

Women in Agriculture



The women is the backbone of agricultural workforce but worldwide her hard work has mostly been unpaid. She does the most tedious and back-breaking tasks in agriculture, animal husbandry and homes. The research efforts at the ICAR institutes have been tried to relieve her of the drudgery by providing time and labour saving tools. Vocational trainings are also being conducted, to impart skills to undertake different avocations. In extension activities the women is now the centre point and activities are being planned keeping her in view. Her enlightenment will change the face of rural India. Several programmes started at the National Centre for Women in Agriculture and Krishi Vigyan Kendras, are the right steps in this direction.

- Projects were initiated on nearly all aspects of role of women in agriculture
 - Development and testing of extension methods for farm women in Eastern India
 - Standardization of women specific field practices in rice in Orissa
 - Occupational health hazards of farm women in coastal Orissa
 - Identification and evaluation of interactive learning modules for dissemination of homestead technologies
 - Improvement in storage practices of seeds and grains of important crops with women perspective
 - Reducing drudgery of women in agricultural operations through use of improved techniques
 - Management of coastal agro-eco system affected by super cyclone in Orissa
 - Empowerment of women in agriculture
 - Involving women in aquaculture is a step towards ensuring economic and nutritional security
- Krishi Vigyan Kendras trained nearly 0.2 million farm women, girls and women extension workers
- Self help groups were made and took up income generating steps in home made products, dairy products, bakery products, tailoring/embroidery, goat/buffalo rearing and vermicomposting
- Innovative marketing outlets developed for Self help groups
- Five components of AICRP on Home Science moved towards empowerment of rural women. There main achievements were
 - Mobilization of self help groups and creation of learning environment
 - Strengthening empowerment process
 - Empowerment gains for women were assessed
- Cafeteria for women in agriculture was developed and offered to states to guide the development of new programmes for women in agriculture

NATIONAL RESEARCH CENTRE FOR WOMEN IN AGRICULTURE (NRCWA)

The National Research Centre for Women in Agriculture (NRCWA) has been functioning at Bhubaneswar, Orissa, for developing methodologies, for identification of gender implications in farming systems approach and to develop women specific technologies under different production systems.

There are 16 ongoing research projects in the areas of gender study on agriculture and household economy, management of coastal agro-eco system, extension methods for farm women, standardization of women specific field practices, occupational health hazards, reducing drudgery of women in agricultural operations, improvement of farming system suited to farm women, eco-friendly pest management technologies for vegetables among farm women, evaluation of interactive learning modules, technological needs in empowering women in rural aquaculture, and improvement in storage practices of seeds and grains.

Under project on Development and testing of extension methods for farmwomen in eastern India, the extent of participation of farm women in different farming systems and farm enterprises and the role of change agents in that context, were studied. Contrary to the situation at coastal tract the male extension agents maintained higher contacts with farmwomen than the lady extension agent. The studies under *Identification and improvement of farming systems suited to farmwomen in Eastern India* project revealed that there is intense involvement of farmwomen in vegetable cultivation necessitating to take follow up supportive activities and interventions in the area of vermicomposting, natural plant pesticides, biological control and IPM.

Under the project *Standardization of women specific field practices in rice in Orissa* data were collected from women heads of 50 farm families on participation of women in relation to varying operations in rice cultivation. Women of family contributed highest hours per season (61.66) in harvesting and post harvesting operations and participated lowest in land preparation. Same pattern was observed from the paid women and total women (family + paid labour).

