

Supplementary Table 1 Components of integrated farming system in salt-affected soils

Component	System	Area (ha)
Grain Component	Rice-Wheat	0.40
	Rice-Wheat-Moong	0.20
	Maize-Wheat-Moong	0.40
	Sub-total (A)	1.00
Horticultural including fodder	Horticulture (95 Guava tress*)	0.20
	Vegetables	0.20
	Fodder	0.40
	Sub-total (B)	0.80
Subsidiary	Dairy (5 cross breed cattle: 2milching + 2 dry + 1calf)	0.20
	Fishery (pond area:0.1 ha) with production potential of 600k kg.	
	Poultry (25)	
	On pond dykes (Aonla:26; Guava:18 including seasonal vegetables), 8 shade trees.	

*Guava plants are only 3 years old.

Supplementary Table 2 Financial viability integrated farming system in salt-affected soils

Criteria	With own investment	With 25 % subsidy	Remarks
Internal rate of return (%)	36	48	Feasible and attractive
Net present value (₹)	1772406	2076284	Positive, Feasible
Benefit-cost ratio	1.29	1.34	>1, hence feasible
Pay-back period (years)	2.77	2.08	Initial investment returned in 2-3 years

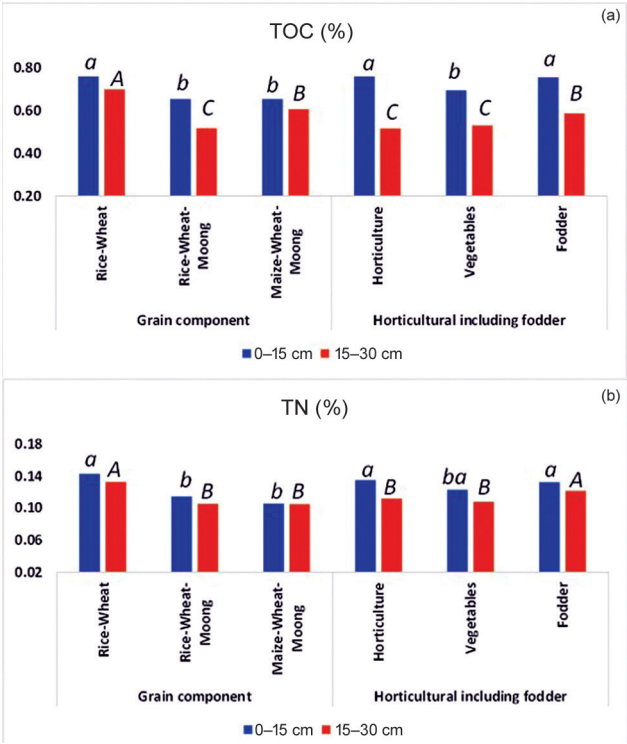
Supplementary Table 3 Annual carbon sequestration by perennial trees (horticultural component, trees on pond dykes and boundary.

Trees in orchards and dykes	Number of trees	Age (year)	Average diameter at breast height (DBH) (cm)	Height (m)	Carbon sequestration kg CO ₂ eq./yr
Shed trees	8	15	49.0	10.85	752.1
Aonla tree on dykes	26	15	19.6	4.96	297.7
Guava on dykes	18	12	10.8	2.25	35.82
Guava in orchard	95	3	8.44	2.89	588.1
Total (2 ha)					1673.72

Supplementary Table 4 Key constraints and their perceived degree/intensity

Particular	Constraint	Marginal	Small	Medium	Large
Technical	Small size of land holdings	***	**	*	-
	Labour scarcity	*	*	**	***
	Efforts and knowledge intensive	***	***	***	**
	Reluctance of youth in agriculture	***	***	***	***
Market	Limited access to market due to high transportation cost for small volume of produce	***	**	**	*
	Price volatility in vegetable and fruit prices	***	***	***	***
Policy	Lack of location-specific demonstration-based evidence integrated farming system	***	***	***	***
	Lack of subsidy and financial support	***	***	*	*

Note: Number of the stars indicates intensity of the constraints faced by the farmers



Supplementary Fig. 1 Effect of different systems on total organic carbon and total nitrogen content of soil. TOC, Total organic carbon; and TN, Total nitrogen.