

TEACHING MANUAL

HEM- 303

WOMEN IN AGRICULTURE



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Objective

- To develop a comprehensive understanding of status and role of women in agriculture and different policies and programmes for empowerment of women in agriculture.

Theory

Evolution of agriculture in India, General agricultural production activities, Agricultural and allied sectors in rural India, role of women in agricultural and allied sectors, status of farm women -Social, economic and health status of women in agriculture, Women friendly tools and implements, Gender issues, Women in agriculture Policy, Programmes (government and non-government) and institutions for women in agriculture, Women empowerment in agriculture, Agripreneurship and training to farmwomen.

Sl. No.	Course Outline	No. of classes
1	Evolution of agriculture in India	2
2	General agricultural production activities.	2
3	Agricultural and allied sectors in rural India	2
4	Role of women in agricultural and allied sectors	3
5	Status of farm women -Social, economic and health status of women in agriculture	4
6	Women friendly tools and implement	4
7	Gender issues	3

8	Women in agriculture Policy, Programmes (government and non-government)and institutions for women in agriculture	4
9	Women empowerment in agriculture	4
10	Agripreneurship and training to farmwomen	4
Mid-term Examination		2
Total		34

Lecture -1

EVOLUTION OF AGRICULTURE IN INDIA

Primitive/root grabbing stage- before 2.5 million years

When man arrived on this earth he was always frightened by wild animals. He was taking shelter in earth holes, caves, branches of trees. They lived by consuming natural fruits and roots available in the wild.

Hunting and old stone stage- 2.5 million years ago to 9600 BCE

Man slowly learnt to use stones to protect themselves from attacks of wild animals. He used big and blunt stones to throw at animals. Thus began the hunting and man began to eat the flesh of wild animals. During the hunting stage, while men were busy hunting women started collecting fruits and roots from the immediate surroundings.

Fire and new stone stage- 9600 BC to 8000 BC

During this period man was able to make fire and prepare improved arms. Fire was made by rubbing stones against each other. Earlier raw meat was eaten but with the knowledge of making fire man began to cook meat.. And since they were able to hunt animals man also became less insecure as he was now able to control the animals.

Animal domestication /husbandry stage- BC 8000 onwards (about 10000 years

ago) Man became expert in hunting and for the meat . He realised that some animals were gentle and harmless. Such animals he kept at home for killing when he could not go out to hunt.. Cattle, goat, sheep, dog and ass were domesticated. During this time man was still eating natural fruits and roots but he did not know how to produce them. He was still moving from place to place in search of foods and shelter.

Crop Production stage:

At about the same time of domestication of animals people in the fertile crescent areas of the middle East with plenty of water bodies began growing plants for food rather than depending entirely on the wild plants and animals. These early farmers began saving seeds from plants with particularly favorable traits and planting those seeds in the next growing season. Through this process of "artificial selection," they created a variety of crops with characteristics suited for agriculture.

Over the next few millennia, people around the world used similar processes of evolutionary change to transform many other wild plants and animals into the crops and domesticated animals which we depend on today.

The Middle Ages: For many centuries after man began a settled life with fertile land and domesticated animals, there were no major changes in how agriculture was carried out. Then in the middle ages, there was selective cross-breeding of plants and animals for optimal quality. The techniques of ridge and furrow farming, plowing by oxen (and later, horses) began to be used.

In the 16th century: crop rotation, or the growing and harvesting of different crops on the same land during different seasons developed and this drove the modernization of farming practices.

It was the **Industrial Revolution** in the 18th century that really took humans from the past into the present. With crops that required fewer workers, better soil replenishment and improved livestock care, there was increased agricultural productivity and so more people could work in urban industries.

The 20th century: introduced widespread use of machinery, fertilizer and pesticide technology, which coincided with huge population growth. As a result, food largely became an affordable and accessible commodity in developed countries.

Today, we find ourselves at yet another turning point in which we must balance sustainability and increased food production for the 9.6 billion people expected in the world by 2050. New technologies of digital farming, like improved data collection methods and GPS systems, and other innovative technologies like remote sensors, drones, robots etc. are required.

Agricultural Science in Independent India

After independence and the partition, there were many problems in the country. For making the country self-reliant and prosperous in agriculture, our planners made concrete plans for all-round development of agricultural resources, agricultural research, education and extension. Large dams were planned and constructed. Due to this, large areas came under irrigation. This was the turning point in bringing about the green revolution in the country in the 1960's.

Green Revolution

- The introduction of high-yielding varieties since the 1960s of seeds and the increased use of fertilizers and irrigation is known as Green Revolution
- The High yielding wheat varieties of Dr. Norman Borlaug and a similar development of HYV of rice varieties by Dr. M S Swaminathan in India were the main contributors to the green revolution

Positive impact of green revolution

- It provided the increase in production needed to make India self-sufficient in food grains
- India stopped importing food from countries like USA
- Negative impacts of green revolution

Due to over adoption of agricultural technologies, (the excessive use of fertilizer, pesticide, weedicides and water), the following negative effects were noticed

- ❖ Loss of fertility
- ❖ Soil erosion
- ❖ Soil toxicity
- ❖ Diminishing water resources
- ❖ Pollution of underground water
- ❖ Salinity of soil and underground water
- ❖ Increased incidence of human and livestock diseases

Mile Stones in Agricultural Development

- **White Revolution**- The **White Revolution**, known as Operation Flood, was launched in 1970. It was an initiative by **India's** National Dairy Development Board (NDDB) and was the world's biggest dairy development programme. It transformed **India** from a milk deficient nation into the world's largest milk producers.
- **Blue Revolution** -The concept of rapid increase in the production of fish and marine product through package programme is called as **Blue Revolution**. Blue Revolution is an explosion in aquaculture, and specifically fish production as a form of self-sufficiency, nutrients, and economic growth for India. It was launched in **India** during the seventh Five-year plan (1985-1990) when the Central Government sponsored the Fish Farmers Development Agency (FFDA).
- In 1996 Dr. M S Swaminathan coined the term "**Evergreen Revolution**" to highlight the pathway of increasing production and productivity for short and long term goals in a sustainable manner.

- **Yellow Revolution in India**-The growth, development and adoption of new varieties of oilseeds and complementary technologies nearly doubled oilseeds production from 12.6 mt in 1987-88 to 24.4 mt in 1996-97, catalyzed by the Technology Mission on Oilseeds, brought about the Yellow Revolution.
- **Biotechnology** includes all techniques that use living organisms or substances from organisms to produce or alter a product, cause changes in plants or animals, or develop microorganisms for specific purposes. **Biotechnology** allows **farmers** to grow more food on less land using **farming** practices that are environmentally sustainable.

Through **biotechnology**: Seeds yield more per acre, plants naturally resist specific insectpests and diseases, and **farming** techniques improve soil conservation. For example the introduction of genetically modified crops like Bt Cotton and Brinjal have made the crops resistant to pests . While it has become possible through biotecnonolgy Vit A enriched golden rice or Iron rich Bananas.

ICT Revolution

ICT Revolution in Indian Farming System. “Information and Communication Technology” is big **revolution** in Indian farming community by providing to the farmers the information about **Agriculture** production and market and linking farmers and Mandis. National Agriculture Market (**eNAM**) is a pan-India electronic trading **portal** which networks the existing APMC mandis to create a unified national market for agricultural commodities. It is great initiative which has been taken by the government of India. Information and communication technologies (**ICTs**) can facilitate access to timely and accurate information for an improved **agricultural** production

ICTs, especially mobile applications, are playing key **role** in facilitating access to these resources by the poor.

- ❖ **Income revolution of farmers: Since** the green revolution India has not only become self sufficient in food but has now started exporting many food grains/ products. However the increase in food production has not brought about major changes in the increase in the farmers income. Farmers’ income has remained low in relation to the income of those working in the non farm sector. Realizing the need to improve the status of farmers in the country the Department of agriculture was renamed in 2015 as department of agriculture and farmers Welfare. A committee was set up for Doubling

Farmers Income by 2022.

The committee plans to do this by a three pronged strategy of

- i) Increasing productivity
- ii) Reducing the cost of inputs and
- iii) Getting remunerative prices for farm produce

Lecture -2

General Agricultural Production Activities

In agriculture, there are certain parameters to be considered such as the type of crop, properties of soil, climate etc. Depending upon these parameters, farmers decide which crop is to be cultivated at what time of the year and place. Cultivation of crops involves several activities undertaken by farmers over a period of time. These activities or tasks are referred to as agricultural practices which are listed below:

- I. Preparation of soil
- II. Sowing
- III. Adding manure and fertilizers
- IV. Irrigation
- V. Protecting from weeds
- VI. Harvesting
- VII. Storage

Soil preparation

The preparation of soil is the first step before growing a crop. One of the most important tasks in agriculture is to turn the soil and loosen it. Before raising a crop, the soil in which it is to be grown is prepared by ploughing, levelling, and manuring. Ploughing is the process of loosening and digging of soil using a plough. This allows the roots to penetrate deep into the soil. The loose soil allows the roots to breathe easily even when they go deep into the soil. After ploughing, the soil is distributed evenly and levelled in the process called levelling. The soil is then manured.

Sowing

Sowing is an important part of crop production. Before sowing, good quality, clean and healthy seeds of a good variety—are selected. Farmers prefer to use seeds which give high yield. After the preparation of soil, these seeds are dispersed in the field and this is called sowing. Sowing can be done manually, by hand or by using seed drilling machines. Some crops like paddy are first grown into seedlings in a small area and then transplanted to the main field.

Manuring

Crops need nutrients to grow and produce yield. Thus, the supply of nutrients at regular intervals is necessary. Manuring is the step where nutritional supplements are provided and these supplements may be natural (manure) or chemical compounds (fertilizers). Manure is the decomposition product of plant and animal wastes. Fertilizers are chemical compounds consisting of plant nutrients and are produced commercially. Apart from providing nutrients to crop, manure replenishes soil fertility as well. Other methods for soil replenishment are vermin-compost, crop rotation, planting of leguminous plants.