Under project on *Occupational health hazards of farm women in coastal Orissa* the health hazards faced by women in household activities, farm activities, post



Types of health hazards faced by farm women

Activities	Health hazards reported
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Farm activities

Transplanting	50%
Harvesting	26.5%

Post harvest activities

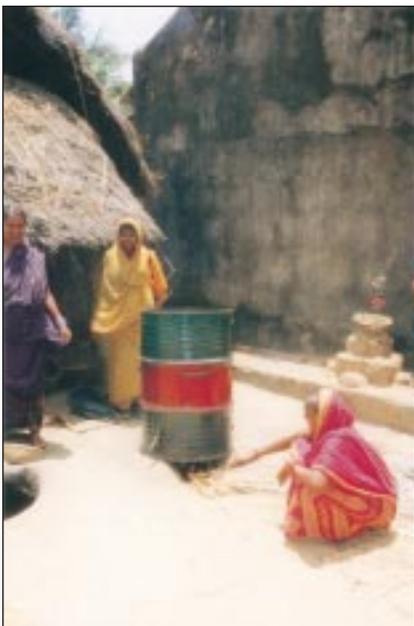
Threshing	50%
Drying	33%
Parbolining	67%

Livestock management

Shed cleaning	47%
Fodder collection	23%
Milching	27.5%

harvest activities and livestock management were assessed.

Under the project *Identification and evaluation of interactive learning modules for dissemination of homestead technologies* ergonomic assessment was carried out on the traditional and improved method of paddy parboiling procedures. During paddy parboiling using improved technology (paddy par boiling unit) the heart beat rate and energy expenditure were significantly reduced and the out put also increased from 35 kg per batch to 75kg per batch. The time duration of carrying out this activity also reduced from 2 days to 6 hours. Considering the significant utility of paddy parboiling unit, an interactive learning module is being developed on paddy parboiling unit, which will be useful for trainers in disseminating the technology.



Introduction of paddy parboiling unit for drudgery reduction and economic empowerment of women SHGs

The project on *Improvement in storage practices of seeds and grains of important crops with women perspective* highlighted that begunia leaf (*Vitex negundo*) treatment of mung seeds is as effective as Captan @3 g/kg of seed.

Comparison of efficacy of different ITKs for storage of greengram seeds

treatment	Parameters for testing storability of seed		
	germination 74(94) %	moisture content %	Loss in germination % than initial % after 1 storage
Seed+begunia leaf+ cow dung ash	82 (94)	9.6	12.76
Seed+neem leaf	74 (94)	9.7	21.27
Seed+naguria leaf	77 (94)	9.68	23.4
Control (Seeds treated with chemical)	81 (94)	9.75	13.8

Under the project on *Reducing drudgery of women in agricultural operations through use of improved equipment*, several developments were made.

(i) Design refinement in sitting type groundnut decorticator for women workers for better ergonomic performance—These refinements included increase in handle length from 32 to 37cm, increase in sitting stool height from 20 to 30 cm and change in wooden base design for easy packing and transport. The output of improved prototype was 30 kg/hr. The women workers liked the equipment as the work could be done in sitting posture and the force required for its operation was less than the standing type decorticator. This equipment has been taken up for prototype production and 55 units were fabricated and sent to various places for demonstration and use.



Groundnut decorticator (sitting type)



(ii) Comparison of heart rate responses in three types of dibbling methods for maize i.e. traditional method, with Naveen dibbler and with rotary dibbler— The parameters used for comparison were heart rate (for evaluation of work load), increase in heart rate in beats/m² of area dibbled and output in m²/hr. The output with rotary dibbler was found highest i.e. about 9- times greater than traditional method and Naveen dibbler. The heart rate data showed no significant difference in the dibbling with traditional method and with Naveen dibbler. But the women workers liked the Naveen dibbler as the



Naveen dibbler



Rotary dibbler

workers carried out the dibbling in standing posture and discomfort due to the bending was avoided. In rotary dibbler though the output was 9-times higher, the mean working heart rate was 141.7 beats/min (ÅHR 49.7 beats/min) thus necessitating the subject to have frequent rest pauses.

