

INTEGRATED AGRICULTURE FOR SUSTAINABLE DEVELOPMENT!

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Abstract:

65 percent of India's population still depends on agriculture. Agriculture is moving through a transition. After independence, the biggest challenge faced by the government was to satisfy the hunger of the growing population. Therefore, various activities were implemented to increase productivity. The agricultural extension system was made more efficient. Research institutes started emphasizing on high yielding varieties and production technology. The objective of increasing production began to bear fruit. The green revolution contributed a lot to that. Although this achievement is something to be proud of, the fact cannot be denied that the small and poor farmers have not been able to make the expected progress. Considering the country's need of the time and the urgency of immediate productivity increase, most of the activities fell into the form of 'top-down' technology flow, so local people's participation in various phases remained nominal. Due to the efforts of the extension system and research institutes, India has not only become self-sufficient in food grain production, but now the country has also started exporting agricultural products; But in this situation, it is also necessary to consider the small and marginal farmers who are more than 80 percent in our country. For this, extension systems have been ordered to change their working methods. The spread of technology based on local needs and problems, people's participation, cropping methods, joint ventures is the highway of sustainable agriculture and more than one way of sustainable income is being built in rural development through an integrated farming system. This will benefit the farmers. Also, it is very important to adopt integrated farming system for sustainable development so that agriculture can be developed well and farmers can become prosperous.

Keywords: People participation, entrepreneurship, sustainable income, organic farming, market linkage:

Introduction:

There is a drastic change in the agriculture business with the passage of time. (Change in agricultural system) One or more options are being opened for increasing production. Therefore, agriculture is no longer a loss-making business, but the production of farmers who have adopted the latest technology has increased, but the integrated farming system has led to the overall development of agriculture and farmers. Integrated farming systems are now taking root and farmers are benefiting from new experiments.

Many farmers have come together and are earning millions by farming together till they get the market by producing various crops. So we are going to see what is integrated farming and how farmers have developed because of it. Farmers in traditional farming are initially reluctant to adopt the new model, but once they start making profits, they do different activities. One such model is integrated farming. A large number of farmers are adopting these farmlands and increasing production.

Rain is decreasing day by day. Drought is becoming more severe due to dwindling rainfall. Also, it is becoming difficult for the farmers to deal with the problems of heavy rains, hailstorms, unseasonable conditions. Therefore, it is becoming difficult to solve the problems of safety, health, education of 5-6 people in their family. There is a need for farmers to change one cropping system to integrated farming in all these hinterlands. It is important to consciously pay attention to how to get more income from agriculture. The model of integrated farming system should be adopted by every farmer, because 'our agriculture is completely dependent on rain. The condition of the farmers is that they do not grow in the fields and if they grow, they do not sell. The economic condition of the farmers will not improve from the

traditional one-crop system, farmers should grow different crops. At the same time, choose profitable and agricultural business from dairy farming, goat farming, poultry farming, fish farming, projects, silk projects. Vermicomposting beds, silage bags, vermiculture should be provided to the farmers. A farming model should be prepared by considering the climate, irrigation facility and market for the agricultural produce in the area where the farmer lives. Employment opportunities can be available from this model. There should be a model that should get a guaranteed income of 25 to 30 thousand rupees per month. Hence, a healthy and balanced diet can be guaranteed to raise the standard of living of the family.

What is Integrated Farming?

Integrated farming is a modern farming system where small and large farmers come together. **Also, big farmers can earn profit by farming through this system.** The main objective of an integrated agricultural system is to make proper use of every part of the agricultural land. In this, the farmer can simultaneously grow different crops, flowers, vegetables, cattle rearing, fruit production, beekeeping, fish farming etc. The only purpose of this is to increase production. The focus is on how farmers can maximize production by making full use of the resources available to them. The aim of this integrated farming system is to reduce costs and increase productivity. Integrated farming system is environmentally friendly and also increases the fertility of the farm.



In the rural areas, there are some crops, animal-poultry based on them, small businesses, interwoven, interdependent and interlinked structures have been formed. It is called integrated farming system.

According to Thomas Jefferson, agriculture is our wisest occupation, ultimately producing the truest wealth, moral values, and happiness. Such interdependent agriculture is known as integrated bio system or agriculture.

Integrated Farming Concept:

Agriculture includes animal husbandry (including indigenous animals such as cows, buffaloes, goats, sheep), poultry (chickens, ducks, turkeys, rabbits, etc.), fisheries (fish, shrimp, canal or mussels, pearl production, etc.), poultry, agar-wood production. , combining beekeeping and to some extent orchards.

Reusing the waste organic matter generated from each component in agriculture after proper processing. E.g. Use of slurry after bio-gas generation in fields etc.

Agriculture also includes mixed cropping, inter-cropping practices, scientific crop rotation, trap crops, live fencing.

