
Member	[ ]	[ ]
Office bearer	[ ]	[ ]
None	[ ]	[ ]

28. In the past **TWO** years in how many Conferences/ Workshops/ Seminars/ Symposia have you taken part ? (give numbers in the brackets)

National [ ] International [ ] None [ ]

29 List your training record for the last **TWO** years.

Name of the Training	**Institution/ Organization where trained**	**Period (weeks)**

30. Status of the facilities provided by your organization ?

	Facility	Not Available	Not Satisfactory	Satisfactory
a.	Creche	[ ]	[ ]	[ ]
b.	Children's School	[ ]	[ ]	[ ]
c.	Health facilities	[ ]	[ ]	[ ]
d.	Transport to work place	[ ]	[ ]	[ ]
e.	Transport while working beyond office hours	[ ]	[ ]	[ ]
f.	Wash room/ toilets	[ ]	[ ]	[ ]
g.	Flexible work hours	[ ]	[ ]	[ ]
h.	Easy leave grant	[ ]	[ ]	[ ]
i.	Accommodation	[ ]	[ ]	[ ]
j.	Others (specify)	[ ]	[ ]	[ ]

IV. CAREER EXPECTATIONS AND VALUES

31. Which of the following is the PRIMARY source of satisfaction in your **PERSONAL** life.
Indicate code for the most appropriate one. [ ]

Code Description

a. Happy family life
b. Being a helpmate to your spouse
c. Your own career development
d. Growth and development of your children
d. Any other (specify) _____

32. Which of the following is the PRIMARY source of satisfaction in your **PROFESSIONAL** life? Indicate the code for the most appropriate one. [ ]

Code Description

a. Exposure to new techniques and technologies
b. Opportunity to develop new contacts
c. Financial advancement
d. Involvement in creative/pioneering activities
e. Intellectual stimulations
f. Recognition by others
g. Any other (specify) _____

33. As a professionally competent person, indicate whom you would prefer as your

		Supervisor	Subordinate
a.	Would prefer a woman	[ ]	[ ]
b.	Would prefer a man	[ ]	[ ]
c.	No preference	[ ]	[ ]

Please give reasons _____

_____

34. Do you have any employees association\ union? [**YES / NO**]

a. If YES, Are you a Member [**YES / NO**]
Office bearer [**YES / NO**]
b. Are women issues represented? [**YES / NO**]

If YES, could you specify some women issues raised _____

35. Compared with most **WOMEN** of your age, qualification and experience would you say that you (tick the appropriate one)

Sl No	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a.	have been more successful in the profession					
b.	had more opportunities in getting challenging assignments					
c.	had better opportunities in making important decisions in the organization					
d.	have been doing soft/ repetitive/easy jobs					
e.	have access to information/ communication within and outside the organization					

36. Compared with most **MEN** of your age, qualification and experience would you say that you (tick the appropriate one)

Sl No	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a.	have been more successful in the profession					
b.	had more opportunities in getting challenging assignments					
c.	had better opportunities in making important decisions in the organization					
d.	have been doing soft/ repetitive/easy jobs					
e.	have access to information/ communication within and outside the organization					

37. As a professional, would you advise other young women to take up professional education in agriculture and allied disciplines? (tick the right one)

a. YES, Most certainly [ ]
b. Qualified YES, Provided they have no other option [ ]
c. No [ ]

Please elaborate _____

38. Has your being a professional, influenced your marriage prospects? (tick the right one)

a.	Very positively	[ ]
b.	Somewhat positively	[ ]
c.	No effect	[ ]
d.	Somewhat negatively	[ ]
e.	Very adversely	[ ]

39. Where is the location of your work place?

a.	Head quarters of the institution	[ ]
b.	Outside head quarters, but a major center	[ ]
c.	Field Station	[ ]

40. Does your work require frequent field visits? **[YES/NO]**

If YES, on average how many days in a month : _____

41. Are you satisfied with the placement of women employees in your organization? **[YES/NO]**

If NO, specify reasons _____

42. At what stage of the career do you feel women can work in a field station where infrastructure facilities are generally poor.

_____

43. Who does your household work?

	Persons involved	**Percent work done**
a.	Yourself	[ ]
b.	Your spouse	[ ]
c.	Other family members	[ ]
d.	Servants (including part-time)	[ ]
		Total : [100%]

44. Do you agree or disagree with the following statements? (tick appropriately)

Sl No	Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
a)	For a married women, a career should be secondary to her responsibilities as a wife and a mother					
b)	Women have to do better than men to get equal professional recognition					
c)	Small children suffer when mothers work full time					
d)	A woman who is really interested in her career should not have children					
e)	A working woman cannot manage both home and work demands without sacrificing either one of them					
f)	Working women often have to deal with sexual advances from men they work with					
g)	Compared to a man, it is harder for a woman to be accepted fully into a professional working group					
h)	In a conflict between a husband's career and a wife's career, the husband's career comes first					
i)	Unless the family/husband provides a supporting role, a woman cannot have a successful career					
j)	The women's movement has been a major force in opening up professional careers for women					
k)	Job involvement of men is higher than that of women					
l)	If men are managers, women are usually given secondary treatment than men.					
m)	Career and work affects (strains) woman's married life					
n)	The present work structure should be modified to enable a woman to combine career, child rearing and home making without a career break					

V. CAREER PROBLEMS

45. Have you had any difficulties in getting a job? **[YES / NO]**

If YES, please elaborate _____

_____

46. Have you ever refused a job? **[YES / NO]**

If YES, give reasons (tick one or more as applicable)

a.	Lack of hostel facilities/accommodation	[ ]
b.	Cannot leave family	[ ]
c.	Childrens education	[ ]
d.	Health reasons	[ ]
e.	Children too young	[ ]
f.	Not economical to have separate establishment	[ ]
g.	Not allowed by parents/spouse	[ ]
h.	Salary too low	[ ]
i.	Any other (specify)	[ ]

47. Would you like to give up your career? **[YES / NO]**

If YES, at what stage and for what reasons?