Irrigation

Irrigation is the supply of water. Sources of water can be wells, ponds, lakes, canals, dams etc. Over irrigation may lead to water logging and damage the crop. This frequency and interval between successive irrigation need to be controlled.

Weeding

Weeds are unwanted plants which grow among crops. They are removed by using weedicides, by manually pulling them with hands and some are removed during soil preparation.

Harvesting

Once the crop is matured, it is cut and gathered, this process is called harvesting. Followed by harvesting, grains are separated from the chaff either by threshing, or manually in small scale (winnowing).

Storage

Grains yielded are stored in granaries or bins at godowns for later use or marketing. Therefore, methods of crop protection need to be better. In order to protect grains from pest and rodents-cleaning, drying, fumigation, etc., are done prior to storing.

Lecture -3

AGRICULTURAL AND ALLIED SECTORS IN RURAL INDIA

Agriculture

Agriculture plays a vital role in India's economy. Over 58 per cent of the rural households depend on agriculture as their principal means of livelihood. Agriculture is the most important sector of Indian Economy. Indian agriculture sector accounts for 18 per cent of India's gross domestic product (GDP) and provides employment to 50% of the countries workforce.

Nearly 80 percent of farming families in India own less than 5 acres of land.

Women participate in all activities of agriculture from seed treatment and sowing to harvesting and post harvesting.

There are currently nine types of agriculture in India:

- I. **Shifting agriculture:** This farming practice is mainly used by tribal groups to grow tuber and root crops. Land is obtained by clearing a forested area and planting crops there. When the land is no longer fertile, another area of land is cleared and the crops are shifted there.
- II. **Subsistence farming:** This is a widely-practiced farming technique and can be seen all over India. The farmer and/or his family grow grains for themselves or for sale at the local market.
- III. **Intensive agriculture:** This farming practice can be seen in densely populated areas in India. It is an attempt to maximize the output of the land, through the use of every possible effort. It requires a huge amount of capital in addition to a great deal of human labour, but more than one crop can be raised per year.
- IV. **Extensive agriculture:** This is the modern type of farming that can be seen largely in the developed world and in some parts of India. It relies largely on machinery as opposed to a human labour force and raises one crop per year.
- V. **Commercial agriculture:** The goal of commercial agriculture is a high yield, so that produce can be exported to other countries or areas for profit. Wheat, cotton, sugarcane, chillies and corn are some commercial crops and they are grown in states including Gujarat, Punjab, Haryana, and Maharashtra.
- VI. **Plantation agriculture:** This style is often used for crops which require a lot of space

and along growing period, such as rubber, tea, coconut, coffee, cocoa, spices, and fruits. Plantations are only capable of producing a single crop. Plantation agriculture is practiced in Kerala, Assam, Karnataka, and Maharashtra.

- VII. **Dry land farming:** As the name suggests, dry land farming is practiced in the more arid and desert-like areas of the country, including northwest and central India. Crops such as gram jowar, bajra, and peas have lower water requirements and can therefore be grown in these conditions.
- VIII. **Wet land farming:** Many areas of India are affected by heavy monsoon rains and subsequent flooding. Well-irrigated areas, such as those in the northeast India and the Western Ghats, are suitable for farming rice, jute, and sugarcane.
- IX. **Aquaponics:** Today, aquaponics farming systems are rare in the country but slowly farmers have begun to practice aquaponics.

There are three growing seasons in India . They are

- Khariff (rainy) season- June to September
- Rabi(winter) -October to Feb
- Summer- March- May.

The different sectors of agriculture are Food grain production

The staple food of most Indians is cereals and pulses. Cereals like, wheat, maize, rice, jowar, bajra etc and pulses like green gram, bengal gram, redgram, black gram etc.

Horticulture

India's varied agro-climatic conditions are highly favourable for the growth of large number of horticultural crops. The important horticulture sectors are fruits, vegetables, flowers, plantation crops (rubber, tea, coffee, coconut, arecanut etc) and medicinal & aromatic plants. And they occupy around 10 per cent of gross cropped area. India is the second largest producer of fruits and vegetables in the world. It is also second largest producer of flowers after China. It is also leading producer, consumer and exporter for spices and plantation crops like tea, coffee, etc.

Animal husbandry

Livestock plays an important role in Indian economy. About 20.5 million people depend upon livestock for their livelihood. Livestock contributed 16% to the income of small farm households as against an average of 14% for all rural households. Livestock

provides livelihood to two-third of rural community. It also provides employment to about 8.8 % of the population in India. India has vast livestock resources. Livestock sector contributes 4.11%GDP and 25.6% of total Agriculture GDP.

Role of Livestock in farmer economy

The livestock plays an important role in the economy of farmers. The farmers in India maintain mixed farming system i.e. a combination of crop and livestock where the output of one enterprise becomes the input of another enterprise thereby realize the resource efficiency. The livestock serve the farmers in different ways.

1. **Income:** Livestock is a source of subsidiary income for many families in India especially the resource poor who maintain few heads of animals. Cows and buffaloes if in milk will provide regular income to the livestock farmers through sale of milk. Animals like sheep and goat serve as sources of income during emergencies to meet exigencies like marriages, treatment of sick persons, children education, repair of houses etc. The animals also serve as moving banks and assets which provide economic security to the owners.
2. **Employment:** A large number of people in India being less literate and unskilled depend upon agriculture for their livelihoods. But agriculture being seasonal in nature could provide employment for a maximum of 180 days in a year. The land less and less land people depend upon livestock for utilizing their labour during lean agricultural season.
3. **Food:** The livestock products such as milk, meat and eggs are an important source of animal protein to the members of the livestock owners.
4. **Social security:** The animals offer social security to the owners in terms of their status in the society. The families especially the landless which own animals are better placed than those who do not. Gifting of animals during marriages is a very common phenomenon in different parts of the country. Rearing of animals is a part of the Indian culture. Animals are used for various socio religious functions. Cows for house warming ceremonies; rams, bucks and chicken for sacrifice during festive seasons; Bulls and Cows are worshipped during various religious functions. Many owners develop attachment to their animals.
5. **Draft:** The bullocks are the back bone of Indian agriculture. The farmers especially the

marginal and small depend upon bullocks for ploughing, carting and transport of both inputs and outputs.

6. **Dung:** In rural areas dung is used for several purposes which include fuel (dung cakes), fertilizer (farm yard manure), and plastering material (poor man's cement).

Fisheries

The 'fisheries and aquaculture sector' is recognized as the sunshine sector in Indian agriculture. It stimulates growth of number of subsidiary industries and is the source of livelihood for a large section of economically backward population, especially fishermen, of the country. It helps in increasing food supply, generating adequate employment opportunities and raising nutritional level. It has a huge export potential and is a big source of foreign exchange earnings for the country.

Sericulture

India is the second largest silk manufacture (around 20000 MT) contributing to 18% of the raw silk production. Sericulture is an important cottage industry in India contributing roughly to 5% of GDP. Majority of the raw silk produced in Tamilnadu and Karnataka. The market share of Indian silk exports in the global silk trade is 4 to 5% which is quite insignificant. 85% of silk goods produced in India are sold in the domestic market and 15% are exported. In India, this industry provides livelihood to 6 million families spread over 59000 villages.

Innovations like eco-friendly silk where the silk is extracted from the cocoons without killing the silk worms are good trends that indicate the progress of the silk industry. The Sericulture Research Institute of Andhra Pradesh has developed a virus-resistant transgenic silkworm. This silkworm would help in stabilizing silk yield levels by reducing uncertainties like viral outbreaks.

Apiculture

Honey is a commercially important product since times unknown and a human going to forest to collect honey is well-known. Maintaining a beehive in a farm promises additional income to farmers. In addition, it does not require huge investments, infrastructure or even a fertile land to start bee farming in India. In agricultural, honey bees do not compete with the crops for resources. On the other hand, it helps increase agricultural productivity. This is because bees play an important role in pollinating many plants. Sunflowers and such other crops are highly dependent on bees for

pollination. Honey produced by bees is of high commercial value. When honey is collected from the forests by traditional method, the bee colonies are destroyed. By raising them in artificial hives the colonies are preserved.

Important agro based industries

The agro-based industry includes industries related to textiles, sugar, paper and Food processing. These industries use agricultural products as their raw materials.

- **Textile industry:** is the largest industry in the organized sector- cotton, woollen, silk and jute
- **Sugar Industry:** India stands second as a world producer of sugar but occupies the first place in the production of gur and khandasari.

- **Food processing Industry:**

Include fruits, vegetables processed grains, oil seeds

Milk and milk Products, meat, poultry and marine products

Consumer foods (alcoholic beverages, soft drinks, packaged drinking water and packaged food)

Lecture -4

ROLE OF WOMEN IN AGRICULTURE & ALLIED SECTOR

Women play a significant and crucial role in agricultural development and allied fields. The nature and extent of women's involvement in agriculture varies greatly from region to region. But regardless of these variations, women are actively involved in various agricultural activities like crop production, livestock, horticulture, post-harvest operation, agro forestry, social forestry, fisheries etc.

As per Census 2011, out of total female main workers, 55 per cent were agricultural labourers and 24 per cent were cultivators. However, only 12.8 per cent of the operational holdings were owned by women, which reflect the gender disparity in ownership of landholdings in agriculture. Moreover, there is concentration of operational holdings (25.7 per cent) by women in the marginal and small holdings categories. The workforce participation rate for rural females is significantly higher at 41.8 percent against urban women participation rate of 35.31 percent (MoSPI, 2017).

