

**MODEL PROJECT REPORT
ON
INTEGRATED FARMING
(1 ACRE PISCICULTURE + 4000
BROILER)**

PISCICULTURE

Protein is an essential ingredient of human food. It is also particularly essential for growing children both for their physical and mental growth. Protein deficiency leads to several diseases in human beings particularly children. Among sources of protein, animal meat is a vital source and fish is the cheapest and most easily digestible animal protein and was obtained from natural sources from time immemorial for consumption by human beings. Fish grows naturally in rivers and ponds but can also be produced under artificial conditions. However, due to over exploitation and pollution, the availability of fish in natural waters have declined considerably forcing scientists to adopt various methods to increase its production. Fish farming in controlled or under artificial conditions has become the easier way of increasing the fish production and its availability for consumption. Small entrepreneurs/farmers can easily take up fish culture in village ponds, tanks or any new water body and can improve their financial position substantially. It also creates gainful employment for skilled and unskilled youths.

The area under tanks and ponds available for warm fresh water aquaculture is estimated to be 2.41 million ha. This shows the tremendous scope for fish culture in the country. Only 15 % of the potential area of tanks and ponds available is developed so far, showing immense possibilities for fish culture.

Composite Pisciculture is adopted for getting maximum fish production from a pond or a tank through utilization of available food organisms supplemented by artificial feeding. Normally, the major species selected for composite fish culture are Katla, Rohu, Mrigal, and other exotic varieties.

POULTRY FARMING

POULTRY SCENARIO OF ODISHA

As per TCD(Technical Committee of Direction for Improvement of Animal Husbandry, Dairying Statistics) Odisha ranks 11th in egg production &13th in meat production among Indian States during 2016-17. Next to Agriculture, Animal Husbandry has the most important economic activity in the rural areas. Poultry has been the fastest growing sector in providing employment and income to a significant number of people in the state. 6250 broiler farms with commercial broiler bird strength of 97.00 lakh are in operation. Broiler placements are to the extent of 20 to 25 lakh day old chicks per week and 18 to 23 lakh adult broiler birds are entering to the market for meat purpose.

Here the broiler unit is complimentary to pisciculture apart from being an economic activity. The litters from broiler will be effectively utilised by the fish. In the proposed project, a broiler unit of 4000 birds with 1 Acre Pisciculture has been included in the project cost estimate.

PROJECT AT A GLANCE

SI No	PARTICULARS	UNIT	PARAMETERS
1	Category of the Project		ARD
2	Type of the Project	Integrated Farming	
3	Unit Size	1 Acre Pisciculture	4000 Broiler
4	Product	Fish	Live Birds
5	Total Cost of the Project	INR	₹ 2,287,432
6	Bank Loan	INR	₹ 1,715,574
7	Promoter's contribution	INR	₹ 571,858
8	Financial Indicators		
	BCR at 15% DF	Ratio	1.15
	NPW 15% DF (Rs)	INR	₹ 3,000,924
	IRR (%)	%	60%
	DSCR		3.00

A. ECONOMICS OF INTEGRATED PROJECT

PISCICULTURE (1 ACRE)

Detailed estimate for Excavation/Renovation of Pvt. Tank of Sri / Smt.												
	Area of the Tank	2.00	Acre		Size of the Tank	1	acre		1.2			
1	CAPITAL COST											
		Details with specification									Total Cost (Rs.)	
	Earth work											
	In ordinary soil	80.00	Mt	x	50.00	Mt	x	0.30	Mt	1,200.00	CuM	
		78.80	Mt	x	48.80	Mt	x	0.30	Mt	1,153.63	CuM	
		77.60	Mt	x	47.60	Mt	x	0.30	Mt	1,108.13	CuM	
									Total	3,461.76	CuM	
		or Say	3,462	Cum @ Rs.	40	per CuM						138,470
	In hard soil	76.40	Mt	x	46.40	Mt	x	0.30	Mt	1,063.49	CuM	
		75.20	Mt	x	45.20	Mt	x	0.30	Mt	1,019.71	CuM	
		74.00	Mt	x	44.00	Mt	x	0.30	Mt	976.80	CuM	
									Total	3,060.00	CuM	
		or Say	3,060	Cum @ Rs.	40	per CuM						122,400
	Provision for inlet / outlet					LS						5,000
	Farm equipments and miscellaneous					LS						10,000
	Land development / Grass turfing					LS						5,000
	TOTAL											280,870
2	RECURRING COST (CAPITALIZED FOR ONE YEAR)											
	Articles				Unit	Specifica tions			Unit Cost (Rs. / Unit)			Total Cost (Rs.)
	Fertilizers											
	Lime				Kgs	400			6			2,400
	Single super phosphate				Kgs	125			8			1,000
	Urea				Kgs	90			8			720
	Litter/ Raw Cow dungs (RCD)				Tone s	4			1000			4,000

