

**FACULTY OF AGRICULTURE SCIENCES AND
ALLIED INDUSTRIES**

SITE SPECIFIC DEVELOPMENT OF IFS MODEL FOR DIFFERENT AGRO-CLIMATIC ZONES

Farming enterprises include crops/cropping system, poultry, fish, piggery, sericulture, mushroom, agro-forestry, bio-gas, vermi-compost etc. A combination of one or more enterprises with cropping when carefully chosen planned and executed, give greater dividends than single enterprise(s) specially for small and marginal farmers. Farm as a unit to be considered and planned for effective integration of the enterprises to be combined with crop production activities. In the IFS, it is always emphasized to combine cropping with other enterprises/activities.

Determinants of farming system

- Natural resources and climate
- Science and technology
- Trade liberalisation and market development
- Policies, institutions and public goods
- Information and human capital
- Indigenous technical knowledge

Criteria for enterprise selection

The basic points that are to be considered while choosing appropriate enterprise in IFS are:

1. Soil and climatic features of an area/locality.
2. Social status of the family and social customs prevailing in the locality.
3. Economical condition of the farmer (return/income from the existing farming system).
4. Resource availability at farm and present level of utilisation of resources.
5. Economics of proposed IFS and credit facilities.
6. Farmer's managerial skills.
7. Household demand.
8. Institutional infrastructure and technological know-how.
9. Market facilities.

Interactions and linkages

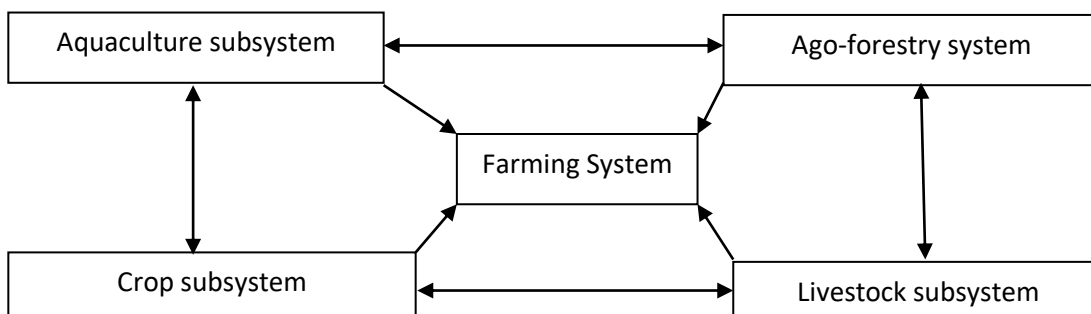


Fig. 1 Linkages of different enterprise in farming system

Interaction of enterprises

In agriculture, crop husbandry is the main activity. Income obtained from cropping is hardly sufficient to sustain the farm family throughout the year. Assured regular cash flow is possible when crop is combined with other enterprises. Judicious combination of enterprises, keeping in view of the environmental condition of locality will pay greater dividends. At the same time, it will also promote effective recycling of residues/wastes.

Integrated farming system for different agro-ecosystems

1. *High altitude cold deserts*: Pastures with forestry, goats, angora rabbits and limited settled agricultural crops like millets, wheat, barley and fodder.
2. *Arid and desert region*: Centering mainly in animal husbandry with the camels, sheep and goat and with moderate cropping components involving Pearlmillet, wheat, pulses, gram and fodder crops.
3. *Western and central Himalayas*: Horticultural crops as major component have less intensive agriculture mainly on the hill terraces and slopes with maize, rice, wheat, pulses and fodder crops.
4. *Eastern Himalayas*: Primitive crop husbandry with rice, millets, pulses etc. Agro-forestry system is also common. Piggery and poultry are the chief livestock activity.
5. *Indo-Gangetic plains*: Intensive crop husbandry involving rice, wheat, maize, mustard, pulses and livestock inclusive of dairy cattle and buffaloes.
6. *Central and southern highlands*: Cotton, sorghum, millet, pulses with dairy cattle, sheep and goats and poultry are the secondary livestock and animal husbandry enterprises.

7. *Western Ghats:* Major activity on plantation crops, cultivation of rice and pulses are the secondary agricultural activity. Cattle, sheep and goats are the livestock components which in most parts are maintained as large herds and allowed to range.
8. *Delta and Coastal plains:* Rice cultivation along with fish culture, poultry and piggery enterprises, capture fisheries of the marine ecosystem is a specialized enterprise and does not mix with cropping activity.