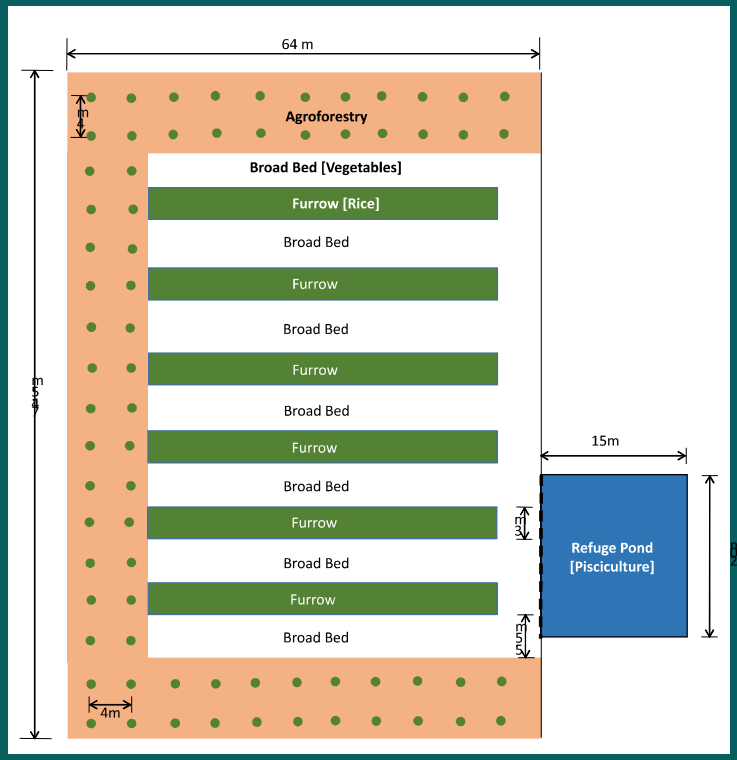
Land Shaping Options for Increasing Farm Income in Coastal Waterlogged Areas

Vegetable cultivation on alternate raised bed system



Alternate raised and furrow bed and aquaculture in an agroforestry system

View of alternate raised and furrow bed system

Developed by

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RELEVANCE

- Low-yielding rice varieties that tolerate salinity and excess water stress are grown in coastal waterlogged areas, with less than 2 t ha^{-1} yield and net income below ₹ 5000 ha^{-1}.
- Land shaping in waterlogged areas could increase farm income by integrating aquaculture, vegetable cultivation in wet and dry seasons besides agroforestry.

DESCRIPTION

- In the land shaping method, broad beds, each 5.5 m at ground level and 5.0 m at the top were alternated with furrows of 3 m wide at ground level and 2 m at the base, with a depth of 1 m from the surface level.
- On the downside, all furrows were connected to a lateral furrow of 45 m length, 5 m width, and 2 m depth. Again, the lateral furrow was connected to a water harvesting farm pond (20 m length, 15 m width, and 2.6 m depth).
- The raised bed around the system's periphery was planted with *Casuarina* and *Eucalyptus* as windbreaks and bird shelters. Fish rearing was taken up in all the furrows and the water harvesting pond. On the raised beds, okra and ridge gourd were grown in the wet season, while tomato and brinjal were in the dry season.

BENEFITS

- Land shaping technology generated a net return of ₹ 1.68 lakh ha^{-1} with a B: C ratio of 1.98, compared to the present practice of lowland paddy at ₹ 4000-5000 ha^{-1}.
- Low-productive coastal waterlogged areas can be converted into high-income generating units through land modification.