

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

LECTURE-2



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Practices for Integrated Paddy-cum-Fish Farming

Site Selection:

- The site selection for rice cum fish farming is low lying area where water flows easily and available at any time in needs.

Soil Quality:

- The soil of the paddy field should be fertile, rich in organic manure and has high water holding capacity.
- Usually medium textured soils like silty clay or silty clay loam are most suitable for paddy cum fish farming/ or shrimp culture.



Bund Preparation:

- The plots selected for paddy cum fish culture are normally prepared in the month of February by raising their embankment all along the plots.
- The paddy fields are suitable for fish culture at the areas because of strong bund to prevent leakage of water, to retain water upto desired depth and also guarded the escape of cultivated fingerlings/ or fishes during the floods.
- The dykes should be built strong enough to make up the height due to geographical and topographic location of the field.
- The bamboo screen matting should be done at the base of the bund area for its support.



Field Leveling:

- After the completion of bund construction, the base of paddy fields are levelled with the help of spade and local made wooden plates.
- Manual weeding is done during the month of February followed by construction of irrigation channel for easy passage, storage and draining of water.
- There are 2-3 channels constructed at the middle of paddy field for water management.
- That channel divides the paddy field perpendicular and horizontally bisect at a point.

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- It is important to note that almost all paddy field have one or two inlets and more outlets.
 - The former serve as entry of water required for the field and the later as outlets, one which remains at the bottom side of the dykes is meant for draining out the water for harvesting paddy crops and fishes.
 - The remaining outlet constructed at the middle height of the dykes is meant for maintaining desirable water depth.
 - Once the dressing work is over, the paddy field is ready for transplantation of rice seedling and fish seed stocking.
 - However, the stocking of fish seed is done after 10-15 days of transplantation of rice seedling from its nursery bed.



Rice varieties used for integrated rice-cum-fish farming:

- The most promising deep water rice varieties chosen for different states are:
- PLA-2 (Andhra Pradesh) , IB-1, IB-2 , AR-1, 353-146 (Assam) , BR-14, Jisurya (Punjab), AR 61-25B, PTB-16 (Kerala) , TNR-1, TNR (Tamil Nadu), Panidhan, Tulsi, Rajranjan, Jalamagan (Uttar Pradesh, Bihar), Jaladhi-1, Jaladhi-2 (West Bengal, Bihar) and Thoddabi (Manipur).
- Manoharsali rice variety seeds are used in rice fields where the fishes are reared.



Pond construction:

- The paddy plots should be renovated suitably for the purpose of paddy-cum-fish culture.
- Construction of an earthen dyke surrounding the paddy plot is essential for retaining water and also for holding the fish and shrimp during the culture.
- The height of the dyke is required to be maintained between 50 and 100 cm depending upon the topography of the plot and tidal amplitude at the site.
- A perimeter canal is necessary on the inner periphery of the plot. For a one ha paddy plot, the width and depth of the canal may be about 2 m and 1 m; respectively.

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- The earth removed from excavating the canal may be utilized for constructing or strengthening the dyke.
 - In addition to the perimeter canal, two cross trenches of about 1 m width should also be constructed at both the directions.
 - The bottom of the trenches should be above the perimeter canal so that during the course of desalination, entire water can be easily removed to the canal.
 - The area covered by the perimeter canal and the trenches will be about 12% of the total land area.