(iii) Developing equipment for dehusking and pearling of ragi (finger millets)— The harvested ragi (finger millet) contains thin cover of fibrous material

mainly husk and bran that needs to be removed before its utilization. Presently it is done using traditional practice of pounding which is tedious and time consuming. As ragi is used in tribal areas as staple food, there is a need of a suitable manual machine for its pearling. A grain testing mill was selected to carry out preliminary investigation on ragi pearling with respect to grain moisture content, emery roller speed and residence time. The response of these parameters was studied on degree of polishing, husk and bran removal, broken grain and power consumption. The initial husk content in the grain was determined to be 3.1% (mass basis). During preliminary study trial, it was observed that with 13.2% moisture content (wet basis), the husk and bran removal increased from 3.3% to 4.7%, 3.9 to 5.6%, 4.4 to 6.6% and 4.7 to 6.6% with increase in emery roller speed from 1,150 to 1,450 rpm for the residence time of 60, 80, 100 and 120 sec, respectively. However, the broken percentage of endosperm was higher at the emery roller speed of 1,450 rpm with residence time of 120 sec.

The project *Management of coastal agro-eco system affected by super cyclone in Orissa* was started with objectives — Nutritional status assessment of the families and intervention, intervention through development of nutritional garden in homestead areas of the families; and preparation of material for nutrition education to the farm families.



Vegetables in nutritional gardens

Heart rate responses and out put of women workers for dibbling maize with three different methods

Parameters	Dibbling methods		
	Traditional method	Naveen dibbler	Rotary dibbler
Working heart rate (HR), beats/min	103.8	104.4	141.7
Increase in heart rate over rest, beats/min	15.5	17.1	49.7
Increase in heart beats/m ² of area dibbled	7.9	7.1	2.8
Output, m ² /hr	117.2	148.1	1057.0

Under *Mission Mode NATP Empowerment of women in agriculture*, 540 farm women were grouped into 36 Self Help Groups for starting different enterprises based on the needs and preference of farm women, resources available and marketing potentiality in the area. Trainings were organized for capacity building of farm women of the SHGs in the enterprises. The members of Self Help Groups were also trained to handle different equipments. Empowerment of women Self Help Groups have been made by skill training and orientation to project management aspects. All the members of SHGs



Nursery rearing of rohu and catla

started enterprises as per their interest. The women have started generating income from enterprises.

Under the project *Involving rural women in aquaculture* – A step towards ensuring economic and nutritional security 56 backyard ponds of Puri and Khurda district were selected for fish culture and nursery raising through the active involvement of rural women. Baseline information of the participating women, water analysis of the ponds and trainings on pond preparation, nursery rearing of rohu and catla, cleaning of weeds, removal of weed fishes, manuring and lime application were undertaken. Nursery rearing of rohu and catla spawn for 1 to 1 ½ month produced healthy and quality fries.

Extension activities

The centre organized 2 trainers' training programmes for the benefit of 22 beneficiaries. Forty-nine trainings for farm women were organized through which 1,850 farm women were benefited in value addition, organic farming, nutrition and gardening. In addition one *Kisan Mela* was also organized for the 150 farm women. On this occasion exhibition, *mahila goshti* and quiz were organized. Six radio talks were also delivered by the scientists.

Krishi Vigyan Kendra (KVK)

Training: The KVKS organized 28,544 training programmes for 1.97 lakh farm women, rural girls and women extension personnel including 64,601 SC/ST

beneficiaries.

Extension activities: The KVKS have organized 6,576 extension programmes including field days, *kisan melas*, exhibitions, exposure visits etc., in which 73,152 farm women participated.

Self help groups of women

Self help groups (SHG) were formed by KVK Gadag with 2,167 members from 5 blocks. It has also conducted training programmes for the members on concept of SHG and thrift besides arranging exposure visits to successful SHGs. The thrift and credit activities of the SHGs include Rs 28.50 lakh savings by the SHGs during the year and Internal lending of Rs 22.00 lakh to the members.