_____

48. If married, which of the following statements apply to you.

a.	Your spouse has encouraged your career	[ ]
b.	Your spouse is not against your working but does not participate in domestic work	[ ]
c.	Your spouse feels that bringing up children is more important than your career	[ ]
d.	Any other (specify)	[ ]

49. What are the **TWO** most important problems associated with your outstation tours. (tick the right ones)

a.	Travel related	[ ]
b.	Accommodation related	[ ]
c.	Domestic concerns	[ ]
d.	Health	[ ]
e.	Personal safety	[ ]
f.	No problem	[ ]
g.	Not applicable	[ ]

50. Rate your perception of changes that have occurred since your graduation in job-related treatment of women as compared to men (tick appropriately)

Sl No	Statement	Worse	No change	Some change for the better	Significant change for the better
a)	In promotions				
b)	Salary and fringe benefits				
c)	Participation in important work-related decisions				
d)	Access to professional job opportunities				
e)	Travel assignments				
f)	Inclusion in informal work related social activities (e.g. lunch groups)				
g)	Acceptance by male colleagues on decisions and judgements taken by women				
h)	Formal recognition of actual duties and accomplishments				
i)	Opportunity to move into higher management				
j)	Competence given more importance than your gender				

VI. OPEN PAGE

51. Please feel free to make any comments or suggestions pertaining to this study and also the questionnaire.

WOMEN GRADUATES IN AGRICULTURE AND ALLIED DISCIPLINES

Note: Please fill in the particulars of other graduate women known to you, particularly those who are unemployed or are employed in state departments, private organizations or abroad. Women in ICAR and SAU's need not be included.

SNo	Name and Organisation	Degree	Contact Address

Survey of Professional Women Holding Degrees in Agricultural Sciences
(for students)

Note: The students questionnaire includes the questions given in Annexure-8 except for the question nos. 9, 26, 29, 30, 35, 36, 39, 40, 43, 49 & 50. In addition, the following five questions were included in the students questionnaire.

1. In your opinion what should be the weightage given to the following criteria for admission to post-graduate programmes.

Criteria	Weightage(%)
a. Marks	[ ]
b. Entrance Examination	[ ]
c. Interview	[ ]
Total	100%

2. Who influenced you **MOST** in your choice of specialization at the post-graduation. (tick your choices)

a. Own Choice [ ]
b. Family members [ ]
c. Teachers [ ]
d. Classmates [ ]
e. Others(specify) [ ]

3. What is the **MOST** important reason for your pursing post- graduation?

a. Better professional prospects [ ]
b. Scholarship/stipend [ ]
c. Interest in higher studies [ ]
d. Scope of going abroad [ ]
e. Lack of suitable job with UG degree [ ]
f. Educational Institution reputation in the area [ ]
g. Educational Institution located in the home state [ ]
h. Others (specify) _____

4. In your opinion what are the **THREE** specialisations in the order of importance most suitable for women at post-graduation. Specify reason(s) using codes given below.

	Specialisation	**Reason(s)**	
i.	_____	[ ]	[ ]
ii.	_____	[ ]	[ ]
iii.	_____	[ ]	[ ]

Code **Reasons**

a. Employment opportunities
b. Jobs available in this specialisation entails more field work/farm work.
c. More urban based jobs are available in this area
d. Scope of going abroad
e. Relative number of seats in the specialisation
f. Academic work in this specialisation is relatively easy and convenient
g. Others (specify) _____

5. What is your opinion about reservation for women?

	In education	In employment
a. Should be there, but reduced	[ ]	[ ]
b. Should be there, but increased	[ ]	[ ]
c. Should not be there	[ ]	[ ]

Annexure-10

Form-1

Questionnaire for Educational Institutions

Number of students admitted and passed

University/ Institution: _____

(For one academic year 1995-96 or the most recent academic year for which the data is available)

Year				
Degree and Branch	**Admitted**		**Passed**	
	Girls	**Total**	**Girls**	**Total**

Form-2

Questionnaire for Educational Institutions

Year-wise number of students admitted and passed

University/ Institution : _____

Year	Admitted		Passed	
	Girls	Total	Girls	Total
1995-96				
1990-91				
1985-86				
1980-81				
1975-76				
1970-71				

Form-3

Questionnaire for Educational Institutions

Names of the women graduate students presently studying
(all PG's and PhD's)

University/ Institution : _____

(the data may be provided college-wise or campus-wise)

S.No.	Students Name	Degree and Branch	College and its address

Questionnaire to Organizations

Note : Professional Graduates in Agriculture include Graduates in Agriculture/ Horticulture/ Forestry/ Coop & Mktg/ Sericulture/ Ag. Engg/ Dairy/ Vet & Ani Sci/ Fishery/ Food Sci/ Home Sci.