Multi-Dimensional Role of Women

- ✚ **Agricultural Activities:** Sowing, transplanting, weeding, irrigation, plant protection, harvesting, winnowing, storing etc.
- ✚ **Domestic Activities:** Cooking, child rearing, water collection, fuel wood gathering, household maintenance etc.
- ✚ **Allied Activities:** Cattle management, fodder collection, milking, goat rearing, poultry farming, sericulture, sheep rearing, beekeeping etc.

Work Participation

- ❖ The Agriculture Census (2010-11) shows that out of an estimated 118.7 million cultivators, 30.3% were female and out of 144.3 million agricultural labourers, 42.6% were females. Out of total female main workers, 55% were agricultural labourers and 24% cultivators.
- ❖ Around ninety per cent of women workers in India are engaged in the unorganized sector, of these over 80 per cent are in agriculture and allied occupations.
- ❖ In the organized sector women constitute only 13.3 per cent of all employees.

- ❖ In the public sector, they account for 11 per cent of total employment and in the private sector for 17.8 per cent.
- ❖ Among rural woman workers, 87 per cent are employed in agriculture as laborers' and cultivators.
- ❖ Women workforce outside the four walls is larger in rural areas than in urban India.
- ❖ Women are responsible for 50 per cent of food production in the developing world.
- ❖ Women outnumber men as agricultural laborers.
- ❖ An estimated 20 per cent of rural households are *de facto* female headed, due to widowhood, desertion, or male outmigration.
- ❖ The poorer the family, the greater the involvement of women in agricultural activities.

Women role in various sectors

1. Crop production

Women's participation in crop production has increased as a result of male migration to urban areas to seek employment. Women is active in all aspects of crop production except ploughing in which women are not actively involved. Women are involved in sowing, weeding, plant protection, maintenance, harvesting, food preparation, storage, preservation, treatment and marketing yields.

2. Post Harvesting

Almost entire post harvest and agro-processing activities are performed by women. The operations like cleaning, grading, drying, parboiling, milling, grinding, decortication and storage are performed by women. Cotton picking, sugarcane transport and crushing, spices picking, cleaning and processing are also largely performed by women.

3. Livestock

Livestock is the primary livelihood activity used to meet household food needs as well as supplement farm incomes. It is a common practice in the rural areas to give an animal as part of a women's dowry. Studies have revealed rural women earn extra income from the sale of milk and animals. Mostly women are engaged in cattle management activities such as

- Cleaning of animal and sheds
- Watering of cattle
- Milking the animals
- Fodder collection

- Preparing dung cakes
- Collection farm yard manure

Except grazing, all other livestock management activities are predominantly performed by women. Men, however, share the responsibility of taking care of sick animals. It is evident that the women are playing a dominant role in the livestock production and management activities.

4. Poultry farming

Poultry farming is one of the major sources of rural economy. The rate of women in poultry farming at household level is the central in poultry industry. Even though rural women are not using modern management techniques, such as vaccination and improved feed, but their poultry enterprise is impressive. Every year, income from poultry farming has been rising. In order to generate more and more income, rural women often sell all eggs and poultry meat and left nothing for personal use. Due to poverty and lack of required level of proteins most of women have got a very poor health. Most of women suffer from malnutrition.

5. Fisheries

India is among the top ten fish producing countries in the world contributing about 3% to the world marine fish catch. About 5 million people in the coastal areas carry out fishing and allied activities for their livelihood.

- In India, nature and extent of women's participation in fisheries varies across the states.
- Fish drying/curing, marketing and net-mending are the main areas of women's involvement in Tamil Nadu, Andhra Pradesh and Orissa.
- Women are also involved in shrimp processing in these states. In addition, in Andhra Pradesh, women are engaged in mollusk and shell collection on a seasonal basis in a few places along the coastline.
- However, marine fish capture is a men's domain.
- In coastal aquaculture, women are involved in prawn and seed collection to a very limited extent

6. Forestry

The Indian population, particularly the rural, is highly dependent upon forests. Fuel

wood contributes 84% of the total household energy consumption. There are 66.5 million tribal's in India and with few exception, majority of them are forest dwellers. Unfortunately, forests are deteriorating massively due to encroachment of agricultural production, mining, construction of dams, industrial and railway demand. In India about 16% of the total geographical area is covered by woodland and forests. Rural Indian women's interface with the forests is varying - gathering, wage employment, production in farm forestry and management of afforested areas in the community plantation.

- In India, women are the major gatherers and users of a much more diverse range of forest products than men.
- Primarily Non-timber Forest Products (NTFP) are collected by women and timber by men. In several parts of India, large proportions of the tribal population depend on NTFP as their main source of livelihood.
- Apart from fodder and fuel, women collect food, medicinal plants, building materials, material for household items and farm implements.
- As women are the ones who have traditionally been collecting forest products, they possess the knowledge of properties and potential uses of these products

7. Home Management

The entire household activities including collecting of fire wood and water, food processing, preparation and cooking, dairying, washing clothes, childcare, utensil cleaning etc. are performed only by women. The fire wood collection and transport in rural areas is almost women's whole day affair, especially among landless peasant families during lean season.

8. Rural Production

Women in rural India generate income in various ways. Women are highly involved in processing of the NTFP, particularly in small-scale enterprises. This includes basket, broom, rope making, tasar silk cocoon rearing, lac cultivation, oil extraction, and bamboo works, etc. Women constitute 51% of the total employed in forest-based small-scale enterprises.

Among the scheduled-caste weavers in Orissa, men collect grass for basket making while women cure it and make the basket. Men and women are equally involved in collection, processing and marketing of forest products such as grass, bamboo and

resin.

9. Food Security

Women's key role in the production of major grains and minor millets illustrates their invaluable contribution to the food security. In addition, women play a crucial role in ensuring supply of food as food vendors and post-harvest processors of livestock and fishery products. As major buyers of family food and meal-makers, women ensure adequate food security. As primary providers of nutrition to the young children, women are the major decision-makers in ensuring nutrition to the next generation.

Participation of Men and Women in different activities

Activities	Women	Men
1. Household Activities	Cooking (grinding, cuttingpreparing food etc)	-
	ing, washing clothes &utensils	-
	Fetching water	-
	Collecting water	-
	Making cow dung- cakes	-
2. Child care	Feeding children	-
	Taking care of children	-
3. Agricultural Activities	Digging	Ploughing ,digging
	-	Irrigation of fields
	Harvesting crops	Harvesting crops

	Sowing	Sowing
	Weeding	-
	Cutting grass from fields	-
	Groundnut picking	-
	Husking/winnowing	-
	Vegetable plucking	Vegetable plucking
	-	Fertilizing
4. Selling	Sells vegetables, groundnuts , cereals , sometimes sells fire wood	Marketing of bulk quantities
5. Dairying	Collection of fodder, Feeding cattle, milking & bathing the cattlesometimes	Cattle feeding ,milking bathi ngcattle
	Cleaning of cattle shed	Cleaning of cattleshed sometimes

Lecture -5

STATUS OF FARM WOMEN -SOCIAL, ECONOMIC AND HEALTH

STATUS OF WOMEN IN AGRICULTURE

Status of Rural Women

(Social, Economic & Health)

Total population	121 crores (2 nd in the world)
Male Female	62.4 crores
	58.6 crores
Total Rural Population	83,34,63,448
Male Female	42,76,32,643
	40,58,30,805
Rural Female Literacy Rate	58.75%
Sex Ratio	940 females for every 1,000 males
Women's Day is Celebrated	8 March

Census 2011

A. Social status of rural women

Women constitute nearly 50% of population in India. Women are the pivot around which the whole family revolves in Indian society. Women are regarded as goddess of power, prosperity and learning. Over the ages the women's place in the society was determined by needs, ideas, dream and aspiration of man. He only determines norms of behaviour, the way she should live, conduct herself in society and the things she should sacrifice for the well being of family members. Earlier women were confined to domestic area only. Her place in society was known as daughters, wife and mother. Presuming for her protection and welfare, this domination and suppression denied her contact with external world and condemned her to domestic tragedy thus making her status lower in the society.

In many countries women have liberated themselves by mean of education and by acquiring skills, eliminating prolonged struggle of discrimination and injustice created by an exaggeration of biological differences. Here or elsewhere, women have to fight among others against the discrimination of men and the monopoly of power.

Now Indian women have put their foot in varied areas and have made a remarkable name and identity for themselves in the society. Some have entered the political arena, some are flying planes and others are entrusted the responsibility of running MNCs. They are on par with men in terms of their economic standing. Woman's status today has undergone a drastic change from what it was in the past.

Men and women are two basic components of our human society. Rural women in India are less literate than rural men. There is a negative attitude of the family towards educating the girl child. Moreover, lack of separate toilets for girls in schools, lack of security while travelling from home to school, lack of female teachers in schools, elder sister's responsibility to look after the younger siblings when both the parents have to work to meet both ends, are some of the reasons behind the high drop-out rate of girls from schools. Primary education is free, but parents are not interested to send them to school. Right to Education has been passed by the Parliament, but it is still far when the right will be a reality. Mid-day meal scheme has been formulated in order to attract the small children to school. However, this scheme received set-backs when many school children died after consuming food from the school kitchen. Majority of rural Indian women do not have the right to choose their partner. It is always decided by the family elders and the marriage is arranged with an endogamous group, where caste plays a very important role. If the girl wishes to marry someone from other caste or tribe, the traditional leaders of the villages oppose.

The status of women in society has to be perceived in Terms of

1. Structural and cultural settings.
2. Functioning of institutions in societies viz families.
3. Role in everyday life.
4. Self image and social image.
5. Prejudice and biases expressed through stigma associated with women.