Self Help Groups – Viable Micro Credit Institutions in Ahmednagar, Maharashtra

The lack of knowledge resources, lack of communication, and linkages with other agencies are causes of large gaps in adoption of new technologies in crop production, dairy management, post harvest management. To provide critical skills and technologies, the KVK organized women farmers clubs.

The total amount collected by the SHGs was Rs 6.50 lakh with bank loan of Rs 2.50 lakhs with amount available for internal lending of Rs 9.00 lakh. The activities taken up by the SHGs include dairy (49), backyard poultry (13), vermicompost unit (5), tailoring unit (7), processing unit (2), goat unit (9), and other enterprises (12).

Twenty-six training programmes on various income generating activities were conducted by the KVK for 599 SHG members. Many of the SHGs were linked to the financial institutions and other government agencies (SC/ST development corporation, Zilla Panchayat etc.) for financial assistance. The total revolving fund of the groups was Rs 66.38 lakh.

The income generating activities taken up by the SHGs included home made products, bakery products, small business, tailoring/embroidery, goat/buffalo rearing and vermicomposting.

Innovative marketing outlets for SHGs (Saturday and Sunday Bazars): The KVK initiated the concept of Saturday Bazar in Gadag town to encourage the SHG

Financial Linkages under Different Projects

Particulars	Zilla Panchayat	Backward Community Development Corporation	Pragatimitra (NGO)	Rural Banks	Total
No of SHGs	10	128	30	174	342
Total savings (Rs in lakh)	2.70	1.29	4.73	26.51	35.23
Bank loan (Rs in lakh)	14.03	7.20	4.51	5.45	31.19
Total revolving fund (Rs in lakh)	66.42				



Details of Enterprises in SHGs

Name of Taluka	Total SHGs	No. of members	Enterprises
Rahuri	4	50	Dairy, Goat rearing, Backyard poultry
Kopargaon	2	26	Consumer store
Shrirampur	8	127	Dairy, tailoring, backyard poultry, goat rearing
Sangmner	16	285	Gas agency, hotel, Vermicompost unit, dairy, vegetable selling, masala, noodles unit, goat rearing, bakery, general
Rahata	76	10	Flour machine, dairy, goat rearing, tailoring, backyard poultry, floriculture, processing unit
Total	106	498	



Saturday and Sunday bazars--innovative marketing outlets for SHGs



Vermicomposting--An income generation activity taken up by women in SHGs



Income generating activities involved papad making (top) and mushroom cultivation (bottom)

members by providing suitable market outlet. The farmers and farmwomen belonging to SHG groups only were allowed to sell the goods in Saturday bazaar after they undergo training at the KVK and the KVK home scientist verifies the quality of their products. They were also issued identity cards by the KVK. The products in the market included fresh fruits, vegetables, pickles, crisp rotis of jowar, and bajra. On an average 50 SHG members participated in the bazaar every week and the weekly transaction of the bazaar varied from Rs 15,000-20,000. Based on the consumer demand another market, Sunday Bazaar was started by the KVK at another place. Currently the KVK is performing role of a facilitator to ensure smooth running of the markets.

Women in Cyber Extension: The KVK, Ahmednagar, Maharashtra, with the support of the host organization established high-speed computer network linking its ten institutions (health, humanities, engineering, agriculture etc..) through wireless radio frequency and the institutions located within 5km radius with a wide area network (WAN).

The Krishi Vigyan Kendra apart from having the Internet access from the Pravara Network and internal network linking all the Subject Matter Specialists (SMS)



with all the villages in the network had access to internet as well. All the SMSs of the KVK frequently build up the information repository for agriculture extension at its server, which is available for all those connected to the wireless LAN in the Pravara Network.