Name and address of the organization :

Contact person :

Total number of agriculture graduates employed :

Total number of agriculture women graduates employed :

Name and address of agriculture women graduates employed

SNo	Name and Designation	Contact Address*

*To be filled if the person is not located at organization address

Advertisement

DST SPONSORED STUDY ON "PROFESSIONAL GRADUATE WOMEN IN AGRICULTURE"

NAARM is carrying the above study to analyse the issues of women in agricultural and allied disciplines, their career expectations, opportunities, problems and values and to draw relevant conclusions to provide policy level recommendations to improve the situation.

Disciplines covered under Agricultural Sciences include :
Veterinary; Animal Science; Dairy Sc. & Tech.; Fishery Sc. & Tech.; Home Sc.; Agriculture; Cooperation & Marketing; Horticulture; Forestry; Food Sc.; Sericulture; Agricultural Engg. & Tech.

If you are a **WOMAN** holding a degree in any of the above disciplines and are willing to be part of the study please contact us indicating YOUR CONTACT ADDRESS:

PRINCIPAL INVESTIGATOR
"PWA" PROJECT
NATIONAL ACADEMY OF
AGRICULTURAL RESEARCH MANAGEMENT
RAJENDRANAGAR, HYDERABAD
500 030

We will subsequently be reaching you with a detailed questionnaire to elicit your views on the issues cited above. **YOUR REPLY WILL BE KEPT CONFIDENTIAL.**

Annexure – 13

Workshop on Issues of Professional Women in Agriculture

(November 18-20, 1997)

Programme

November 18, 1997

Session-1: 10.00 -10.45 hrs

Inauguration

Chief Guest : Smt. Padma Seth, Adviser, NCW

Session-2: 11.00-13.00 hrs

Theme: Women Graduates In Technology Transfer And Sustainable Agriculture

Chairperson: Dr Rajammal Devdas, Avinashlingam Institute for Higher Education, Coimbatore

Rapporteur: Dr Sudershana Bhateria, HPKV, Palampur

Topic & Speakers: **Empowerment of Women & Agriculture Bill**
Mrs. Padma Sett, Adviser, NCW, New Delhi

Interface between Professional Women and Rural Women In Transfer of Technology
Dr Tara Thomas, Directorate of Extension, Delhi

Women's Work & Family Strategies
Dr S.K. Mann, PAU, Ludhiana

Sustainable Agriculture - Role of Women
Dr R. Kalpana Sastry, NARRM

Session-3: 14.00-15.30 Hrs

Theme: Management Issues Of Graduate Women

Chairperson: Dr Geervani, Padmavathi Mahila University, Tirupati

Rapporteur: Dr Utpala Goswami, AAU, Jorhat

Topic & Speakers: **Development Issues of Women in ICAR**
Dr R.S. Paroda, ICAR

Management Issues of Professional Women
Dr Rajammal Devadas, V.C. AIHE, Coimbatore

Issues of Women Executives
Dr Paramita Dasgupta, ASCI, Hyderabad

Gender Balanced Development in Livestock
Dr Rebecca & Dr Annette, ISPA, Hyderabad

Session-4: 15.30-17.00 hrs

Theme: Entrepreneurship Development for Women in Agriculture

Chairperson: Dr Paramita Dasgupta
Rapporteur: Dr Dr Poonam Agarwal, PSSCIVE, Bhopal

Topic & Speakers: **Entrepreneurship Development in Agriculture and Role of Women Graduates**
Dr Tej Verma, ADG, ICAR, New Delhi

Entrepreneurship Development of Women Opportunities and Policy Issues
Smt. Rama Devi, A-LEAP, Hyderabad

November 19, 1997

Session-5: 10.00-11.30

Theme: Role of Graduate Women In Development and Financial Agencies

Chairperson: Dr S.K. Mann, PAU, Ludhiana
Rapporteur: Mrs. Namita Gupta, DST, Delhi

Topic & Speakers: **Issues of Women in Science and Technology**
Dr A.R. Rajeswari, DST

Professional Women In financial & Banking Sector With Special Reference to Agriculture and Allied Sectors
Smt. Leela Venkat Rao, DGM, SBH, Hyderabad

Women Managers in Banking Sectors
Dr Aruna Mankidy, NIBM, Pune

Session-6: 11.30-13.00 hrs

Theme: Gender Issues In Agricultural Education

Chairperson: Dr A.R. Rajeswari, Ex-Adviser, DST
Rapporteur: Dr Jyotsna Devi, AAU, Jorhat

Topic &Speakers: **Assimilation of Home Science into Mainstream Agriculture**
Prof. Geervani, V.C. PMU, Tirupati

Vocationalisation of Agricultural Education and Gender Issues
Dr Poonam Agarwal, PSSCIVE, Bhopal

Social Dynamics of Gender Issues in Agricultural Education
Prof. Hari Babu, HCU, Hyderabad

Management Dynamics of Technology Transfer to Women in Agriculture
Dr Tej Verma, ADG (Home Science), New Delhi