	Sub Total											8,120	
	Seed												
	Fingerlings (80 mm above)			nos	2200			5				11,000	
	Hatchery FW prawn seed			nos	2000			1				2,000	
	Minor / exotic carp intercropping			nos	1000			1				1,000	
	Sub Total											14,000	
	Feed												
	Pellet feed			kgs	3000			22				66,000	
	Prawn feed			kgs	225			30				6,750	
	Sub Total											72,750	
	Miscellaneous												
	Medicines & Chemicals			Ha	0.4			5000				2,000	
	Harvesting expenses			Ha	0.4			5000				2,000	
	Miscellaneous expenses			Ha	0.4			5000				2,000	
	Sub Total											6,000	
	TOTAL											100,870	
3	HORTICULTURE (PAPAYA, BANANA, DRUMSTICK AND OTHER CASH CROPS)									LS		20,000	
	GRAND TOTAL											401,740	

INCOME												
Articles	Specification				1	2	3	4	5	6	7	Total
Sale of Fish @ 2000 kg per acre	2000	kg	110	1	-	220,000	220,000	220,000	220,000	220,000	220,000	1,320,000
Sale of Minor/Exotic carps 400 Kg./acre	400	kg	120	1	-	48,000	48,000	48,000	48,000	48,000	48,000	288,000
Sale of Prawn @ 100 Kg./acre	100	kg	200	1	-	20,000	20,000	20,000	20,000	20,000	20,000	120,000
Receipts from Horticulture in Embankments		LS			30,000	30,000	30,000	30,000	30,000	30,000	30,000	180,000
TOTAL					30,000	318,000	318,000	318,000	318,000	318,000	318,000	1,908,000
EXPENDITURE												
Annual expenses for pisciculture					-	100,870	100,870	100,870	100,870	100,870	100,870	605,220
Annual costs of horticultural crop on embankment					20,000	20,000	20,000	20,000	20,000	20,000	20,000	120,000
TOTAL					20,000	120,870	120,870	120,870	120,870	120,870	120,870	725,220

BROILER FARMING (4000 Capacity)

TECHNO-ECONOMIC NORMS			
Sl. No.	Parameters	UoM	Value
1	CAPITAL INVESTMENT		
I	Land	Acre	0.3
a	Cost of land development / LS	Rs.	7,500
b	Cost of fencing / LS	Rs.	15,000
II	Civil Construction		
a	Cost of shed construction / sq.ft.	Rs.	230
b	Cost of store room construction / sq.ft.	Rs.	250
III	Water Supply system		
a	Borewell / Tubewell	Rs.	90000
b	Pump & Pipe line	Rs.	25000
c	Sump / Over head Tank	Rs.	10000
d	Foggers @ 33 / 2000 birds	Rs.	40
e	Sprinklers @ 7 / 2000 birds	Rs.	75
IV	Electrification		
a	Cost of electrification (as % of civil cost)	%	2.5
V	Plant & Machinery		
a	Cost of equipment / bird	Rs.	30
2	RECURRING EXPENDITURE/BATCH		
a	Cost / Day Old Chick	Rs.	32
b	Cost of feed / kg	Rs.	30
c	Cost of medicine, vaccine etc. / bird / batch	Rs.	3
d	Cost of litter / bird / batch	Rs.	0.3
e	Cost of labour / bird / batch	Rs.	1.5
f	Energy Charges / bird / batch	Rs.	1
g	Misc. exp	Rs.	0
3	Birds per batch	No	4000
4	Rearing period	Week	5.5
5	Batches reared per year	No	7
6	Batches sold per year	No	7
7	Space requirement per bird	sq.ft.	1.1

9	Area of store room	sq.ft.	200
10	Mortality during rearing	%	4
11	Supply for free chicks from hatchery	%	2
12	DOC to be purchased / batch	No	4086
13	Feed requirement / bird / batch	kg	3.1
14	Average body weight / bird at sale	kg	2
15	Sale price / kg live weight	Rs.	82
16	Sale price / bird	Rs.	164
17	Sale price of manure / bird / batch	Rs.	0.7
18	Gunny bags / MT of feed	No	20
19	Sale price / gunny bag	Rs.	10

FLOCK PROJECTION CHART

Year	No. of batches reared	No. of batches sold
1	7	7
2	7	7
3	7	7
4	7	7
5	7	7
6	7	7
7	7	7