The local website in the wide area network provides textual information on 17 important fruits, 16 vegetables, 6 flowers, 5 improved technologies, 6 soil related problems, one IPM, 16 field crops and one on processing. Apart from this the KVK has also prepared visual material accessible for the farmers that comprises 14-multi media presentation and one audio presentation called Tomato Extension and Training Information System. The information that is required by the farmers has been compiled specifically in Marathi for the farmers to facilitate easy understanding of the improved crop cultivation practices related to various crops grown by them. In all 646 women farmers from 4 villages availed the facilities of IT Centres for information which include 246 for technology, 98 for market information, 33 for weather and 269 for other information.

Production of vermiculture by women farmers: The Andhra Pradesh Mahila Samatha Society, Karimnagar and Adilabad district has started their Samatha Dharani Programme, which is a joint farming programme of food crops by the SC, ST and weaker section women. The programme envisages production of food crops through safe methods of agriculture. Earthworms (4 kg) of mixed culture were supplied to these women beneficiaries and established units at Godishala, Husnabad, Potharam and Bejjanki; 100 women started the project and produced 128 tonnes of vermicompost.

Mango nursery—A viable alternative for income generation for women: After assessing the constraints and opportunities prevailing in the villages, the KVK,

Mahaboobnagar, organized women groups in 5 mandals for raising mango nursery in the villages as a means of income generation. Prior to the initiation of the activity, the sangham members were trained intensively on different steps of nursery raising for 20 days followed by a specialized skill training on grafting technique for 15 days.

The proper marketing of the mangoes in the intra-village selling and other markets have given them profit on their investments. The profits realized were shared among the members of the group and part of the total earnings was pooled up to start nursery in subsequent years. The cost-benefit analysis of three villages to have a proper knowledge of the mango nursery activity was compiled.

Impact of training on farm women

The KVK, Mahboobnagar, Andhra Pradesh, conducted various training programmes for farm women of which some of the important programmes are as follows.

Dairy development: The KVK, Baramati, Pune, Maharashtra, identified 9 villages mainly rainfed villages

Particulars	Villages		
	Kistagiri	Rajapeta	Kamblapur
No. of women	40	55	45
Year of training	1995-96	1995-96	1996-97
Year initiated	1995	1995	1996
Seedlings bagged (No.)	5,000	7,500	10,000
Successful seedlings (No.)	4,500	5,500	7,000
Expenditure (Rs)	20,000	26,000	32,000
Successful grafts made (No.)	3000	3,500	5,000
Sales (Rs)	45,000	52,500	75,000
Net income (Rs)	25,000	36,500	48,000

Name of the activity	Impact
Non pesticidal management	<i>Heliothis</i> pest control on pigeonpea and chickpea with botanical pesticides is in use in 300 farms owned by women sangha.
Vermiculture	559 Vermiculture units have been established in 49 villages with production of 279 tonnes
Wasteland development	Women sanghams have developed over 1,000 acres of common land in and around their villages by raising neighbourhood forests in 28 villages. They have now owned tree pattas
Herbal medicines	Village level medicinal garden were established in 28 villages

where dairy farming was the main source of income generation for the poor farmers and where the resources were extremely poor. The KVK made collaborative efforts with the local Cooperative Milk Union and the local processing unit so as to train women.

The KVK monitored 40 dairy units, the average milk yield increased from 380 to 610 litres per dairy with a net increase in profit of Rs 3,200.00 to Rs 5,800.00 per unit per annum.



Involvement of women has revolutionized the dairy industry of the area

Women were trained on first aid and artificial insemination in cows so that they could work as para-veterinarians in villages. Many of the participants started practicing as para-veterinarians in their villages and achieved self-reliance. They also solved the problem of non-availability of veterinary services in remote villages, and successfully managed the dairy. They diagnosed the common ailments and carried out treatments. Many of them are able to carry out insemination in cattle. They managed the fodder in a better way and even started cultivating fodder crops and have made their own well knit milk union. This has revolutionized the dairy industry of the area.