6. Process of differential socialization.

Causes for poor status of women in India

- Male dominant society.
- High rate of illiteracy among women.
- High dropout rate of girl student.
- Dependency on male.
- Traditions of society.
- Less awareness about the legal rights.
- Poor nutritional and economic condition.
- High work load.
- Poor economic condition of the families.
- Taboos of the society

B. Economic status of rural women

Majority of rural women suffer not only from economic poverty but also from 'information poverty'. Rural women are vital and productive workers in India's national economy. There is statistical bias in under estimating the role of rural women in development. Women work for longer hours than men and contribute substantially to family income, they are not perceived as productive workers. (Pankajam and Lalitha, 2005) They are silent workers who are struggling to complete her household duties from dawn to dusk. But, still, in the family, many a times, she is criticized for not being sincere in her job. If the family members had to pay for the whole household work and the free labour she provides in the small agricultural land of the rural families, then her real worth could have been realized. She does this day-in and day-out with compromising the family interest, but in very few families, she gets the respect which she should get.

Equal pay for equal work is one of the cornerstones of the gender equality movement the world over. But Labour Bureau data show there has been little progress in terms of parity of salaries for men and women for equivalent work in India. Even more alarming is the fact that even though wage disparities have always existed in rural parts of the

country, in some spheres of activity, the divide has widened. So while men were paid 70 per cent higher wages than women for ploughing work at the end of 2004-05, the difference rose to 80.4 per cent in end March 2012 and stood at 93.6 per cent at the start of 2013-14. While men were paid 75 per cent more than women for well-digging work in March 2005, the difference stood at 80 per cent in the current financial year. The data indicate that daily wage disparities have by and large remained constant since 1999, though they did rise in the early 2000s. As of 2013, the discrimination in wages paid to women tends to be higher in physically intensive activities (such as ploughing and well-digging), but lower in the case of work such as sowing and harvesting. Outside the agricultural sphere, it appears that gender stereotypes won out once again, if one considers unskilled non-agricultural work. (Jayaram, 2003) In rural India, very few women have ownership over land or productive assets. This proves to be a road block in institutional credit. Majority of the agricultural labourers are women. They are mainly assigned manual labour. Men perform operations involving machinery. (Kurukshetra, 2003) Agriculture which is the mainstay of the rural Indian economy is sustained for the most part by the female workforce. They are the invisible life line of the agrarian rural community life. Rural women from childhood days have to bear the burden of taking care of younger siblings, cooking, engaging in domestic chores, looking after the fodder of the domestic animals in their parents' house. They are married off at a very early age. Indian women are condemned to a life of serfdom, anonymity, facelessness. At the root is the 'gender insensitive' society (Singh, 2004).

Health

The average female life expectancy today in India is low compared to many countries, but it has shown gradual improvement over the years. In many families, especially rural ones, girls and women face nutritional discrimination within the family, and are anemic and malnourished. Almost half of adolescent girls are chronically malnourished. In addition, poor nutrition during pregnancy often leads to birth complications.

The maternal mortality in India is the 56th highest in the world. 42% of births in the country are supervised in Medical Institution. In rural areas, most of women deliver with the help of women in the family, contradictory to the fact that the unprofessional or unskilled deliverer lacks the knowledge about pregnancy.

Common issue faced by rural women

Women in India face issues like malnutrition, lack of maternal health, diseases like AIDS, breast cancer, domestic violence and many more.

1. Malnutrition

Nutrition plays a major role in an individual's overall health, psychological and physical health status is often dramatically impacted by the presence of malnutrition. India has one of the highest rates of malnourished women among developing countries. A 2012 study by **Tarozzi** have found the nutritional intake of early adolescents to be approximately equal. However, it is seen that the rate of malnutrition increases for women as they enter adulthood

Maternal malnutrition has been associated with an increased risk of maternal mortality and also child birth defects. Addressing the issues of malnutrition would have beneficial outcomes for women and children.

2. Lack of maternal health

The lack of maternal health contributes to the economic disparities of mothers and their children. Poor maternal health not only affects a child's health in adverse ways but also decreases a woman's ability to participate in economic activities. Therefore, national health programs such as the National Rural Health Mission (NRHM) and the Family Welfare Program have been created to address the maternal health care needs of women across India. Although India has witnessed dramatic growth over the last two decades, maternal mortality still remains high as in comparison to many developing nations.

India contributes to nearly 20 percent of all maternal deaths worldwide between 1992 and 2006. The primary reasons for the high levels of maternal mortality are directly related to disparities of economic conditions and cultural constraints limiting access to care.

However, maternal mortality is not identical across all of India or even particular state urban areas often have lower overall maternal mortality due to the availability of adequate medical resources. For those states where there is higher literacy and growth rates tend to have greater maternal health and also lower infant mortality.

3. Suicide

Suicide is a major problem in India. The suicide rate in India is five times higher than that of the developed world. Furthermore, the rate of suicide has been found to be higher in women as compared to men in India.

The most common reasons for women's suicide is directly related to:

- Depression
- Anxiety
- Gender discrimination
- Domestic violence

The suicide rate is particularly high among female sex workers in India, who face numerous forms of discrimination for their gender and line of work.

4. Domestic Violence

Domestic violence is a major issues in India. Domestic violence is defined as acts of physical, psychological, and sexual violence against women is found across the world and is currently viewed as a hidden epidemic by the World Health Organization.

As per reports of India National Family Health Survey III (2005-2006), 31 percent of all women reported having been the victims of physical violence in the last 12 months. However, the actual number of victims may be much higher.

Lecture -6

WOMEN FRIENDLY TOOLS AND IMPLEMENTS

Tool/ Implement Definition

A tool is any instrument or simple piece of equipment that you hold in your hands and use to do a particular kind of work.

OR

A device or implement, especially one held in the hand, used to carry out a particular function.

1. HAND RIDGER



Function

For making ridges in field to sow vegetables on ridges. The equipment can also be used for making furrows in field for irrigation.

Benefits

- About 67% saving in cardiac cost of worker per unit output with the ridger in comparison to the traditional method of making ridges.
- It avoids bending posture, which is generally adopted in traditional method with short handled tools for making ridges.
- Productivity of worker doubles with the equipment than traditional practice.

2. SEED TREATMENT DRUM

Function

For uniform mixing of chemicals in seeds for its treatment before sowing.

Benefits

- Equipment provides safety to worker as direct contact with chemicals is avoided.
- Uniform mixing of chemical is done.
- It also avoids bending/squatting posture as done in traditional method of treating the seed.

3. FERTILIZER BROADCASTER

Function

For uniform application of granular fertilizer in field.

Benefits

- About 6% saving in cardiac cost of worker per ha with refined broadcaster in comparison to traditional practice was found.
- Uniform application of fertilizer is done.
- It saves workers from dust of urea at the time of application thereby enhancing safety of workers.
- Productivity of worker increased more than thrice with the equipment than traditional method.

4. CIAE SEED DRILL



Function

For row sowing seeds of wheat, soybean, maize, gram, pigeon pea etc.

Benefits

- Output is 18 times than traditional practice.
- Apart 87% saving in cardiac cost of workers per unit of output.
- By the use of seed drill, bending posture which is generally adopted in traditional method can be avoided.
- Line sowing is done with the equipment that promotes use of mechanical weeder for weeding thereby reducing cost and drudgery during weeding operation.

- Seed saving is also achieved.

5. PAU SEED DRILL



Function

For row sowing seeds of wheat, soybean, maize, gram, pigeon pea etc.

Benefits

- Output is 18 times than traditional practice.
- Apart from 87% saving in cardiac cost of workers per unit of output.
- By the use of seed drill, bending posture which is generally adopted in traditional method can be avoided.
- Line sowing is done with the equipment that promotes use of mechanical weeders forweeding thereby reducing cost and drudgery during weeding operation.
- Seed saving is also achieved.

6. NAVEEN DIBBLER



Function

For dibbling bold (like maize, soybean) or costly/scarce seeds in less area and for gapfilling purpose.

Benefits

- About 13% saving in cardiac cost of workers per unit of output with the dibbler as

compared to traditional.

- It also avoids bending posture, which is generally adopted in traditional method.
- Line sowing is done with the equipment that promotes use of mechanical weeders thereby reducing drudgery and cost during weeding operation.
- Seed saving is also achieved.

7. ROTARY DIBBLER



Function

For dibbling bold or medium or costly/ scarce seeds in less area or gap filling of seeds in soybean, sorghum and maize crops.

Benefits

- It is suitable for dibbling bold seeds like maize, soybean and pigeonpea.



8. FOUR-ROW PADDY DRUM SEEDER

Function

For line sowing of sprouted paddy seeds in puddle field.

Benefits

- Light in weight, and easy to transport and handle.
- Uniformity in seed sowing.
- Hill dropping of seed is achieved and continuous drilling is eliminated.
- Seed saving is achieved with the equipment as compared to traditional method.
- Line sowing is done with the equipment that promotes use of mechanical weeder thereby reducing drudgery and cost during weeding operation.

9. TWO-ROW RICE TRANSPLANTER



Function

For transplanting of 20–25 days old mat type rice seedlings (at 3-4 leaf stage) in two rows simultaneously under puddled conditions.

Benefits

- Transplanting can be done in two rows simultaneously with the equipment.
- 16% saving in cardiac cost of workers per unit area.
- It avoids bending postures which is adopted in traditional method.
- Line sowing helps in promoting the use of mechanical weeder thereby reducing drudgery and cost during weeding operation.
- Productivity of worker is increased by 79% as compared to traditional method.

10. TWIN WHEEL HOE

Function

For weeding and inter culture in upland row crops in black soil region.



Benefits

- About 43 % saving in cardiac cost of workers per unit of output.
- It avoids bending/squatting postures, which is generally adopted with short handled handhoe in traditional method.
- Productivity of worker increased more than three times with the equipment than traditional method.

11. IMPROVED SICKLE



Function

For harvesting wheat, rice, soybean, chickpea, grasses and thin stalked crops.