Agri-based Rural Technologies for Women
Dr Vatsala, Dean (HS), ANGRAU, Hyderabad

Session-7: 13.00-15.00 hrs

Theme: Policy, Planning And Future Action

Chairperson: Dr Tej Verma, ICAR
Rapporteur: Dr Sandhya Shenoy, NAARM

Speakers: Chairpersons and Rapporteurs of all sessions

Session-8: 15.30-16.30 hrs

Valediction

Chief Guest: Smt Padma Seth

November 20, 1997

Finalisation of Recommendations

List of participants

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Dr Lalitha Anand Head, Biotechnology Indian Institute of Hort. Research Bangalore - 560 089	Dr Sudha Sukumaran Central Plantation Crops Research Institute Kasargod - 671 124

Case Study : Issues of women in Panjabrao Deshmukh Krishi Vidyapeeth, Akola

Kirty Arun Sirothia[i]

1. Facilitating factors for women to take up agriculture career as graduate students

- 30 per cent reservation of seats for girls has become one of the most important facilitating factors.
- Lesser fees compared to other professional courses.
- Availability of hostel facility.
- A good advisory system and socially healthy atmosphere in the campus for students
- Presence of women labourers in large numbers on the fields is also an unnoticed but very important factor due to which girls feel quite safe and comfortable.

2. Inhibiting factors for women to take up agriculture career as graduate students

- Postings in remote places where education and other facilities for children are not available.
- Strenuous field work in distant and scattered fields.
- Conveyance problems
- Girls may become vulnerable to physical harassment if places of working are in isolated places. Eg. Horticulture gardens or experimental fields etc.

3. Reasons for women preferences in agricultural disciplines, especially at postgraduation

- All the factors listed in part-1 above.
- In addition, women mostly prefer to complete postgraduation to go into academic, administrative or research line.

4. Women preference for type of jobs

- It has been observed and experienced that women prefer teaching, administrative and lab jobs having flexible timings to be able to balance their domestic and professional responsibilities. Fixed office hours, having rigidity for physical presence, are not preferred by women.

5. University policy and its actual practice as related to women recruitment, placement, transfers and promotions

- The university is obliged to practice the state government policy of recruitment. This is being done.
- Placements and transfers are carried out as per the whims and fancies of the university authorities with no special regards or considerations for women.
- Promotions are done as per rules and regulations.

6. Reasons for job breaks or job changes

- Marriage
- Transfer of husband
- Health problems of children or other family members
- Physical/mental harassment by male colleagues/boss

7. General career problems faced by women employees

- Non-flexible timings
- Non-cooperative, jealous boss/subordinates/colleagues/husbands
- Conveyance
- Inability to attend conferences, trainings
- Difficulty in going for higher studies due to family bindings and responsibilities.

8. General standing of women as compared to male colleagues in terms of work and achievements

- It has been observed that women did exceptionally well at teaching jobs, other extra-curricular activities related to students and even excelled in research presentations.
- Women were found to be weak and helpless in situations where male colleagues succeed in manipulating through dinners, drinks and other unofficial methods.

9. Status of physical facilities needed for women and the general attitude in creating and monitoring them

- Toilets are provided
- No common rooms/canteen/tiffin room
- No conveyance
- General attitude is of least sensitivity to ladies physical facilities.

10. Limitations or restrictions on upward mobility

- Women sometimes refuse promotions if postings are at remote places or if the family is going to be disturbed. Otherwise there are no limitations.

11. Harassment at work

- Mental harassment at work has been experienced by almost all the ladies in the university at one or other stage of their career.

- Physical harassment has not yet been reported by any female staff member.

- Female students have reported physical harassment by male teachers. Two cases are on record.

12. Extreme situations or isolated events

- The head of the department in one case insisted that female teacher going on maternity leave in september must complete her full syllabus before she goes on leave. The semester which had started in August was to end in December. This lady had to complain to the Dean, who then came to her rescue.

- A female faculty with a lot of potential was harassed by her husband after returning from abroad as he started doubting her integrity.

The above excerpts were from Dr Kirty Arun Sirothia, Associate Professor, Department of Veterinary Pathology, PDKV, Akola-444104. She is one of the resource persons of the project. She was the first female graduate and first lady faculty of the university and holds the charge of Rector of the university girls' hostel.

Case Study : Need for a collective women's forum

K. Saroja Krishnaswamy [i]

This case study was conducted during 1996-97 on the need for a collective women's forum and its functions at University of Agricultural Sciences, Dharwad. The study survey covered 86 per cent (43 out of 50) professional women working in UAS. A pre-tested questionnaire, which was framed after in depth interviews with some of the respondents, was used. The results are presented below.

The distribution of respondents by position is shown in Table-1. The respondents belonged to all cadres. The respondents belonged to all levels of scientific staff, typical in a state agricultural university in India.

Table-1: Distribution of respondents by designation

Designation	Respondents	
	Number	Per cent
Professor	3	7.0
Associate Professor	12	28.0
Assistant Professor	16	37.0
Research Scientists	12	28.0
All	43	100.0

The respondents were asked to specify the likely functions of the proposed women's forum in the order of their importance and the responses are given in Table-2. Providing timely information necessary for increasing professional participation and promotions was ranked first by 90.7 per cent respondents. Study of the problems of women in the agricultural university was ranked second by 88.4 respondents and 83.7 per cent wanted the forum to provide counseling for professional and personal problems. 72.1 per cent wanted the women's forum to be their collective voice, which points out to the gender based powerlessness experienced by the respondents.

