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Integrated Farming System – Sustains and Maintains Farm Family

Agriculture is the back bone of Indian economy. Farmers work very hard to increase the production of crops to feed the growing population. Even though they work hard, they get less for their produce after spending all the inputs (seeds, livestock breeds, fertilizers, pesticides, energy, feed, labor, etc.). Growing crops alone does not make more profit for the farmer likewise rearing animals without crop. Integrating various farm enterprises (crop +livestock) will improve the farmer's livelihood. Integrating various enterprises in turn improves the usage of farm waste effectively and reduces the usage of chemical fertilizers, pesticides and insecticides which cause harm to ecosystem. Integrated Farming System (IFS) is the commonly used term to explain the integrated farming approach compared to monocropping. It integrates crop and livestock or crop + livestock + fish or Crop + fish + mushroom + ducks and sometimes known as integrated biosystems. It is an inter-related approach where waste from one component is used as an input for another component. This reduces input cost and improves income. It utilizes waste as a resource/input which reduces input cost and ensures overall increase in overall productivity of the farm.

INTRODUCTION

Integrated Farming System (IFS) is organically integrated systems which unifies natural resources and regulates their mechanisms into farming activities which in turn results in better replacement of chemical inputs with farm waste, protract farm income and reduces environmental pollutions generated by use of chemical inputs.

OBJECTIVES

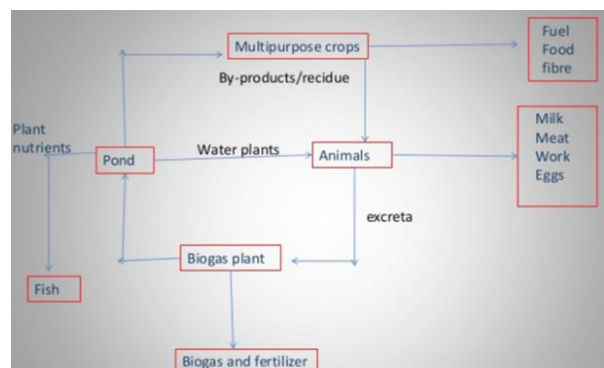
- Efficient use of resources
- Minimizing use of chemical inputs
- Efficient utilization of farm waste
- Complementary combination of farm enterprises
- Mitigating the negative impact of agricultural inputs on environment
- Increasing natural resource use efficiency
- Achieving agro-ecological equilibrium
- Providing pollution free environment
- Increasing Productivity
- Maximizing profit

CHARACTERISTICS OF IFS

- Holistic
- Problem solving
- Interdisciplinary
- Gender sensitive
- Actual adoption

CLASSIC SITUATIONS FOR IFS

- Farmers below poverty line
- Peasants desire to improve soil fertility
- To reduce soil pollution
- To minimize recyclable waste disposable farm waste
- Farmer is looking to minimize use of inorganic inputs
- Desire to increase profit with the existing farm area
- Soil problems due to increased chemical usage
- Farm household is below the poverty line

TYPES OF ENTERPRISE RELATIONSHIP

1. Independent enterprise - Increase or decrease of one component does not have effect on other component.

2. Complementary enterprises - Increase or decrease of one component increase or decrease other without competing for resources.
3. Competitive enterprises - Enterprises compete with each other for the resources.
4. Supplementary enterprises - Enterprise which do not compete for resources but to increase income of the farmers.

TYPES OF ALLIED ENTERPRISES

- Dairy Farming
- Sheep and Goat farming
- Poultry farming
- Duck farming
- Turkey rearing
- Piggery
- Rabbit farming
- Bee keeping
- Pigeon rearing
- Aquaculture
- Sericulture
- Mushroom cultivation
- Bio-gas plant
- Fruit cultivation
- Vegetable production

INTEGRATION OF ENTERPRISE

- Livestock combined with cropping is complementary in nature.
- Bio-gas plant installation with crop-livestock system will utilize wastes and provide manure and gas for cooking
- Fishery, duck and buffalo rearing in wetland has a better waste utilization.
- Straw from can be effectively utilized for mushroom production.
- Sericulture, poultry, piggery is well suited with arable crop production.
- Under rainfed farming, crop can be combined with sheep and goat rearing, agro-forestry etc.,
- Enterprises with complementary relationship should be selected to avoid competition.

TYPES OF INTEGRATED FARMING SYSTEMS

- Crop - livestock system
- Crop - livestock - biogas system
- Crop - mushroom farming system
- Crop - fishery - duckery system
- Crop - fishery - duckery - mushroom farming system

- Crop-livestock -fishery farming system
- Crop – poultry – livestock system
- Agri-silvi-apiary system
- Crop- forestry - livestock farming system
- Crop- livestock-vermicomposting farming system
- Crop-livestock -poultry - fishery farming system

Crop-live stock –fishery farming system



Crop-livestock -fishery farming system

FACTORS AFFECTING CHOICE OF ENTERPRISE

- Size of farm
- Market facilities
- Climatic condition of the region
- Technical knowledge
- Type of soil
- Credit facility available
- Knowledge of the farmer

ADVANTAGES

- Income generation throughout the year
- Conserve environment

- Reduces pollution
- Reduction in input cost
- Restores soil fertility.
- Improves the economic status of the farmer

FURTHER THRUST OF IFS

- Contingent plan is required to meet the weather threats under different farming situations.
- Assessment and refinement of the technologies developed by research centers at farmers field
- Need to develop research modules of farming system under different size land holding
- Need to create economically viable systems
- Need to create database on farming system in relation to resources available under different farming situation.

CONCLUSION

Utilization of farm resources and protection of environment without harming the basic resources is the only way to promote sustainable development. Waste from one enterprise is utilized as input for other enterprise. Integrated farming system increases the productivity of the farm which in turn satisfies the farmer's household needs both physically and economically. Nutritional requirement of the farm is self-sustained through resource recycling. Employment is generated throughout year because of combination of various enterprises. It provides a better economic and nutritional security.