Benefits

- About 15% saving in cardiac cost of workers per unit of output with improved sickle as compared to local sickle.
- Serrated sickles does not require the sharpening of cutting edge frequently.
- It also provides safety to the workers due to its better construction.

12. GROUNDNUT DECORTICATOR (SITTING TYPE)

Function

For separating kernels from groundnut pods.



Benefits

- About 79% saving in cardiac cost of workers per unit of output with the groundnut decorticator as compared to traditional practice.
- The productivity of workers increased tremendously than traditional practice apart from safety of workers.
- The reduction of drudgery with the equipment per kg of pods decorticated is to the tune of 74 and 79% in case of standing and sitting type decorticator respectively.

13. GROUNDNUT STRIPPER

Function

For stripping on groundnut pods.



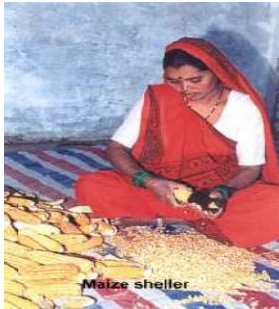
Benefits

- Higher output i.e. 350 kg of pods/day can be obtained as against 200 kg in case of conventional stripping.
- Squatting posture is avoided which minimizes stress at knee.
- About 79% saving in cardiac cost of workers per unit of output with the groundnut strippers compared to conventional practice.

14. TUBULAR MAIZE SHELLER

Function

For shelling maize from dehusked cob.



Benefits

- About 15% saving in cardiac cost of workers per unit of output in comparison to the traditional practice.
- The productivity of workers increased 1.6 times than traditional practice i.e. shelling with the help of sickle.
- The chances of injury to fingers are eliminated thus making the operation safer for workers.

15. ROTARY MAIZE SHELLER



Function

For shelling maize from dehusked cob.

Benefits

- Output is very high and the equipment is suitable for farmers growing large quantity of maize.
- About 32% saving in cardiac cost of workers per unit of output in comparison to the traditional practice.
- The chances of injury to fingers are eliminated thus making the operation safer for workers.

16. CONO WEEDER



Function

Uprooting and burying of weeds in between standing rows of rice crop in wetlands.

Benefits

- Bending posture is avoided thus reducing drudgery of workers in weeding operation in wetlands.
- Output is increased significantly.

17. COTTON STALK PULLER (JAW TYPE)

Function

Bending To uproot cotton plant stalks from soil.

Benefits

- Posture is avoided thus reducing drudgery and chances of backache of workers in cotton stalk pulling operation.



18. SUGARCANE STRIPPER

Function

For stripping of sugarcane.



Benefits

- It helps to reduce the drudgery involved and chances of injury to workers in sugarcane stripping operation.

19. PEDAL OPERATED PADDY THRESHER

Function

For threshing of paddy.



Benefits

- It helps to reduce the drudgery involved in paddy threshing operation as bending posture is avoided and arms are not to be raised for above shoulder height as in case of traditional method i.e. beating on a platform/stone.

20. FRUIT HARVESTER



Function

Plucking of fruits from orchard trees.

Benefits

- Damage to the fruit is avoided.
- Operation is made safer as the worker does not have to climb on the tree and the chances of injury are eliminated.

21. HANGING TYPE GRAIN CLEANER WITH SACK HOLDER

Function

For separating impurities like stubbles, chaff, dirt and broken received with grain after threshing.



Benefits

- Apart from 63% saving in cardiac cost of worker per unit of output, the productivity of the worker increased more than four times as compared to traditional thereby reducing drudgery.

22. PADDY WINNOWER

Function

For cleaning grain after harvesting.



Benefits

- This machine can be easily operated as there no need of waiting for air flow as required in traditional cleaning.
- This machine can be operated under shade or in the workshop where grain cannot bedamaged due to rain etc.

DOUBLE REFLECTOR BOX TYPE SOLAR COOKER

Function

For cooking and roasting of food items.



Benefits:

- It reduces cooking time by 15-20% as compared to single reflector type cooker.
- The solar cooker saves the health of the women, because it does not emit smoke during cooking.

BHINDI PLUCKER

Function



- To protect worker from thorny/chemical materials during bhindi harvesting

Benefit

- It is a tool which helps on plucking of Bhindi (Lady's finger) without causing any itching or discomfort to skin.

23. WHEEL BARROW



Function

Carrying of agricultural materials

Benefit

- A large amount of material can be carried from one place to another with less drudgery.

24. GRAIN MILL



Function

For making flour from grains/ other items.

25. HAND OPERATED CHAFF CUTTER WITH SAFETY DEVICES

Function

For cutting chaff/fodder/stalk into small pieces



Benefits

- ☐ Safe in operation.
- ☐ Finger and hand Injuries are prevented.
- ☐ Wastage of fodder is reduced.

26. DAL MILL



Function

Preparation of Dal from whole pulse grain

27. COOK STOVE

Function

For cooking

28. TEA PLUCKER SCISSOR TYPE

Function

For plucking tea leaves



Benefits

- Economic benefit: Rs. 1000/unit/year
- The output is 40 % higher when compared with conventional method of hand picking.
- Cardiac cost for tea plucking with is less (295 betas/kg of tea leaf) as compared to traditional plucking (580 beats/ kg of tea leaves).
- Results in 32 % saving in cost and 40 % saving in time when compared with conventional handpicking method.

29. ROTARY ARECANUT DEHUSKER



Function

For dehusking a reanuts

Benefit

- Possibility of injuries to fingers and palm totally eliminated

Renu

Lecture-7

GENDER ISSUES

Gender:

Gender refers to the socially constructed roles and responsibilities of men and women, in a given culture or location. These roles are influenced by perceptions and expectations arising from cultural, political, environmental, economic, social, and religious factors, as well as custom, law, class, ethnicity, and individual or institutional bias.

Gender attitudes and behaviors are learned and can be changed.

Sex

It identifies the biological differences between men and women.

Difference between Gender and Sex

GENDER	SEX
Social differences between men and women	Biologically determined differences between men and women
Learned	Universal
Changeable over time	Not changeable
Have wide variations within and between cultures	

Gender Discrimination

Prejudicial treatment of an individual based on a gender stereotype (often referred to as sexism or sexual discrimination).

Gender issues

Specific consequences of the inequality of women and men.

A. Gender Inequities in the Household and the Society

Gender discrimination against women manifests itself in intra-household relations and in the social space. Within the household, women and men are differently positioned in relation to the allocation of responsibilities, processes of decision-making, and access

to and control over resources.

1. Domestic responsibility

Nearly 70 percent of the women reported they do not get any help from their men in the discharge of domestic responsibilities such as cooking, fetching water, washing clothes, cleaning floors or caring of children. There is no difference in this regard even in the better off families among them. The few women who get support get it either in fetching water or in the care of children. The gendered relations have created an environment at home which does not allow women to put their feet up even after long hours of tedious, backbreaking work such as transplanting, weeding or harvesting. After collecting wages, these women rush to the nearby shops for buying food articles and then to their kitchen for preparing dinner. Usually, women do errands and fetch food articles and other household items, in addition to the work in the kitchen. Obviously, most of these works are invisible and not reckoned as work at all. They are considered women's responsibility. It will not, however, be entirely correct to believe that all women internalise such gender roles uncritically. It is largely the social pressures that impose such burdens on them.

2. Decision-making and resource control

Decision-making and control of available resources are two important areas where distinct gender inequities prevail in most families. The role of decision-making in the household is decided on the basis of sex and age. The role of women in economic and other important decision-making for the households is insignificant.

Gender inequities are often reflected in women's lack of access to and control over resources including their own wages. Since the size of landholdings among the workers is limited (which are mostly homesteads) and so are their alternative array of economic resources. Their labour power is practically the only economic resource they have. Even over women's wages men wield considerable control.

Men wield control not only over economic resources but on their women's mobility and freedom to work as well. Men and women have more conflicting than co-operative priorities. But the conflicts of interests are camouflaged most of the time under semblance of consensus. Open conflicts affect women adversely.

3. Marital relations

Dominance over and control by men of the various other aspects of women's life including her body and sexuality is pervasive. Insecurity drives women into the stresses and strains

and even the nervous breakdown. Yet, in most cases, these problems do not lead to divorce or separation. Women often hope against hope and strive to conserve their conjugal bonds. The power that society has conferred on man to act according to his discretion adds to the powerlessness of woman and her suffering at his hands. Violence associated with sexual relations was another area of mental stress. Given the fact that, the power relations between men and women are more hegemonic than democratic in nature, it has reflections in sexual relations.

B. Gender issue in Agricultural

1. More Work, Less Pay:

Employment in agriculture is thus available for fewer days per year. It is therefore becoming essential for men to migrate in search of better paid work. Women are filling this vacuum. Women are forced to accept work in agriculture in their own village under very bad conditions because they cannot migrate as easily as men. The dependence of women's labour on family farms, especially during the peak periods of sowing and harvesting has become very common. Farmers, on the other hand, also seem to prefer women as agricultural workers. The farmer is faced with the increasing costs of production required for modern agriculture. He finds that he can squeeze his labour costs by using lower-paid womenworkers. Similarly, the work of women within family-based agriculture is preferred because it is cheaper than hiring labour. Women agricultural workers, although they represent a big proportion of all women workers, continue to receive lower wages than men. The Ministry of labour puts the difference at 60 per cent of men's wages, while the Indian Labour journal showed that women received 75 per cent of men earnings.

Lecture-8

OCCUPATIONAL HEALTH HAZARDS OF WOMEN IN AGRICULTURE

Health

The World Health Organization (WHO) defined human health “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”.

Health is measure in term of energy, capacity and potential of the person for productive work. Nothing can be consider of higer important than the health of the people.

The health of farm works (male / female) is a vital resource to protect for proper agricultural growth, supplying farm families with the means to meet its basic needs, adequate working and living conditions, protecting their health & welfare is important to raise the productivity of the workforce. Investment on occupational safety & health is an added value that provides for improved working conditions and higer productivity.