Responses on specific needs to be met through the proposed women's cell's collective are given in Table-3. The respondents viewed transport from work place to home, while working beyond office hours, as the most important need. This was followed by the need for separate ladies' toilet and wash rooms. The concerns reflected as the needs to be met through the women's cell related to inadequate physical facilities at the work place, which indirectly reflected either their absence or the poor condition of the existing facilities.

Table-2 : Functions of women's cell as envisaged by the respondents

Functions	Rank	Number responded	Per cent responded
Providing timely information necessary for increasing professional participation and for promotions	1	39	90.7
Study the problems of professional women in the agricultural university	2	38	88.4
Provide counselling for professional and personal problems	3	36	83.7
Provide an authoritative collective voice to the problems and demands of professional women	4	31	72.1
Assist and co-ordinate teaching, research and extension work related to rural and tribal women	5	26	60.5
Provide database on rural and tribal women	6	22	51.2

Table-3: Specific needs to be met through the women's cell's collective

Need	Rank	Number responded	Per cent responded
Transport while working beyond duty hours	1	34	79.1
Separate ladies' toilet and washrooms	2	32	74.4
Accommodation	3	28	65.1
Creche	4	27	62.8
Flexible working hours	5	26	60.5
After school care for small children who return at 12 noon	6	24	55.8

To sum up, the women respondents felt the need for a separate cell or forum, vested with some authority, to highlight the problems and needs of the professional women working in the UAS, Dharwad. They also felt that such a forum should not only look after their welfare but also view their potentialities in proper perspective by helping them to work more efficiently to serve the system.

[i] Dr (Mrs) K. Saroja Krishnaswamy, Associate Professor, Rural Home Science College, UAS, Dharwad, is a resource person for this project. This case study was carried out by her exclusively for this project.

International experiences

Women's participation in science in general, and agriculture in particular, is increasing world over. High participation of women in science can be seen in many third world countries. There is evidence of significant number of women in agricultural research in Asia (Brush *et al*, 1995). Data on women agricultural graduates' outturn and working in research and education in some countries (for which data is available) are given in Table-1 and 2, respectively.

Table-1: Outturn of students in agriculture in some Asian countries

Country	Outturn of students in agriculture			Reference year
	Total	Female	Per cent female	
Sri Lanka	694	247	35.6	1984
Nepal	1176	7	0.6	1987
Philippines	45107	21285	47.2	1984
India	17458	3773	21.6	1996

Sri Lanka, Nepal and Phillippines data from Ref. Vina Mazumdar, 1989

Table-2: Women in agricultural research and education in some countries

Countries	Number of women	Per cent women	Year	Sector
Philippines	-	54.1*	1992	Ag. Research
Sri Lanka	-	27.5**	1991	Ag. Research
Thailand	-	44.0	1992	Ag. Research
US	986	9.7	1993	Ag. Education
Iran	63	5.8	1992	Ag. Education
India	1760	6.7	1997	Ag. Research & Education

* in 4 research institutes
** in 19 research institutes
Phillipines, Thailand and Sri Lanka data from Ref. Brush *et al* , 1995
Iran data from Ref. Ali Reza Talaie, 1996
US data from Ref. William Camp, 1995

The experiences of professional women in other countries indicate that problems faced by women professionals are essentially same all over. In the developed world the women studies are tuned towards feminism and equity whereas in developing world the studies are tuned towards inequality, gender representation and social justice.

Status of women and gender issues in research and education sectors in US and some south east Asian countries are given below:

Philippines case

In most developing countries the problems faced by women agricultural graduates in the agricultural profession are the same. The findings of research study "Women Scientists and Managers in Agricultural Research in the Philippines" (Brush et al, 1995) present picture about professional women in agriculture in Philippines. This study was carried out in four public sector institutes with a total of 300 scientists, 54 per cent of whom are women. The study used survey data, interviews and discussions with 100 staff, and records from two universities. Brief summary of the study is given below.

The Philippines represent the case of high participation by women in agricultural sciences in the world. Women are replacing men who have left the public sector for career opportunities in the private sector. Family responsibilities are important factor leading to retention of women in public sector jobs, which offer stability, flexibility, and supportive policies. Although women constitute a majority of the work force, they are under-represented in top-level positions. Seniority and research output did not explain the discrepancy since men and women have comparable length of service and publication records. Data suggest that women's careers are affected more than men's by their status in dual-career families. Women cited delay in training, relocation to follow husbands, and lack of mobility as career constraints. Cultural stereotypes of men's and women's roles within the household continue to affect working relationships and appear to limit women's opportunities for advancement into senior positions. Constraints to women's career attainment may persist primarily due to cultural barriers.

Some important observations and specific reactions of individual women are given below:

Key observations

1. The Philippines has one of the highest rates of participation of women in agricultural research than any country in the world. Women constitute approximately 50 per cent of agricultural researchers in public sector organizations. The major factors contributing to this high rate of participation include: long standing educational opportunities, the relative gender-neutrality of science as profession, the growth in the number of women qualified for careers in agricultural research, the expansion of disciplines considered important for agricultural research and the growth in jobs in agricultural research in government agencies and universities.

2. Women have been replacing men who have left the public sector for better salaries and career opportunities in the private sector and abroad. Women face little overt discrimination in the public sector, but significant obstacles remain in the private sector.