Identification of topics for training		
Training	No. of programmes	No. of participants
Prevention of diseases in dairy animals	15	629
Non conventional feeds for milking animals	9	403
Reproductive health management	16	635
Clean milk production	8	343
Record keeping in dairy	8	357
Total	56	2367

AICRP ON HOME SCIENCE FOR WOMEN'S EMPOWERMENT

An important component of empowerment in Third World Countries comprises rural women who play multiple crucial roles in all spheres of development activities. In the recent past added emphasis has been laid on acknowledging and preparing database on

multidimensional role sets of women where their roles have become an inbuilt factor for input-output system of empowerment. In this process, the All India Coordinated Research Project (AICRP) on Home Science aims at developing resource base of rural women for empowering them to become subsistence-generating units for sustaining development and improving quality of life.

Moving towards women's empowerment

At the initial stage of the project, the prescriptive approach was used which dealt with exploring information for providing a package of instruction regarding what rural women should do to endure health security, food security, economic security and livelihood security. Gradually the project thrust shifted towards integrated and participatory approaches for working with rural women in their own context. For this, the nutrition component laid emphasis on nutritional security for human health in agrarian ecosystem. The component focused attention on documenting uncommon foods for its wider acceptability by determining nutritional quality of identified food sources, development of recipes and nutrition guide. The nutrition guide is user-friendly computer software for knowledge empowerment of nutrition educators and its subsequent transfer at grassroot level. The nutrition component has also strived to identify micro-nutrient deficiencies with the aim to suggest diet modifications and establish nutrition gardens as approaches to health and nutrition security.

The Human Development component which initially focused attention on data generation for developing growth norms of rural children is now empowering rural mothers for optimal development of children through interventions on scientific child care practices. The establishments of farm creche for comprehensive child care facilities in supplementary feeding and development of child through creative play materials. The training of creche workers through training materials on child care practices empowers them to be efficient caretakers.

The ergonomic management of drudgery undertaken by Family Resource Management component aims at introducing women-friendly drudgery reducing technologies related to farm, home and allied activities. The ergonomic cost is being calculated for respective tool/technology as a measure for suggesting improvements in tool/technology that will promote health empowerment.

The clothing and textile component since its inception has focussed attention on economic feasibility of use of locally available agro and animal based fibres and exploration of indigenous dyes textile product preparation. A large wealth of natural dyes has been explored for use on wool and silk and the interventions have been conducted to empower rural women and weavers with knowledge and skill. The economic empowerment is also being assured by transferring technologies of natural dyes to rural women for preparing textile handicrafts.



The database on rural women and indigenous knowledge being undertaken by Extension component has suggested several pathways for empowerment of rural women with reference to their participation and decision making roles in farming and allied activities as per indicators of qualitative data. The pathways have highlighted on empowerment of knowledge, skill, decision making; economic and social empowerment. The data base on indigenous knowledge has strongly suggested for empowering women with knowledge on locally available plant sources for ensuring health security.

Strategies used for empowerment

- Development of technology kits and media mixes for promoting knowledge and skill empowerment on various topics related to farming and household practices.
- Development of software as 'Nutriguide' based on regional foods for food and therapeutic purposes.
- Establishment of nutrition garden in rural households as cost-effective solution for micronutrient malnutrition and nutritional upliftment of rural population.
- Development of software and a compendium on natural dyes and its subsequent use in agro and animal based fibres for textile product preparation.
- Development of software and a compendium on natural dye sources for use by weavers and women entrepreneurs.
- Organizing stimulation programme in farm creche for enhancing psycho-motor, mental, social and emotional development of rural children and educational interventions to rural mothers for providing conducive home environment to children.
- Providing supplementary feeding to infants and toddlers in farm creche for healthy security.
- Conducting field trials on drudgery reducing technologies for assessing ergonomic based physiological cost and work efficiency of rural women.
- Conducting out-reach programmes through radio and television talks; publication of scientific articles in newspapers, magazines.
- Adoption of one village by each AICRP centre and using Participatory Rural Appraisal (PRA) techniques for sustainable, self reliant and people centered development that is socially just, economically efficient and ecologically sound for empowering rural women.