Occupational Health

It has been defined as “promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations by preventing departure from health controlling risk and adaptation of work to proper and people to work”.

-WHO

Occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards. The health of the workers has several determinants, including risk factors at the workplace leading to cancers, accidents, musculoskeletal diseases, respiratory diseases, hearing loss, circulatory diseases, stress related disorders and communicable diseases and others.

Occupational hazard

An occupational hazard is a hazard experienced in the workplace. Occupational hazards can encompass many types of hazards, including chemical hazards, biological hazards (biohazards), psychosocial hazards, and physical hazards.

Causes of health hazards in agriculture activity

1. Inadequate education & training on improved technology
2. Poverty & lack of education
3. Women are ignorant about agricultural hazards
4. Lack of aware & careless in performing farm activity
5. Mechanization in farm activity
6. Increase use of pesticides bring special risks to agriculture worker.

Hazards faced by Women in Agriculture

1. Physiological health hazards

Workers in agricultural operations for both crop and animal production typically use repetitive motions in awkward positions and which can cause Physiological health hazards.

Ergonomic risk factors are found in jobs requiring repetitive, forceful, or prolonged exertions of the hands; frequent or heavy lifting, pushing, pulling, or carrying of heavy objects; and prolonged awkward postures. Vibration and cold may intensify these conditions.

New technology may reduce some types of physiological injuries but increase others. For instance, while dairy farmers have traditionally been at a higher risk for developing osteoarthritis of the knee³, more recent research has shown new technology used in milking has resulted in a shift in musculoskeletal disorders to the shoulders, hands and arms.

2. Environmental health hazards

The environmental health hazards during various agricultural activities are poisonous bites & stings, cold in winter season, sunburn during summers, allergy due to suspended particles of dust, grain husk, chemical drift, pollen etc. Biological agents, including microorganisms and toxins produced by living organisms, can cause health problems in workers. Influenza is an example of a biohazard which affects a broad population of workers. Heat- dehydration through over respiration, leg edemas, cramps & fainting.

Rain & Cold – leads to respiratory infections.

3. Respiratory health hazards

Respiratory hazards in barns, manure pits, machinery and silos range from acute to chronic air contaminants. Farm workers' most common respiratory hazards are bioaerosols, such as organic dusts, microorganisms, and endotoxins and chemical toxicants from the breakdown of grain and animal waste. Inorganic dust, from silicates in harvesting and tilling, is prevalent but less significant.

Changes to farming mechanisms have both improved working conditions and increased exposure to respiratory hazards—mainly due to the increased density in animal confinement.

4. Mechanical health hazard

The main hazards associated with mechanization include moving machinery parts, use of high-voltage electrical appliances & transport vehicles.

- Workers are often not trained to safely use of machinery and vehicles.
- These hazards are in the form of injury of fingers and hand due to the tool used during work
- Making electrical connection carelessly or repairing electrical faults.

5. Pesticides and other chemicals

Chemical hazards are a subtype of occupational hazards that involve dangerous chemicals. Exposure to chemicals in the workplace can cause acute or long-term detrimental health effects. There are many classifications of hazardous chemicals, including neurotoxins, immune agents, dermatologic agents, carcinogens, reproductive toxins, systemic toxins, asthmagens, pneumoconiotic agents, and sensitizers.

Exposure to pesticides and other agro chemicals is one of the major occupational risk causing poisoning and death and in certain cases, cancer. Pesticides pose risks of short- and long- term illness to farmworkers and their families. Workers who mix, load or apply pesticides (known as pesticide handlers) can be exposed to toxic pesticides due to spills and splashes, defective, missing or inadequate protective equipment, direct spray, or drift.

Workers who perform handlabor tasks in areas that have been treated with pesticides face exposure from direct spray, drift or contact with pesticide residues on the crop or soil.

Pesticides can present a hazard to applicators, to harvesters reentering a sprayed field, to family members due to take-home contamination, and to rural residents via air, ground water and food. Workers may also be exposed to pesticides if they drink from, wash their hands, or bathe in irrigation canals or holding ponds, where pesticides can accumulate.

6. Skin disorder

Fungal or bacterial infection may be developed in areas of skin, which results from humidity and heat.

- Eczema/ allergic dermatitis
- Occupation acne is acquired from handling motor oil and grease or the moving parts of agricultural machines.

7. Electrical hazards

On the farm can result in electrical shock and fire within structure or in operating equipment.

Lecture-9

Policy for Woman in Agriculture

NATIONAL AGRICULTURAL POLICY

The first ever National Agriculture Policy was announced on 28th July, 2000. The formulation of Agriculture Policy had been under consideration of the Government.

National Agriculture Policy was absolutely essential to build on the inherent strength of the agriculture and allied sectors to address the constraints and to make optimal use of resources and opportunities emerging as a result of advancement in science and technology and emerging of a new economic regime.

National Agriculture Policy seeks to actualise vast untapped growth potential of Indian Agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro-business create employment in rural areas, secure affair standard of living for the farmers and agricultural workers and their families, discourage migration to urban areas and face the challenges arising out of economic liberalization and globalization over the next two decades.

It aims to attain:

- A growth rate in excess of four per cent annum in the agriculture sector.
- Growth that is based on efficient use of resources and conserves our soil, water and bio-diversity.
- Growth with equality, i.e. growth which is widespread across regions and famers.
- Growth that is demand driven and caters to domestic markets and maximizes benefits from exports of agricultural products in the face of the challenges arising from economic liberalization and globalisation.
- Growth that is sustainable technologically, environmentally and economically.

THE RIGHTS OF WOMEN AGRICULTURAL WORKERS

- Article 39 of the Indian Constitution directs the state to ensure that “citizens, men and women equally, have the right to adequate means of livelihood”; that “there is equal pay for equal work for both men and women”;
- On the other hand, article 16 of the Constitution, stating the principle of equality in

employment, applies to public employment only.

- With regard to access to employment, sex discrimination is prohibited by the Equal Remuneration Act of 1976 (sec. 5, as amended in 1987).
- The Equal Remuneration Act of 1976, as amended, prohibits discrimination in employment conditions (including promotion, training and transfer) (sec. 5, as amended in 1987).
- On the other hand, protective legislation prohibits women's night work in a number of sectors.
- As for agriculture, the Plantations Labour Act of 1951 prohibits the employment of women between 19 hours and 6 hours (except for midwives and nurses) unless there is a permission from the state government (sec. 25).
- Maternity leave is governed by the Maternity Benefit Act of 1961, which applies to plantations and to other establishments with more than ten employees (sec. 2). Pregnant workers have a right to 12-week paid maternity leave (secs. 4 and 6(2)).
- A six-week leave is granted in case of miscarriage or termination of pregnancy (sec. 9).
- An additional one-month leave is provided in case of illness arising out of pregnancy, delivery, miscarriage or termination of pregnancy (sec. 10).
- Maternity benefits are equivalent to the average daily wage of the woman worker (sec. 5).
- Discharge or dismissals of a woman on maternity leave, as well as the varying of her working conditions at her disadvantage, are prohibited (sec. 12).
- Pregnant workers have the right not to perform arduous work, or work which involves long hours of standing or which is likely to interfere with the pregnancy, the normal development of the foetus, adversely affect health or cause a miscarriage (Maternity Benefit Act, sec. 4(3)).
- No deductions from wages can be made because of the changed nature of the work performed (sec. 13 of the same Act).
- Nursing women have a right to two nursing breaks per day until the child attains the age of fifteen months, without deductions from the wage (secs. 11 and 13).
- Under the Plantations Labour Act of 1951, employers with more than 50 women workers (or with women workers having a number of children under six years old of 20 or more) must provide crèche facilities (sec. 12).

- The laws on social security (Employees' Provident Fund and Miscellaneous Provisions Act 1952 and the Payment of Gratuity Act 1972) apply equally to men and women.

Fundamental Rights:

- Article 14 ensures to women the right to equality.
- Article 15(1) specifically prohibits discrimination on the basis of sex.
- Article 15(3) empowers the State to take affirmative actions in favour of women.
- Article 16 provides for equality of opportunity for all citizens in matters relating to employment or appointment to any office.

Directive Principles of State Policy:

- Article 39 (a) provides that the state direct its policy towards securing for men and women equally the right to an adequate means of livelihood.
- Article 39 (d) mandates equal pay for equal work for both men and women.
- Article 42 provides that the state make provision for securing just and humane conditions of work and for maternity relief.

Need a National Policy for Women

Given the long-term nature of issues which impact on women in India, there is a need to strengthen the processes that promote all-round development of women by focusing on a coordinated approach for implementation of the schemes of the concerned Ministries/Departments and by creating an enabling environment conducive to social change.

Since 2001, when the last National Policy for Empowerment of Women in India was formulated, the concept of women empowerment has seen changes, from being recipients of welfare benefits to the need to engage them in the development process, welfare with a heavy dose of rights.

Previous legislation and policies for women

- In 1976, National Plan of Action (1976) was enforced providing guidelines based on United Nations 'World Plan of Action for women' with special attention to areas of health, family planning, nutrition, education, employment, legislation and social welfare for formulating and implementing of action programmes for women.
- During the 7th Plan period, the National Policy on Education 1986 was adopted which focused on providing educational opportunities to women.
- The reservations provided to women through the 73rd and 74th Constitutional Amendment

Acts of 1992 in local bodies has enabled them to be brought to the centre-stage in the nation's efforts to strengthen democratic institutions.

- The Government of India had adopted the National Policy for Empowerment of Women in 2001 with the objective to bring about the advancement, development and empowerment of women and to eliminate all forms of discrimination against women. It was directed towards achieving inclusive growth with special focus on women.
- India is also a signatory to a number of UN conventions, Primarily Convention on Elimination of all forms of Discrimination Against Women (CEDAW), Beijing Platform for Action and Convention on Rights of the Child.