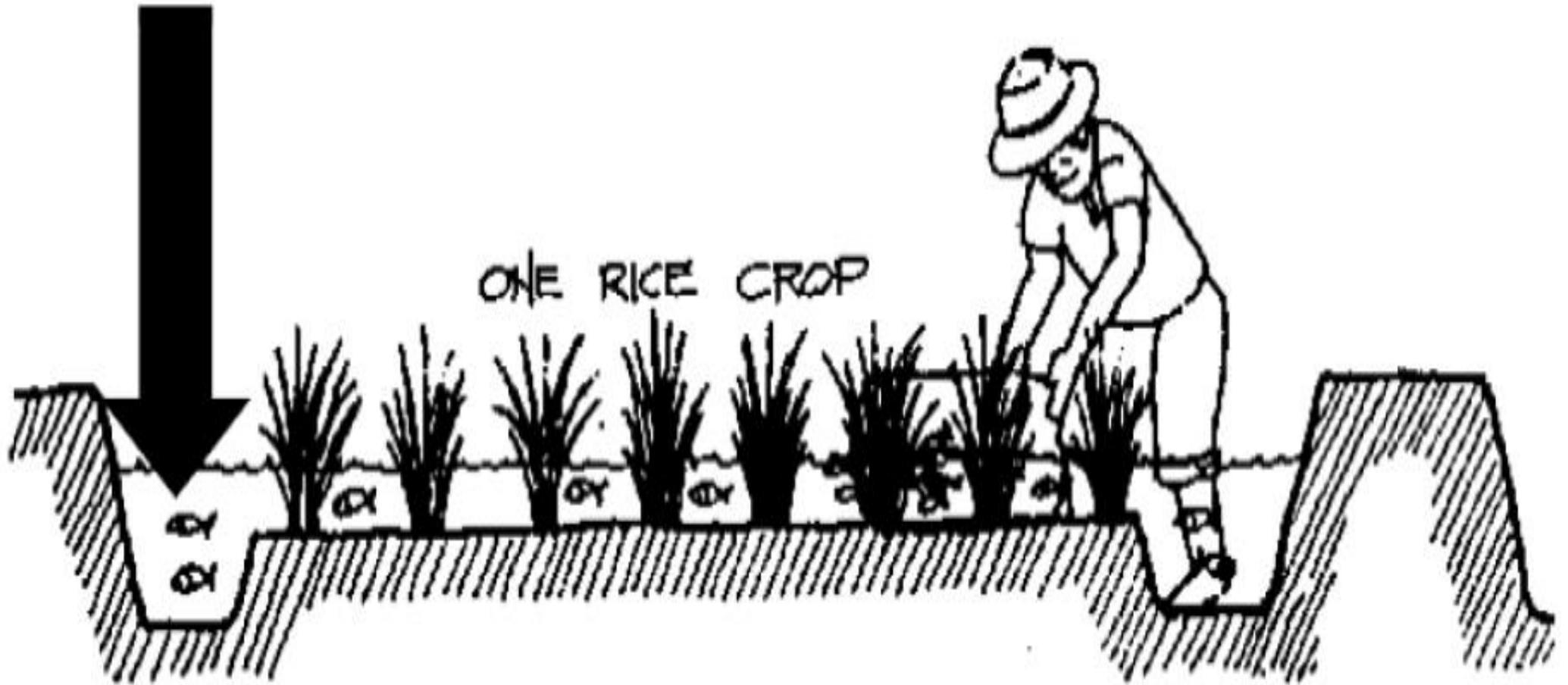
Design of Pond:

- Peripheral trench
- Diagonal trench
- Crossed trenches

- Y-shaped trench

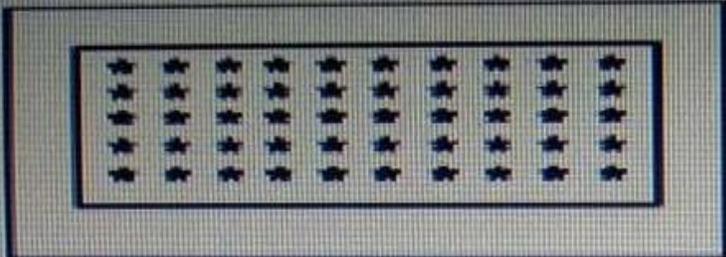
- Peripheral with one central longitudinal trench
- Peripheral with two equidistant transverse trenches
- Latticed trenches