End result of empowerment

The five component of AICRP on Home Science have moved towards empowerment of rural women through there respective thrust of research. The end result as evident from research endeavor are as follows:

Mobilization of self help groups (SHG) and creation of learning environment: In the adopted villages the rural women have been mobilized to form SHG and opportunities have been provided to undertake

Women in agriculture

The NATP Project studies on Fisher Women in Coastal Ecosystem of Andhra Pradesh, Karnataka and Kerala was initiated to empower the fisher women technologically, to reduce their drudgery in the context of fish processing and to create an awareness on hygiene and sanitation in fish handling.

This project was envisaged for technological economic empowerment of women through training, education and participatory approach involving self help women groups. The major thrust was on health, nutritional status, economic empowerment, natural calamity management and entrepreneur development. The study covered 28 villages comprising more than 6,000 fishery families in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu.

Further, low cost ice cream freezer and fresh fish vending and Display table have been fabricated under this project and the patent numbers were received. The technology has been licensed for manufacturing these two equipments for two years.

Low cost ice cream freezer

- The cost of the equipment is low (Rs 3,950)
- No technical know-how is needed
- Labour is not required as in the traditional ice cream making
- Ice cream can be prepared by a layman also
Capacity per batch is 4.5-6 litres
- Time required per batch is 5-7 minutes

Multipurpose fresh fish vending and display table

- The cost of the equipment is Rs 5,600
- To store the leftover fish
- To cut the fish
- Also for display the fish



Fresh fish vending and display table (top left), Insulated fresh fish container (top right), Low cost ice cream freezer (bottom)



Cafeteria for women in agriculture

Mainstreaming gender is an important component of the Policy Framework for Agricultural extension (PFAE) developed by the Ministry of Agriculture (Government of India). The Centre developed a cafeteria for the Ministry of Agriculture for offering it to states to guide the development of new programmes for women in agriculture. New Programmes for women in agriculture should be developed based on the following key principles identified in the cafeteria.

- New programmes that are proposed should expand their definition of agriculture beyond crop production and should be based on site specific needs assessments.
- New projects that are proposed should build on groups, networks, organizational capacity and resources already in place and functioning from existing project initiatives and should take on and build on lessons from existing projects.
- Apart from extending agricultural technologies on production and post harvest to women farmers, new programmes should concentrate their efforts in providing crucial back-up services and support (backward and forward linkages) to help women groups to successfully adopt new techniques, crops and enterprises to increase their incomes and employment opportunities.
- New programmes should be planned with adequate resources for mobilizing women, forming groups, improving capacity and capability in technical, organizational and commercial (business/micro-enterprises) sectors and support systems (credit, raw material and markets).
- These should be prepared jointly in consultations with other organizations (public, private and voluntary) that can potentially complement and supplement the efforts of the state Department of Agriculture.

income generating activities and enhance knowledge on various aspects of family life. Emphasis has been also laid on increasing decision making capabilities, improving skill and thereby, the project is contributing towards women in economic, cognitive and decision making spheres.

Strengthening empowerment processes: The empowerment process through educational interventions, Transfer of technologies, the feasibility trials and the out-reach programmes has contributed to significant gain in knowledge, adoption of women-friendly technologies for improving work efficiency, acceptance of technology for economic gain and improving various parameters of quality of life are the reflections of women's environment.

Assessing empowerment gains for women: Empirical evidences have revealed that women have moved from beneficiaries to active partners in shaping empowerment. The information strategies used by different components under AICRP on Home Science have encouraged women to play key role in micro - level planning, designing community infrastructure for information dissemination and mobilization of community resources - both human and material to gain benefits from the project.

To conclude it can be acknowledged that the project is leading towards empowering rural women by broadening the trust of research of each component and expanding the horizon by including more number of Home Science Colleges in the Tenth Plan Period.