National Policy for Women, 2016

- ❖ The policy is roughly based on the Rajput Committee report set up by the MWCD in 2012 which submitted its recommendations in 2016, including a suggested national policy for women and an action plan to end violence against women.
- ❖ Maternal and prenatal mortality will remain a priority area, focusing on a coordinated referral transport system for safe deliveries and emergency obstetric care to be made available in difficult, remote and isolated areas.
- ❖ It aims to implement “a gender transformative health strategy” which shifts the focus of family planning efforts from female sterilisation to male sterilisation.
- ❖ It focuses on prioritising the nutrition of women of all ages and strengthening geriatric services to address women aged above 60, who form 8.4% of the population.
- ❖ It tries to addresses the problem of navigating the distance from home to school by suggesting “innovative transportation models” such as “cluster pooling of minibuses.” to enroll more girls in secondary schools and retain current girl students.
- ❖ The policy talks about engaging men and boys through advocacy, awareness generation programmes and community programmes to instil respect for women in men from a young age.
- ❖ It also takes note of more women taking recourse to artificial reproductive techniques. It proposes efforts to ensure the rights of surrogate mothers, commissioning mothers along with those of the children born through surrogacy.
- ❖ It mentions designing “a comprehensive social protection mechanism” to address the vulnerabilities of widows, single, deserted, separated and divorced women and create opportunities for them such as building a 1000-room shelter for widows and other

vulnerable women in Vrindavan.

- ❖ Another area of concern the policy focuses on is the trafficking of women. The draft policy features efforts to develop a compatible and comprehensive database on violence against women, strict monitoring of the response of (law) enforcement agencies to violence against women, the time-bound trial of heinous crimes against women, strengthening naari adalats and family courts, etc.
- ❖ It also focuses on increased participation of women in workforce and politics (through need-based training), narrowing the gender-based wage gap, creating entrepreneurial opportunities for women (through schemes like E-haats), recognising women's unpaid work (at home) in terms of economic and societal value, achieving gender equity in agriculture, effective implementation of the legal provisions to ensure rights of women to immovable properties as well as the skill development of women in traditional, new and emerging areas.
- ❖ The policy aims at bettering security environments with initiatives, such as one stop centre's, women help lines, mahila police volunteers, reservation of women in the police force, creating immediate response mechanism through panic buttons in mobile phones, public and private transport and surveillance mechanisms in public places.

Welfare schemes for women in India

1. Beti Bachao Beti Padhao

It aims at taking coordinated and convergent efforts are needed to ensure survival, protection and education of the girl child.

2. Support to Training and Employment Programme for Women (STEP)

It is a Central Sector Scheme launched in 1986-87, seeks to upgrade skill of poor and assetless women and provide employment on a sustainable basis by mobilizing them in viable cooperative groups, strengthening marketing linkages, support services and access to credit.

3. Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG) – 'SABLA'

It is a Centrally-sponsored scheme was approved by the Government to meet nutritional needs and to provide vocational training for girls above 16 years of age for their economic empowerment.

4. Rashtriya Mahila Kosh – (National Credit Fund for Women)

The Rashtriya Mahila Kosh (National Credit Fund for Women) was set up in 1993 with a

corpus of Rs. 31 crores, against the backdrop of socio-economic constraints faced by poor women to access micro – credit from the formal financial system in the country, especially those in the rural and in unorganized sectors.

5. Indira Gandhi Matritva Sahyog Yojana (IGMSY) – Conditional Maternity Benefit (CMB) Scheme

It is a Conditional Cash Transfer scheme for pregnant and lactating women to contribute to the better enabling environment by providing cash incentives for improved health and nutrition to pregnant and nursing mothers.

6. Ujjwala Scheme

Ujjwala is a comprehensive scheme that was launched in 2007 for prevention of trafficking and rescue, rehabilitation and reintegration of victims of trafficking for commercial sexual exploitation.

7. SWADHAR (A Scheme for Women in Difficult Circumstances)

It aims at the protection of women, especially in a difficult circumstance like widows, destitute and deserted women, women ex-prisoners, victims of sexual abuse and crimes, including those trafficked and rescued from brothels, migrant or refugee women who have been rendered homeless due to natural calamities.

Lecture-10

Women Empowerment (Concept, Need & Ways of Empowerment)

Empowerment

It is a process of becoming stronger and more confident, especially in controlling one's life and claiming one's rights.

Women Empowerment

Women empowerment is an active, multi-dimensional process which enables women to realize their potential and powers in all spheres of life. The process should materialize only when there is a conducive environment for the enlightenment which is to be ensured first. Empowerment is enlightenment and there is no development without enlightenment; it is the quality of life measured not in terms of rising money incomes or longer life spans alone, rather by the autonomy and security enjoyed by women everywhere.

or

Women Empowerment refers to increasing and improving the social, economic, political and legal strength of the women, to ensure equal-right to women, and to make them confident enough to claim their rights.

or

Women empowerment is a process that helps and assists women to realize their identity, capacity, capability, strengths and power and its application in day to day life in various spheres.

It enables them to have access to resources, in decision making, more ability to plan their time & family size and also free them from irrelevant customs, traditions, practices and prejudices.

Need of women empowerment

1. Our constitution, in its fundamental rights, has provision for equality, social justice and protection of women. These goals are yet to be realized. Women continue to be discriminated, exploited and exposed to inequalities at various levels.

2. By empowerment, women would be able to develop self-esteem/ respect, confidence. Realize their potential and enhance their collection bargaining power.
3. Women's empowerment can be viewed as a quantum of several inter-related and mutually reinforcing components.
4. Awareness building about women's situation, discrimination, rights and opportunities as a step towards gender equality.
5. Women empowerment helps the women for capacity building and skill development, especially the ability to plan, make decision, organize, manage and carry out activities, to deal with people and institution in the world around them.
6. It increases participation and greater control and decision making power in the home, community and society.
7. Action to bring about greater equality between men and women.

Thus empowerment is a process of awareness and capacity building. Leading to greater participation, greater decision making power and control. It strengthens their inner ability through acquiring knowledge, power and experiences.

Strategies for Empowerment of women



1. In order to bring about the advancement, development and empowerment of women, the National Policy for Empowerment of women (2001) need to be widely disseminated so as to encourage active participation of all stakeholders for achieving its goals.
2. Legal- judicial system should be mode more responsive and gender sensitive to women needs especially in cases of domestic violence.
3. Women equality in power sharing and active participation in decision making at all levels should be ensured for the achievement of the goals of empowerment.
4. Policies, programmes and systems should ensure mainstreaming of women's perspective in all developmental process.
5. Economic independence- If the women stands on their own feet and have some money of their own, used for family benefits. It has been found that whenever women earns, it is used for whole family betterment.

Economic independence brings changes in the motivation level, attitude, value, knowledge and skills of women when in turn gets translated into confident

empowered women. Their type independence also bring shift in the status of women in society.

6. Capacity building- It will be enhancing their self-esteem and confidence. The specific programme may include skill development, especially the ability to plan, make decision, organize, manage and carry out their like activities & deal with people around them.
7. Gender sensitization- camps and awareness programmes must be organise for the women.
8. Changing attitude- a mind-sets of both men and women for gender mainstreaming process to begin.
9. Collectivization – bring a group of women together at a base to become an integral part of an economic activity is an important part of the strategy toward their empowerment.
10. Education- Equal access to the education farmer & women. Non formal education for empowerment means people gaining an understanding and control over social, economic or political forces in the society. Education helps women for increased access to resources, increased collective bargaining power, improved status, self-esteem, cultural identity, ability to reflect critically, solve problems, self-discipline & the ability to work with others. Formal education for their girls- increasing awareness programme, appointing female primary teachers in rural areas, establishing special scholarships, can really help in reducing their dropout rate.
11. Improvement in social conditions
 - Health – A health services has to be adopted and special attention given to the women and girls, at all stage of the life cycle.
 - Nutrition- In view of the high risk of malnutrition, nutrition education need to be made.
 - Women in difficult circumstances- in recognition of diversity of women's situation, measures and programmes have to be undertaken to provide them with special assistance.
 - Violence against women- all forms of violence against women, physical & mental (domestic level/ societal level) arising from customs, traditions needs to be deal with effectively, with a view to eliminate its incidence.
 - Right of the girl child – to strict enforcement of the law against prenatal sex selection, female feticides, child marriage, child prostitution, discrimination in the treatment of the girl child etc.

The different parameters of empowerment are –

- Enhance self-esteem and self confidence in women.
- Build a positive image of women by recognizing their contributions to the society and economy.
- Develop in them an ability to think critically.
- Foster decision making and action through collective process
- Enable them to make informal choices in areas like education, employment and health.
- Ensure equal participation in the development process
- Provide information, knowledge and skill for economic independence.
- Enhance access to legal literacy and information related to their rights and entitlements in the society with a view to enhance their participation on an equal footing in all areas.

Dimensions of Women Empowerment

Empowerment is multi-dimensional as it covers financial independence, social awareness and political consciousness of an individual. These elements can be categorized as economic empowerment, social empowerment and political empowerment.

1. Economic Empowerment

Economic empowerment is nothing but making women aware about their role / importance in economic development and provide them space for attaining financial independence and account their significant contributions to the production process.

Economic empowerment is a process as well as a stage which is to be reached by designing strategies focusing on building credit worthiness and financial independence among women by removing all the gender-specific barriers which prevent women from gaining access to their rightful share in every spheres of life. Thus economic empowerment is a necessary condition for enabling women to seek justice and equality, because without economic strength, women cannot be able to exercise their rights and entitlements.

