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## Lecture-13

**Integrated Farming System-  
historical background,  
objectives and  
characteristics, components  
of IFS and its advantages**



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# Definition

- It is defined as a new type of system in which multiple agricultural productions and development are guided, organized and managed in the light of ecological-economic principles and by using the system engineering approach
- IFS works as a system of systems. It ensures that waste from one firm become a resource for another firm

# Objectives



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- To identify existing farming systems in specific areas and access their relative viability
- To formulate farming system models involving main and allied enterprises for different farming situations.
- To ensure optional utilization and conservation of available resources and effective recycling of farm residues within system
- To raise overall profitability of farm household by complementing main/allied enterprises with other.



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## Goals of IFS

- Provide a steady and stable income rejuvenation/amelioration of the system's productivity and
- Achieve agro-ecological equilibrium through the reduction in the build-up of pests and diseases, through natural cropping system management and the reduction in the use of chemicals (in-organic fertilizers and pesticides).



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# Advantages of IFS

- 1. Productivity:** - IFS provides an opportunity to increase economic yield per unit area per unit time by intensification of crop and allied enterprises. Time concept by crop intensification and space concept by building up of vertical dimension through crops and allied enterprises are the ways to increase the productivity indicated above.
- 2. Profitability:** the system as a whole provides opportunity to make use of the produce /waste materials of one component on another component at least cost. Thus there is reduction in cost of production of the component



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- Potentiality: in IFS, organic supplementation through effective utilization of byproducts of linked components is done thus providing an opportunity to sustain the potentiality of production base for much longer period.
- **Balanced food-** in IFS, we link components of varied nature enabling to produce different sources of nutrition from same unit area. This will provide an opportunity to solve the malnutrition problem that exists in the diet of average Indian.
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- **Environmental safety-** In IFS, we use waste material as organic source in different component, decrease the application of herbicide and pesticide. Thus IFS greatly reduces environmental pollution.
- **Recycling-** IFS establishes its stability due to effective recycling of produces or waste materials at the farm level, thus reducing the cost of cultivation also.
- **Income round the year-** IFS provides flow of money to the farmer round the year by way of disposal of egg, milk, mushroom, and honey .this will help the resource poor farmers to get away from the clutches of money lenders.



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- **Adoption of new technologies-** availability of money round the year gives an opportunity to the small and marginal farmers to go for the adoption of technologies.
- **Meeting fodder crisis-** growing of perennial fodder crops in the border and water course is a recommended practice in IFS. This helps in enrichment of soil and supplementation of fodder.
- **Solving fuel and timber crisis-** In IFS, linking agroforestry appropriately, the production level of fuel and timber can be enhanced without detrimental effect on crop activity in the field level.





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- **Employment generation-** combining crop with livestock enterprises would increase the labour requirement significantly and would help in reducing the problem of under employment to a great extent. IFS provide enough scope to employ family labour round the year.
- **Agro industries-** when once the produce of different components linked in IFS are increased to commercial level there will be surplus for value addition leading to then development of allied agro-industries.



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- **Increasing input efficiency-** IFS provides good scope to use the inputs in different components very effectively leading to greater efficiency and benefits cost ratio.
- **Increasing standard of living-** higher income as well as availability of different produce for family consumption, it increases the standard of living.



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# Mixed farming vs Farming system

- Subsistence is important objective of mixed farming while higher productivity without altering ecological balance is important in farming systems



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# Components of Integrated Farming system

Agriculture	Kitchen garden
Fish farming	Poultry
Horticulture	Fodder production
Duck rearing	Goat rearing
Forestry	Nursery
Pigeon rearing	Sheep rearing
Mushroom cultivation	Seed production
Sericulture	Piggery
Azolla rearing	Vermiculture
Diary	Bio-gas

- Crop component- cereals, pulses, oilseeds etc.
- Animal component- Cattle, goat, sheep etc.
- Homestead farming- Bio-gas, grinding and splitting of pulses etc.



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# How to select an enterprise

- Soil and climatic features of an area
- Social status of the family and social customs in the locality
- Economical condition of farmer
- Economics of proposed IFS and credit facilities
- Farmer's managerial skills
- Household demand
- Institutional infrastructure and technological know how
- Market facilities



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**Thank You**