3. Women concentrate less in traditional field-oriented agricultural disciplines. They are found more in the support disciplines (eg. plant pathology and entomology), biological science, food technology, social sciences, and extension related fields (eg. agricultural education), whereas men have dominated in traditional disciplines (eg. plant breeding and agronomy). Contrary to this conventional wisdom, women do not spend significantly less time in the field than men. In fact, women were seen as an asset in field-based programmes in the Philippines.

4. The attrition of women scientists is low and comparable to that of men. They do not typically leave their jobs when they marry and have children, because jobs in the public sector provide support for them combining family and professional responsibilities.

5. Women are under-represented in senior scientific and management positions and advance more slowly than men. Reasons for lower career attainment are not clear. There was no significant difference between the sample men and women average ages. More over, women's productivity, as measured by publications, was equal to that of men. The status of different disciplines and problems with mobility for field work also do not appear to be important factors inhibiting career attainment.

6. The strong cultural stereotypes about gender roles make it more difficult for women to attain senior positions and perform effectively within them. They may also influence women's choices against pursuing senior positions.

7. Professional women are more likely than professional men to have a spouse who is also a professional. Women are more likely than men to make compromises for the benefit of their spouse's career. Compromises that have of a negative effect on their own career are delay in training, not going abroad for training and reduced mobility.

8. Women experience more intense work, family conflicts than men, but these do not appear to be a major constraint to productivity or career attainment. The institutes are able to maintain a stable and productive female work force where policies such as extended maternity leave, flexible work schedules, delegation of responsibilities and team work are in force.

9. Married women are more than twice as likely to be located in a central station than in an outlying station because of spouse employment and support systems for child care.

10. Managers in outlying stations reported that hiring spouses of employees contributed to their ability to fulfil recruitment targets. However, they take care to

place husbands and wives in separate units in order to improve their chances of success.

11. Managers of organizations also reported that staff absences due to family situations is a major issue. This they are coping up with informal practices like flexible working time, part-time employment, cross-training, delegation of responsibility to peers, an active sense of give and take, and team work.

12. Gender did not appear to inhibit productive working relationships among peers. Although many still preferred and found it easier to work closely with colleagues of the same sex, they maintain effective relationships with colleagues of the opposite sex.

13. Gender is an important variable affecting vertical relationships. Whereas men were willing to accept women as equal colleagues, they appeared less willing to accept women in positions of power. Cultural stereotypes of men's dominant and women's subordinate decision-making roles within the household continue to affect working relationships and appear to limit women's opportunities for career advancement into senior positions.

14. Men and women were perceived to bring unique and often complementary schemes and characteristics to the work place. Benefits of the diverse work force were expressed in terms of improved research performance and working relations within the organization. Most managers saw gender diversity as an organization asset and not as a problem to be solved.

Reactions of individual women graduates in Philippines

The following quotes by men and women agricultural graduates in Philippines reflect the status and issues of women professionals in that country.

- *"Family stability is often cited as a reason for staying but this affects women mainly. Men are free to leave the job to seek a better job". (Male scientist)*

- *"When my husband received a scholarship to pursue his Ph.D. in the United States, I stayed home because children were small then. When I was offered a scholarship in the United States but I had to forgo that because my husband had to come back to the Philippines". (Female manager)*

- *"I lost an opportunity for a scholarship abroad because of the government policy that pregnant women or women with children under two years of age could not leave country for training". (Female scientist)*

- *"Married men are more free to move, our society does not accept women to be so mobile. The norm allows men to change the jobs easily, which is unfair, a sort of double standard". (Male scientist)*

- *"Married women are left to take care of the family while men go to seek new jobs elsewhere. Women tend to stay in the same job very much longer because they have to establish stable schooling for the children and keep a household where the men can come back to". (Female scientist)*

- *"I had to give up a good job in the United States to follow my husband when we returned to the Philippines when he completed his studies". (Female scientist)*

- *"Once my husband and I were offered a job together (with a private company in another location); the offer to him was good but my offer was at a much lower salary. I did not accept the offer and my husband rejected his offer because of my decision". (Female manager)*

- *"Men do not want to be dominated by the weaker sex. Men will adapt but it will be hard for them'. (Female scientist)*

- *If a man is much more junior in position, there will be no problem reporting to a senior female boss. But if the male subordinate and the female boss are of the same age, there could be difficulties". (Female manager)*

- *"Women do not have the same opportunities. Men are closer to the Director. They have a better chance to move into management because the Director knows them better. Men have stronger informal associations. They socialize more, stay up late talking, and participate in decisions. Women cannot join these groups or events. That limits their opportunities". (Female scientist)*

US case

Writing on status of women in US, Pell (1996) describes females as under represented in university faculties. Effective networking and mentoring play an important role at the faculty level. If our goal is to have a scientific community open equally to all members of the general population, it is necessary to keep adolescent girls involved in math and science and to maintain their self-esteem. New faculty need to be more completely included in departmental and professional activities through both formal programs and good neighborliness on behalf of existing faculty.

Indonesia case

Since 1978, the role of women in Indonesia's national development has been proclaimed as a national issue to encourage the diversification of women's role in development (Hubeis, 1994). Problems to incorporate women in specific development activities were encountered partly due to the lack of statistical indicators, research studies and an effective national data bank of research on women. To mainstream women in development planning, Indonesia is now developing programs to undertake further development and institutional strengthening within the state university for the role of women, with the assistance of

several donor agencies including the state's budgets.

