

INTEGRATED PADDY-CUM-FISH FARMING SYSTEM LPM-610 (Unit-II)

LECTURE-1



Date: 31.10.2020

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Integrated Paddy-cum-Fish Farming System

- Integrated Paddy-cum-Fish farming is a system of producing fish in combination with paddy cultivation using the same resources in the same unit area.
- Rice farming with fish culture is a type of dual culture farming system in which rice is the sole enterprise and fishes are taken to initiate additional for extra income.
- Rice-cum-fish farming is practiced in many rice-growing belts of the world.
- Rearing of fish along with paddy is an older farming practice adopted in India especially in the coastal areas of the country.

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- Rice and fish are the staple food of our agro-based developed country.
 - The future development of the country is very much related with the agricultural sector.
 - As an socio-economic activity, fisheries ranks second in the world to agriculture sector.
 - Fishery as on the major sub-sectors has been playing a significant vital role in terms of nutrition, employment, foreign exchange earnings, good supply and more importantly socio-economic stability in the rural areas.

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- ▶ Farming systems based on the integration of crops, livestock and fish production can contribute significantly to food supply and the income of farmers.
 - ▶ India is the land of water with several rivers and the country is very rich in natural water resources in the form of rivers, reservoirs, ditches, lakes, ponds, flood plains and large areas of rice fields.
 - ▶ The Rice-cum-fish farming involves the simultaneous production of rice and fish in irrigated rice fields so as to obtain an added production of fish with rice.



History of development of integrated paddy-cum-fish farming:

- History of Rice-Fish culture is quite old and first started in ancient China about 2000 years ago.
- In course of time, this practice became introduced in Indonesia, Vietnam, Thailand, India and many other countries of the world.
- The system of raising fish from the rice fields probably started in the north-east with the beginning of the rice cultivation itself, because the water logged rice fields form natural habitat for wild fish.



Main objectives of sustainable paddy-cum-fish farming practice:

- To assess the relative profitability of using rice-cum-fish culture compare to rice monoculture.
- To determine the effects of the rice-cum-fish culture in changing yields, total costs, fish consumption and labour employment as compared to the monoculture.
- To identify the major problems in conducting integrated rice-fish farming.
- To determine the effect of different fish combinations on fish yield in Rice-cum-fish culture system.



Benefits of Integrated paddy-cum-fish culture system:

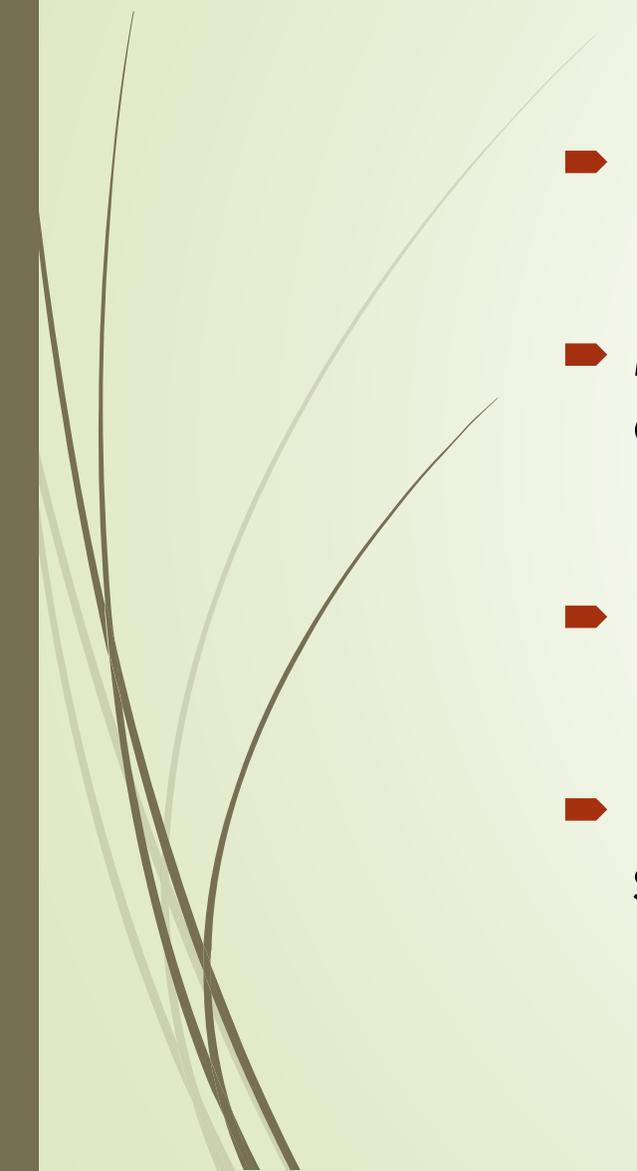
- Improves the soil fertility and soil health.
 - Increasing economic yield per unit area.
 - Reduction in production costs.
 - Decreases farm input requirements.
 - Multiple income sources.
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- Efficient utilization of family labour.
 - Reduction in animal feeding requirements.
 - Minimize the use of chemical fertilizers
 - Provides balanced nutritious food for the farmers.
 - Solves the energy problems with biogas.
 - Avoids degradation of forests.