Efficient use of water, nutrients and space. It alleviates bio-tic and antibiotic stress on crops.

Various ancillary dairy farming, goat farming, sheep farming, poultry farming etc. Arranging that the business will continue to generate income throughout the year.

Even though the crops were damaged by the fall-in storm which occurred when rice cultivation was in full swing, the family was able to survive the year due to some income from dairy business, jute, fish farming. At that time the farmers who depended only on agriculture, their economic potential was reduced to zero. According to the model of integrated farming system, it has been revealed that the income increases by 20 to 30 percent.

Features of Integrated Farming:

- Local environmental change
- Conservation system
- Use of organic fertilizers
- Crop changes
- Zero tillage technique
- Minimal or zero use of chemical fertilizers, pesticides.

Importance of Integrated Farming System:

Properly integrated farming practices minimize negative impacts on soil, environment and overall atmosphere. She was absorbed in the lifestyle of common farmers till now. But per capita agricultural area is decreasing, 82 percent of farmers in India have less than 2.5 acres of land.

In order to produce more food in this situation, these interwoven threads have been loosened since 1960 due to various reasons such as new methods, technology etc.

These farmers do not have the ability (to pay) to purchase inputs like seeds, fertilizers, pesticides or even to pay wages as required. This has not only happened in India, but the same results are being seen in different parts of the world.

Integrated farming is also nothing new in India. It was a part of our lifestyle in the past. Attempts to develop an alternative model between extreme chemical farming and organic farming began around 1943. But its proper development and eye adoption was neglected.

If the farmers adopt integrated farming system, it is definitely possible to stabilize the sustainable income, so doing integrated farming system has become a great need of today.

Adoption of integrated farming system by farmers to increase farm income as well as economic empowerment of farmers.

Why Integrated Farming?

Considering the growing population of the country, this should be included in the process of doubling farmers' income by 2025. According to the idea that agriculture can become a profitable and sustainable business, Vice-Chancellor of the Central Agricultural University of Manipur, M. Presented by Premjit.

A smallholder farmer's 2.6 hectare area can earn more than about 16 lakh rupees annually through integrated farming system. How would agricultural production increase if we excluded bees and beekeepers from agriculture? We have seen everything differently till now.

Founder of Central Agricultural University of Meghalaya U. K. According to Behera in his article, integrated farming practices will be an important tool in the process of doubling farmers' income.

40 to 60 percent reduction in various inputs, increasing efficiency of farming system by 2 to 3 times. Along with the availability of employment opportunities in the rural areas, the family's food security will also be ensured.

Dr. who is a member of Directorate of Agriculture. V. L. Madhu Prasad is considered to be the father of the modern integrated farming system. International standards and grading organizations have honoured him for this work.

Government of India earmarked about Rs 225.5 crore for the financial year 2021-22 for the promotion of integrated farming system.

Global Integrated Farming:

Integrated farming system is being adopted in developed and developing countries of the world. Integrated farming systems have been developed in many European and Asian countries. Many of these methods will be useful in adapting food production for larger populations in the current and future climate change crisis. Farmers in Asia and Africa have combined animal husbandry with agriculture. This has resulted in a sustainable increase in their income.

Generally, after two to three years of adoption of integrated farming system, the increase in soil fertility starts to increase in production. If it is combined with the market, the income of the family increases. Nutrient requirements can be well met.

Advantages of Integrated Farming System:

Un-cultivable land can be used for production, and productivity will increase, multiple sources of income will be possible, sustainable development will help and economic productivity will increase, balanced food, pollution free environment, continuous income throughout the year, use of new technology, solving energy problems, four Problems will be resolved, forests will be protected, agribusiness and industries will be boosted. Employment opportunities will be created in rural areas.

Through integrated farming system, cropping systems and various agro-related industries should be combined as follows.

- 1) Cropping system + cow / buffalo + vermicomposting production + fruit trees on embankment + vegetables.
- 2) Cropping systems + Agriculture + Farm Pond Aquaculture.
- 3) Crop systems + cow / buffalo or poultry + fruit trees
- 4) Cropping methods + Goat / Sheep / Goat farming + Vegetables should be selected as complementary to agriculture.

Conclusion:

The concept of commercial farming is outdated to the earlier integrated farming practices adopted today. Decrease in productivity of dry-land crops, scarce availability of essential nutrients from the soil due to lack of water are adversely affecting the productivity of crops. A review of fifty years of average rainfall revealed variation in rainfall intensity and diurnal patterns. In such a situation, it is possible to avoid the damage due to the fluctuation of rainfall by planting suitable inter-crops with cotton and soybean crops. For this, crop rotation, dung, cow urine, milk and livestock for agriculture and the contribution of family members are needed.

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