Thailand case

In Thailand (Hirampruk, C. 1994) women constitute over 90 per cent of the work force in the country's top 10 export industries with 68 per cent of all female workers being under the age of 30. Today, the main sectors which employ women are agriculture (50.5 per cent of female workers or 41.4 per cent of the sector's work force); industry (16.1 per cent of female workers or 49.1 per cent of the sector's work force); and trade (15.5 per cent of female workers or 51.8 per cent of the sector's work force). Females constitute 35.1 per cent of government employees, 40.1 per cent of private company employees, and more importantly, 64.5 per cent of Thailand's women manage family-owned businesses. At least eight universities provide women study programs and integrate gender and women's development into their programs of study. Despite the efforts of all these organizations, gender discrepancies still prevail in the society and, to a certain extent, it affects the country's image abroad. Thailand finds itself in a transition stage between an agricultural and industrialized society where some values have changed while others have not. Thai women are an essential part of this change which is redirected toward a more balanced and sustainable development.

Malaysia case

Jariah-Masud (1994) provides a brief overview on the current position of women in Malaysia. In 1990, 44 per cent of university students were women and their labor force participation was 67.8 per cent. The proportion of women in the agricultural sector declined as more women became involved in service and manufacturing sector. However, women's involvement in the political arena has changed very slowly. Gender blindness among men and women at all levels need to be addressed to ensure that policies and programs are gender-sensitive and also to enable men and women to become partners in development. Other issues include the need to change the gender perceptions and roles in the family to enhance family living. Programs for women only are plenty, but there is also a need to integrate women into the mainstream of development, to address human resource development and upward mobility in work force and partnership in family development. Gender perspective in development in Malaysia has to be addressed with its own model and framework based on national priorities.

Estimation of women agricultural graduates in 1995

Women agricultural graduates in private organizations

Number of units	Number	Total agricultural graduates	Women agricultural graduates	Per cent women
Units responded	45	1481	45	3.0
Total units identified*	217	9183	279	

* Estimation of the total agricultural graduates and women agricultural graduates is based on the assumption that their percentage in all the units will be same as in the responded units.

Estimation of women agricultural graduates in banks

Number of units (Zonal offices)	Number	Total agricultural graduates	Women agricultural graduates	Per cent women
Units responded	46 units (in 8 banks)	2140	31	1.5
Total units identified*	416 units (in 29 banks)	6539	95	

* Estimation of the total agricultural graduates and women agricultural graduates is based on the assumption that their percentage in all the banks is same as that in the responded banks.

Women agricultural graduates in central departments

Number of units	Number	Total agricultural graduates	Women agricultural graduates	Per cent women
Units responded	29	134	11	8.2
Total units identified*	97	449	37	

* Estimation of the total agricultural graduates and women agricultural graduates is based on the assumption that their percentage in all the units will be same as in the responded units.

Women agricultural graduates in state departments of agriculture

Number of states	Net cropped area (million hectares)*	Total agricultural graduates	Women agricultural graduates	Per cent women
7**	47.0	6979	435	6.2
All India***	142.0	21085	1314	

* Net cropped area taken from CMIE Report, 1997.

** Questionnaires were sent to 45 state agriculture and related departments in the country, out of which 16 departments from 7 states have responded.

*** Number of total agricultural graduates and women agricultural graduates were estimated based on the assumption that their proportion to net cropped area is same all over India.

Women agricultural graduates in states veterinary departments

Number of states	Total livestock population (thousands)*	Total veterinary graduates	Women veterinary graduates	Per cent women
8**	160.0	7351	512	6.9
All India***	470.0	21620	1504	

* Total livestock population is taken from CMIE Report, 1997.

** Questionnaires were sent to 44 state veterinary and animal husbandry related departments in the country, out of which 25 departments from 8 states have responded.

*** Total veterinary officers and women veterinary officers were estimated based on the assumption that their proportion to livestock population is same all over India.

Women agricultural graduates in SAUs

Cadre	Total	Women	Per cent women
Scientific *	18062	1210	6.7
Technical	1358**	91***	
Total	19420	1301	

* Data of scientific staff are taken from Annexure-5.

** Out of 13,581 technical personnel in SAUs in 1996-97, about 10 per cent (i.e. 1358) are taken as agriculture degree holders (AGRIUNIS, 1994).

*** Per cent women in technical positions are assumed to be same as in scientific positions.

Women agricultural graduates in general and deemed universities

Cadre	Total	Women	Per cent women
Scientific	1335	44	3.3
Technical	67*	2**	
Total	1402	46	

Source: AGRIUNIS, 1994. The data pertains to 43 colleges in general and deemed universities (non-SAUs).

* Out of 675 technical personnel in non-SAUs, about 10 per cent (i.e. 67) are taken as agriculture degree holders.

** Per cent women in technical positions are assumed to be same as in scientific positions.

Women agricultural graduates in ICAR

Cadre	Total	Women	Per cent women
Scientific	4659	342	7.3
Technical	802*	60**	
Total	5461	402	

Source: ICAR-DARE Annual reports, 1997-98.

* Out of 8,028 technical personnel in ICAR, about 10 per cent (i.e. 802) are taken as agriculture degree holders.