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- Family income support.
 - Fish metabolic waste acts as nutrient and boost paddy production.
 - Enhance employment generation.
 - Pollution free environment.
 - Recycling of resources.
 - Improves the status and livelihood of the farmer.



Drawbacks of integrated paddy-cum-fish farming:

- Use of agrochemicals is often not feasible
 - Maintaining high water level may not be always possible, considering the size and growth of fish.
 - Fish like grass carp may feed on rice seedling
 - Fish like common carp and tilapia may uproot the rice seedlings.
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Types of integrated paddy-cum-fish farming:

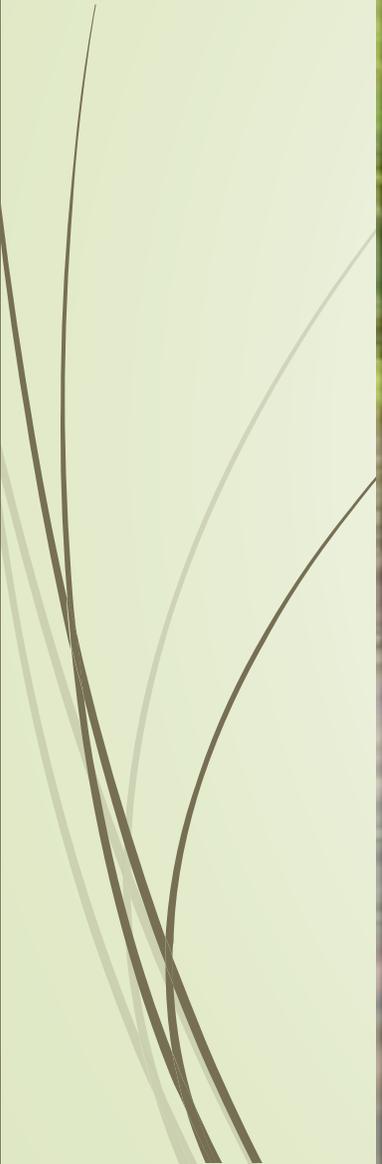
1. Culture of Rice-Fish together/Concurrent system:

- Generally practiced during kharif season in moderate to low paddy fields where water logging exists for 4-5 months naturally.
 - Minor carp and Thai carb are highly suitable for this practice but Tilapia or giant freshwater prawn can also be stocked with rice.
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2. Fish culture after harvesting rice/alternative system:

- In this technique, fish are stocked in the paddy field after harvesting rice from the land.
 - 6-7 months rearing of fish is possible by this way until rice plantation in the next season.
 - Carp and barb species are suitable for stocking but grass carp can also be stocked. In case of grass carp stocking, precaution must be taken so that this fish can not eat young paddy.
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THANKS