

**CLASS 3: INTEGRATED FARMING SYSTEMS- ROLE OF LIVESTOCK AND POULTRY, MANURE  
MANAGEMENT METHODS, DUCK/FISH/RICE CULTURE.**

Integrated Farming system

**CLASS 6**

**Integrated farming system – (IFS)**

- **Component of farming system research a change farming techniques for maximum production – optimum utilisation of resources**
- Defects of mixed farming is overcome –
- proper planning,
- monitoring
- and execution of work according to size of the farm, farm resources, Agro climatic etc.

Focused on a few selected, interdependent and interrelated systems

Type of livestock species or poultry enterprises -selected

- availability of feed,
- fodder,
- water resources of the farm.
- Quantity – Availability : No. of animals maintained

**GOALS**

**Four goals**

- **Maximizing of yield** of all components- steady and stable income
- **Rejuvenation of systems** productivity-ecological equilibrium
- **Control pest, weed and diseases** by stable management.
- **Reducing the use of chemicals** and other harmful agro chemicals

**Advantages**

- **Productivity**
- **Profitability**
- **Potentiality and sustainability**
- **Balanced food**
- **Pollution free environment**
- **Recycling**
- **Adoption of new technology**
- **Solve energy crisis**
- **Employment generation**
- **Improves the standard and literacy**

**Different systems**

- **Lowland farming system**
- **Irrigated upland farming system**
- **Upland farming system**

### Lowland farming system

- Cropping + poultry + duck + pigeon + fishery + mushroom in all possible combinations
- Recycling reduces the cost of output
- one hectare 0.90 ha for crop + 0.10 for fish pond
- 1000 polyculture fingerlings
- 50 babcock layers or 100 pigeons feed requirement for 1000 fingerlings
- Pigeon open grazing ^ profitable

### Other Combinations

- **Crop + piggery + fish+ mushroom**
- **crop + goat + fish**
- **Goat Unit 11.0 t more manure apart from feed requirement**
- **Employment for the farmers**
- **crop residue sand waste of horticulture for producing 5 kg of edible mushroom /day**
- **vermicomposting**

### Irrigated upland farming system

- Crop + Dairy + Biogas + Spawn+ Mushroom
- Dairy of 3 milch animals
- Dung to generate 2m<sup>3</sup> of biogas – sufficient for preparation gruel, lightning 2 lamps and cooking of mushroom and spawn
- Sericulture – mulberry leaves after worm feed – and faecal matter of worms good biogas input
- **Left out after reeling silk yarn** – rich in protein – good feed supplement

### OTHER INTEGRATION

- **Rabbit farming**
- **One unit 10 females and one male** – 200 kindling – weight around 1000 kgs meat
- **coconut border planting** on irrigation channels with 4 m interval – 50 trees – 5000 nuts per annum
- Nutrient enriched by **growing sun hemp**
- **Vermicompost** from plant good organic source

### Horticulture oriented

- ▶ Homestead Garden with vegetables, fruit trees – vermicompost to the land
- ▶ Honey bee hives – collect honey from the flowers
- ▶ Horticulture Waste to the animals (dairy)

### Upland farming system

- **Conventional Rain fed Crops**
- integrating farms and biomass build up
- **Dry Land With Goat+ Fodder Crops + Perennial Grasses**

- 20 ewes and one buck -365 days by short duration field crops ( **Tellicherry** ) – dual purpose – economic traits – manure of 11.2 t of soil excellent source primary, secondary and micro nutrients absorb more moisture and release to the crop

- **After 5 years perennial fodder trees bear the stock**

#### **Other Inputs**

- Buffalo – Good Quality Of Milk Fat with low quality fodder
- Drought Tolerant Fruit Crops like ber, amla, guava, pomegranate raised with legumes or intercrops feed supplement to milch animals
- Farm pond

1/ 25 of the cultivated land – outlet point for the secure run off water  
dimension 40\* 10\* 1.5m

Silt settling unit – silt removed – organic nutrient to perennial fruit trees and stagnation of water more 3 1/2 to 4 months – tilapia a local fish reared in pond

#### **Constraints**

- **Heavy investment at initial stage**
- **involvement of multi disciplinary activities like animal husbandry**
- **Lack of marketing**
- **Lack of knowledge of preparation of own feed**
- **non availability of new variety**

#### **Specialized farm**

- **Intensification of agricultural activity** aimed at maximising the production/unit area /unit time.
- **Operational efficiency** and speed of execution.
- Focused on a **single system**.
- **Management skills**

If located close to town –  
Advantageous

i. Reduce transport cost

ii. Marketing easy since avenues more.

Village : Cost of land cheap : investment on feed and fodder less.

- **Mixed Farming** : Along with crop Husbandry one or more component of livestock or poultry maintained. mixed farming is the economical rearing of different types of Livestock&Poultry in the farm along with
- (a) making use of farm Produce.
- b)Utilization of unconventional feed and fodder
- c)better utilization of farm by products