

Technologies:

1. Livelihood Improvement through Integrated Farming System for Food and Nutritional Security

AREA (%) ENTERPRISES	ALLOCATED FOR DIFFERENT ENTERPRISES	
ENTERPRISES	1 ACRE MODEL	2 ACRE MODEL
CEREALS	50	50
VEGETABLES	22.5	12.5
GOATRY	4	-
LIVESTOCK	-	1.9
FODDER	12.5	12
FISHERIES	-	18
+DUCKRY		
POULTRY	2.02	-
VEG.BUND	4	4
MUSHROOM	2.02	-
MANURE PIT	2.33	1.5



Net monetary profit

ANNUAL RETURN FROM IFS MODELS			
MODEL	GROSS INCOME (Rs)	COST OF CULTIVATION (Rs)	NET INCOME (Rs)
1 ACRE	1,68,412.0	69,653.0	98,759.0
2 ACRE	3,41,748.0	1,39,112.0	1,61,249.0

2. Livelihood Improvement through Integration of Fish, Makhana & Water Chestnut

- ❑ Traditionally, Makhana (*Euryale ferox Salisb.*) was grown as a sole crop and water bodies were utilized for only seven months - February to August
- ❑ Fish and water chestnut was grown successfully in combination of makhana in order to ensure higher profitability
- ❑ With the intervention of makhana cum fish and water chestnut farming, the water bodies are utilized throughout the year
- ❑ A refuge area covering 10% of net water bodies is used as vacant space for integration of Indian major carps
- ❑ Water Chestnut (*Trapa bispinosa Natans.*) is taken as tertiary crop
- ❑ Net income from integrated makhana based farming system ranges from `44,686.0 to 51,216.0 per ha/yr whereas income from cultivation of makhana alone is worked out to be Rs.24,367.0 to Rs. 29,153.0 per ha/yr

3. Ultra-high Density Guava Orchard

- ❑ Effective method for increasing productivity of guava in eastern plateau and hill region
- ❑ Planting at a spacing of 1 x 2 m accommodating 5000 plants /ha
- ❑ Pruning of shoots thrice a year viz. February, May and October, and proper management of water and nutrient through drip irrigation



- ❑ A yield level of 35-50 t/ha from 3rd year of orchard establishment against a yield level of 20 t/ha under conventional orchards
- ❑ A total cost of Rs.2,50,000.0 is incurred for establishment of 1 ha of ultra-high density guava orchard

4. Fruit Based Multi-tier Cropping System

Technology involves growing of early bearing short stature fruit trees in between large sized fruit trees as filler crops and growing annual crops in the interspaces



5. Home-made Concentrate Mixture for Dairy Animals in Bihar

- ❑ Balance ration was made by mixing the feed ingredients: Crushed maize/ wheat /broken rice (30%), wheat/ rice bran (30%), mustard cake (7%), linseed cake (12%), chunnies (18%), salt (1%) and mineral mixture (2%).
- ❑ Milk yield increased by 20% and feed cost reduced by 25-30%



6. Eco Hatchery



- Suitable for small farmers, easy installation, low water consumption
- Breeding pool has capacity of 3400 litres and suitable for breeding of 10-12 kg of carps
- Hatching tank has capacity of 1430 litres and of hatching one million eggs per operation