Trenches

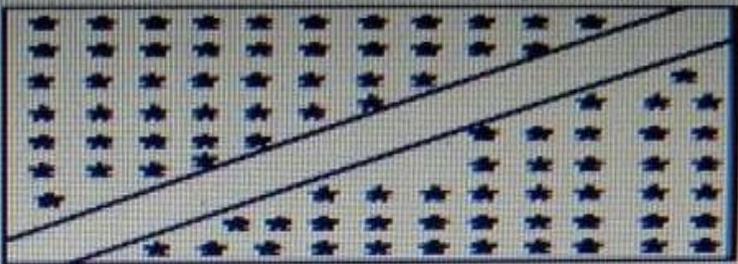




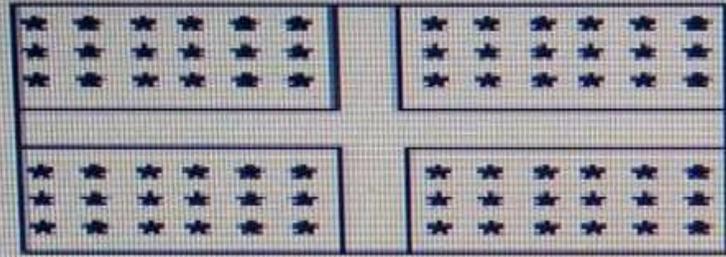
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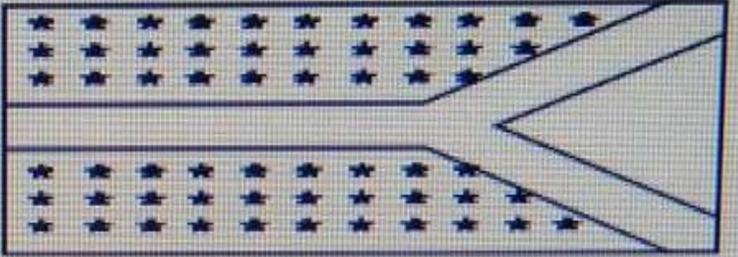
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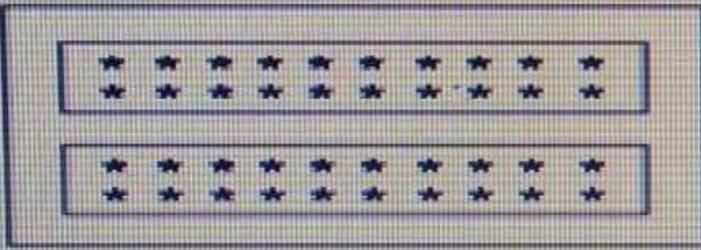
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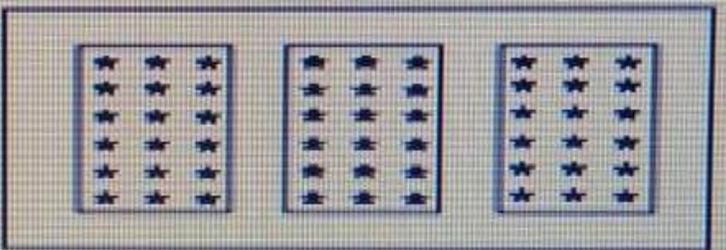
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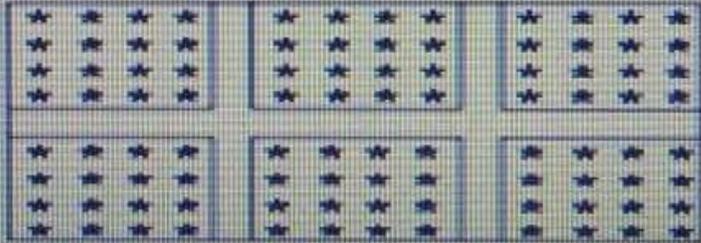
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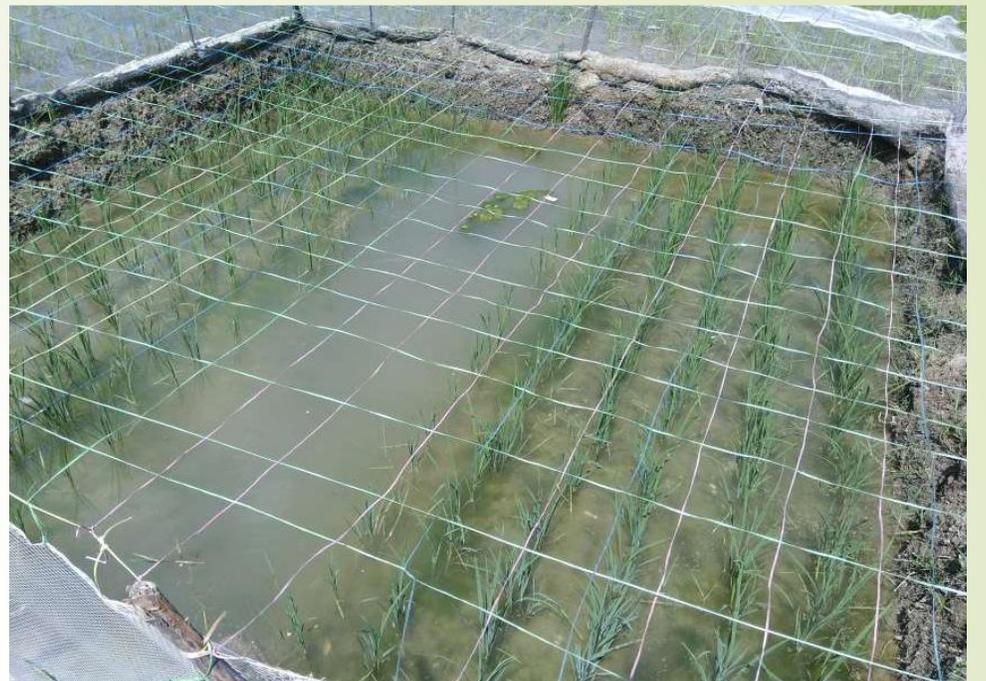


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THANKS