PROJECT COST (BROILER FARMING)						
A CAPITAL INVESTMENT						
	Particulars	Specifications		Units	Unit Cost Rs	Total cost Rs
1	Land	0.3	Acre		Available	
a	Land Development	0.3	Acre	LS	7,500	7,500
b	Fencing	0.3	Acre	LS	15,000	15,000
					Sub Total	22,500
2	Civil Construction					
a	Broiler Shed	1.10	sq. ft	4000	230	1,012,000
b	Office-cum-Store Room		sq. ft	200	250	50,000
					Sub Total	1,062,000
3	Water Supply system					
a	Borewell / Tubewell		LS	1	90000	90,000
b	Pump & Pipe line		LS	1	25000	25,000
c	Sump / Over head Tank		1500 ltrs	1	10000	10,000
d	Foggers @ 33 / 2000 birds			66	40	2,640
e	Sprinklers @ 7 / 2000 birds			14	75	1,050
					Sub Total	128,690
4	Electrification					
a	Installation & Fitting	2.5%	of civil cost			26,550
					Sub Total	26,550
5	Plant & Machinery					
a	Equipment			4000	30	120,000
					Sub Total	120,000
	Total Capital Cost					1,359,740
B	RECURRING EXPENDITURE/BATCH					
a	Chick cost			4086	32	130,752
b	Feed cost			12400	30	372,000
c	Medicine, vaccine cost			4000	3	12,000
d	Litter cost			4000	0.3	1,200
e	Labour cost			4000	1.5	6,000
f	Power & fuel charges			4000	1	4,000
	Total Recurring Expenditure					525,952
C	TOTAL PROJECT COST					1,885,692

PROFITABILITY STATEMENT

Sl.No	Particulars	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.	TOTAL
I	COSTS								
A	Recurring costs								
a	Cost of chicks	915,264	915,264	915,264	915,264	915,264	915,264	915,264	6,406,848
b	Cost of Feed	2,604,000	2,604,000	2,604,000	2,604,000	2,604,000	2,604,000	2,604,000	18,228,000
c	Medicine & Vaccine Cost	84,000	84,000	84,000	84,000	84,000	84,000	84,000	588,000
d	Litter	8,400	8,400	8,400	8,400	8,400	8,400	8,400	58,800
e	Labour charges	42,000	42,000	42,000	42,000	42,000	42,000	42,000	294,000
f	Power bill	28,000	28,000	28,000	28,000	28,000	28,000	28,000	196,000
		3,681,664	3,681,664	3,681,664	3,681,664	3,681,664	3,681,664	3,681,664	25,771,648
II	BENEFITS								
A	Sale of birds	4,592,000	4,592,000	4,592,000	4,592,000	4,592,000	4,592,000	4,592,000	32,144,000
B	Sale of Manure	19,600	19,600	19,600	19,600	19,600	19,600	19,600	137,200
C	Sale of gunny bags	17,360	17,360	17,360	17,360	17,360	17,360	17,360	121,520
	TOTAL BENEFIT	4,628,960	4,628,960	4,628,960	4,628,960	4,628,960	4,628,960	4,628,960	32,402,720

B. MEANS OF FINANCE (INTEGRATED)			
Projects	Project Cost	Bank Loan	Owner's Contribution
	Amount	75%	25%
Pisciculture			
Capital Expenses	280870		
Operating Expenses	120870		
SUB TOTAL	401740	301305	100435
Broiler			
Capital Expenses	1359740		
Operating Expenses	525952		
SUB TOTAL	1885692	1414269	471423
TOTAL	2287432	1715574	571858

C. PROFIT & LOSS ACCOUNT (INTEGRATED)								
	YR-1	YR-2	YR-3	YR-4	YR-5	YR-6	YR-7	Total
A. Revenue								
Pisciculture	30000	318000	318000	318000	318000	318000	318000	1938000
Broiler	4628960	4628960	4628960	4628960	4628960	4628960	4628960	32402720
Total	4658960	4946960	4946960	4946960	4946960	4946960	4946960	34340720
B. Operating costs								
Pisciculture	20000	120870	120870	120870	120870	120870	120870	745220
Broiler	3681664	3681664	3681664	3681664	3681664	3681664	3681664	25771648
Total	3701664	3802534	3802534	3802534	3802534	3802534	3802534	26516868
C. Operating profit/PBDIT								
Pisciculture	10000	197130	197130	197130	197130	197130	197130	1192780
Broiler	947296	947296	947296	947296	947296	947296	947296	6631072
Total	957296	1144426	1144426	1144426	1144426	1144426	1144426	7823852
NET PROFIT	735854	900122	935933	971467	1006743	1041779	1076593	6668491