** Per cent women in technical positions are assumed to be same as in scientific positions.

State-wise distribution of the respondents by school location

Zone	State	Number	Percentage
East	Arunachal Pradesh	10	0.8
	Assam	136	10.5
	Manipur	3	0.2
	Meghalaya	5	0.4
	Orissa	22	1.7
	Tripura	1	0.1
	West Bengal	15	1.2
North	Bihar	22	1.7
	Chandigarh	3	0.2
	Haryana	10	0.8
	Himachal Pradesh	46	3.5
	Jammu & Kashmir	6	0.4
	Madhya Pradesh	66	5.1
	New Delhi	12	0.9
	Punjab	120	9.2
	Uttar Pradesh	100	7.7
South	Andhra pradesh	250	19.3
	Karnataka	127	9.8
	Kerala	93	7.2
	Lakshadweep	1	0.1
	Pondicherry	5	0.4
	Tamil Nadu	147	11.3
West	Andaman & Nicobar	3	0.2
	Goa	8	0.6
	Gujarat	7	0.5
	Maharashtra	51	3.9
	Rajasthan	18	1.4
No response		11	0.9
All zones		1298	100

Age of the respondents at marriage

Age (years)	Number of respondents	Cumulative number	Per cent respondents
<=20	38	38	2.9
21	19	57	4.4
22	33	90	6.9
23	59	149	11.5
24	93	242	18.6
25	97	339	26.1
26	106	445	34.3
27	85	530	40.8
28	83	613	47.2
29	57	670	51.6
30	41	711	54.8
31	33	744	57.3
>31	49	793	61.1
Total	505	1298	1[illegible]0

Average age at marriage for male respondents = 27 years

Average age at marriage for female respondents = 25 years

Average age at marriage for both male and female respondents together = 26 years

Number of siblings of the respondents

Number of brothers/ sisters	Male		Female		Male + Female	
	Number	%	Number	%	Number	%
0	10	2.2	12	1.4	22	1.7
1	63	13.9	138	16.4	201	15.5
2	99	21.8	236	28.0	335	25.8
3	85	18.7	189	22.4	274	21.1
4	80	17.6	104	12.3	184	14.1
5	48	10.6	58	6.9	106	8.2
6	28	6.2	51	6.0	79	6.1
7	20	4.4	24	2.8	44	3.4
8	12	2.6	14	1.7	26	2.0
9	5	1.1	8	1.0	13	1.0
10	4	0.9	5	0.6	9	0.7
11	0	-	2	0.2	2	0.2
12	0	-	1	0.1	1	0.1
No response	0	-	2	0.2	2	0.2
Total	454	100.0	844	100.0	1298	100.0

Medium of instruction at school

Language	Number	Percentage
English	616	47.5
Hindi	200	15.4
Telugu	138	10.6
Tamil	75	5.8
Marathi	19	1.5
Malayalam	42	3.2
Punjabi	44	3.4
Assamese	95	7.3
Gujarati	4	0.3
Kannada	28	2.2
Oriya	17	1.3
Urdu	4	0.3
Bengali	11	0.8
No response	5	0.4
Total	1298	100

Distribution of respondents based on type of school studied

State	Type of school system code						
	A	B	C	D	E	F	G
Andaman & Nicobar	-	1	-	2	-	-	-
Andhra Pradesh	4	128	11	55	44	6	2
Arunachal Pradesh	6	1	1	-	1	1	-
Assam	14	100	5	10	3	4	-
Bihar	4	11	1	3	1	2	-
Chandigarh	1	1	1	-	-	-	-
Goa	1	2	1	-	4	-	-
Gujarat	1	4	-	1	1	-	-
Haryana	1	7	1	-	1	-	-
Himachal Pradesh	2	32	-	-	5	7	-
Jammu & Kashmir	1	3	1	-	1	-	-
Karnataka	4	40	22	24	35	-	2
Kerala	1	20	7	50	12	3	-
Lakshadweep	-	1	-	-	-	-	-
Maharashtra	6	17	4	1	23	-	-
Manipur	1	-	-	2	-	-	-
Meghalaya	1	-	-	4	-	-	-
Mizoram	-	-	-	-	-	-	-
Madhya Pradesh	1	38	6	14	6	1	-
Nagaland	-	-	-	-	-	-	-
New Delhi	5	-	1	-	5	1	-
Orissa	-	16	-	-	4	2	-
Pondicherry	1	1	-	3	-	-	-
Punjab	13	58	9	6	26	5	3

Rajasthan	3	5	1	5	4	-	-
Tamil Nadu	5	49	7	46	36	3	1
Tripura	-	1	-	-	-	-	-
Uttar Pradesh	7	56	11	11	14	1	-
West Bengal	6	5	1	-	2	1	-
Others	3	-	-	1	-	1	-
No response	1	1	1	-	2	-	1
Total	93	598	92	238	230	38	9

Codes for type of school system

A - Central Supported (Kendriya Vidyalaya, etc.)

B - State Supported (Municipal, Z.P., etc.)

C - Public

D - Christian Missionary

E - Private

F - Others

G - No response

Two individuals who have supported and influenced the respondent in their choice of college education

Relation	Male		Female		Male+Female	
	Support-1	Support-2	Support-1	Support-2	Support-1	Support-2
Mother	183	2	491	-	674	2
Father	187	142	252	364	439	506
Brother	30	66	29	103	59	169
Sister	5	28	16	87	21	115
Teacher	18	74	22	109	40	183
Classmates	8	41	7	60	15	101
Others	16	45	24	50	40	95
No response	7	56	3	71	10	127
Total	454	454	844	844	1298	1298

Chapter – XIII
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