2. Social Empowerment

Social empowerment means a more equitable social status for women in society because the primary responsibility of any human society is to ensure human dignity to all

members. It is often argued that facilitating women's access to money is not an effective means for achieving women's empowerment unless it is linked to other kinds of activities like training on awareness of the impact of women's subordination, concept of self-esteem and on the meaning and benefits of empowering women.

The approach to gender equity is based on the recognition that all interventions in favour of women must ensure an environment free from all forms of violence against women and also ensure the participation and adequate representation of women at highest policy levels.

3. Political Empowerment

Political participation includes the right to vote, right to contest, right to candidature, their role as women as campaigners, members and their involvement in the decision making process and appointment of women at all levels of government.

Political equality includes not only equal right to franchise but also more importantly, the right to access to the institutionalized centers of power. Participation of women in Panchayat Raj Institutions has been recognized as a step towards equality.

Reserving seats for women in the political institutions will provide them an opportunity to raise their grievances and other related personal and social problems in a formal manner. The participation of women in the electoral process is an indicator of their political consciousness as well as their aspiration for status enhancement.

Lecture -11

AGRI-PRENUERSHIP (CONCEPT & PROCESS)

Entrepreneurship

“Entrepreneurship has traditionally been defined as the process of designing, launching and running a new business, which typically begins as a small business, such as a start-up company, offering a product, process or service for sale”.

It has also been defined as the "...capacity and willingness to develop, organize, and manage a business venture along with any of its risks in order to make a profit. Entrepreneurship is a concept that encompasses transforming an idea or vision into a new business or new venture creation, or the expansion of an existing business, by an individual, a team of individuals, or an established business.

Agri-preneurship

An agripreneur may be defined as someone who undertakes a variety of activities in agriculture and its allied sectors to be agripreneur. An agripreneur may start an agro business, change a business direction, acquire a business or may be involved in innovative activity of value addition. Explicitly an agripreneur is a risk-taker, opportunist, initiator who deals with the uncertain agricultural business environment of the firm.

A farmer to become a successful agripreneur needs to be active, curious, determined, persistence, visionary, hardworking, come up with ideas, communicative with strong management and organizational skills, recognize suitable marketing opportunities, manage the optimum resources or bearing the risk.

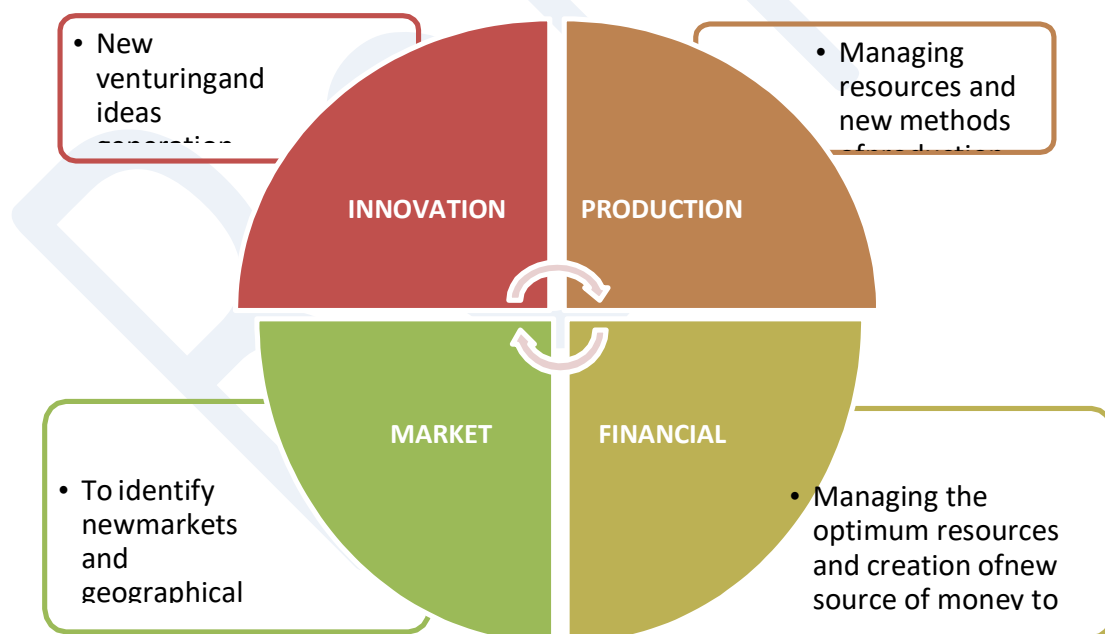
Why India promoting Agripreneurship

India is the centre for biodiversity in plants, animals, insects, micro-organisms and accounts for 17 per cent animal, 12 per cent plants and 10 per cent fish genetic resources of the globe. In recent years, there has been a considerable

emphasis on crop diversification towards horticulture (fruits, vegetables, ornamental crops, medicinal and aromatic plants and spices), plantation crops (coconut, cashew nuts and cocoa) and allied activities. The problems of unemployment, underemployment and disguised unemployment have swamped the country, especially the rural common people.

Considering that 2/3rd of the Indian population is employed in the agriculture sector, providing viable and sustainable business opportunities in Indian agribusiness is essential for generating employment in the country.

Process of Agri-preneurship



Source-Edited by Christie Rudmann, Specific targeted research project SSPE-CT-2005-006500

Important Steps in the development of Agro based Entrepreneurship programme;

1. Identification of and location of perspective self-employees
2. Selection of potential self-employed/entrepreneurs from amongst prospective candidates.
3. Agro based entrepreneurship development training
4. Providing help/guidance in selection of product and preparation of project report
5. Mobilizing different resources
6. Organisational support in setting a enterprise
7. Follow up

Challenges/ Barriers faced by the agripreneurs-

a. Lack of funds

Lack of finance available to rural entrepreneurs is one of the biggest problems which entrepreneurs are bearing now days especially due to global recession. Major difficulties faced by rural entrepreneurs includes low level of purchasing power of rural consumer so sales volume is insufficient, lack of finance to start business, reduced profits due to competition, pricing of goods and services. Major sources of finance in rural areas are loans from regional rural banks or from zamindars but their rate of interest are usually very high. Government has various institutions for this purpose but the results are not up to the level expected. Industrial Finance Corporation of India (IFCI), Industrial development bank of India, Industrial Credit and Investment Corporation of India (ICICI), Small Scale Industry development bank of India (SIDBI) are some of the national level (SFC) institutions that are helping out rural entrepreneurs. Some state level institutions are also working like State Financial Corporation and State Industrial Development Corporation (SIDC). These institutions are providing assistance for setting up of new ventures and side by side for modernization and expansion of

existing ones but their terms and conditions are very strict to be handled.

b. Lack of infrastructure

The growth of rural entrepreneurs is not very healthy in spite of efforts made by government due to lack of proper and adequate infrastructural facilities.

c. Risk

Rural entrepreneurs have less risk bearing capacity due to lack of financial resources and external support.

d. Marketing problems and competition-

Rural entrepreneurs face severe competition from large sized organizations and urban entrepreneurs. Major problems faced by marketers are the problem of standardization and competition from large scale units. They face the problem in fixing the standards and sticking to them.

e. Management problems

I. Lack of technological dissemination

Information technology is not very common in rural areas. Entrepreneurs rely on internal linkages that encourage the flow of goods, services, information and ideas.

II. Legal formalities and regulations –

Rural entrepreneurs find it extremely difficult in complying with various legal formalities in obtaining licenses due to illiteracy and ignorance in farmers.

III. Availability of resources

Procurement of raw materials is really a tough task for rural entrepreneur. They may end up with poor quality raw materials, may also face the problem of storage and warehousing.

IV. Lack of technical knowledge

Rural entrepreneurs suffer a severe problem of lack of technical knowledge. Lack of training facilities and extension services create a hurdle in the development of rural entrepreneurship.

V. Quality Control

Another important problem is growth of rural entrepreneurship is the inferior quality of products produced due to lack of availability of standard tools, techniques and equipment, lack of quality materials.

VI. Low skill level among farmers

Most of the entrepreneurs of rural areas are unable to find workers with high skills. Turnover rates are also high. They have to be provided with on the job training and their training is generally a serious problem for entrepreneur as they are uneducated and they have to be taught in local language which they understand easily.

Remedies to Solve These Problems

Different organization like IFCI, ICICI, SIDBI, NABARD etc. are trying to sort these problems. Marketing problems are related with distribution channels, pricing, product promotion etc. In order to make the rural entrepreneurs to state the business venture, the following measures may be adopted:

- 1. Establishment of finance cells-** The financial institutions and banks which provide finances to entrepreneurs must create special cells for providing easy finance to rural entrepreneurs.
- 2. Concessional rates of interest -** The rural entrepreneurs should be provided finance at concessional rates of interest and on easy repayment basis. The burdensome formalities should be avoided in sanctioning the loans to rural entrepreneurs.
- 3. A suitable supply of raw materials -** Rural entrepreneurs should be ensured of proper supply of scarce raw materials on priority basis. A subsidy may also be offered to make the products manufactured by rural entrepreneurs cost competitive and reasonable.
- 4. Offering training facilities-** Training is essential for the development of entrepreneurship. It enables the rural entrepreneurs to undertake the venture successfully as it imparts required skills to run the enterprise. Presently the economically weaker entrepreneurs of the society are offered such training

facility under Prime Minister's Rozgar Yojna. (PMRY) Programmed FICCI, (NGOs) Lions Clubs, Rotary Clubs and voluntary organizations can also arrange such training programmes for rural entrepreneurs to provide them stimulation counselling and assistance .

- 5. Setting up marketing co-operatives** - Proper encouragement and assistance should be provided to rural entrepreneurs for setting up marketing cooperatives. These co- operatives shall help in getting the inputs at reasonable rate and they are helpful in selling their products at remuneration prices. Hence, middlemen can be avoided and rural entrepreneurs derive the benefits of enterprise.

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