

HATCHERY

PRODUCT CODE	: 024001007
QUALITY AND STANDARDS	: As per customers' specifications. However, the Bureau of Indian Standards has laid down specifications for basic requirements for day-old chicks (layer/broiler) under IS 9800:1981.
PRODUCTION CAPACITY	: Quantity : 2 Lakhs day old chicks (per annum) Value : Rs. 28,72,500
MONTH AND YEAR OF PREPARATION	: March, 2003
PREPARED BY	: Branch Small Industries Service Institute, Chandpur Industrial Estate, Varanasi-06 Phone No. (0542)-2370621

INTRODUCTION

India is a densely populated country having predominantly agricultural economy. Almost every part of our country is suitable for poultry farming. During the past few years poultry industry have gained enormous potential particularly in and around major cities and towns. The Government of India through State Directorates of Animal Husbandry and Veterinary Services have been giving thrust on and incentives for the development of poultry industry. Development of poultry industries may further be accelerated, if improved varieties of layers/broilers are made available to the poultry farmers which could ensure fast growth, maximum feed to meat/egg conversion and low mortality among the poultry birds. Therefore, it is essential that hatcheries are set up in different areas having potential on decentralised basis,

so that poultry farmers may get high yielding varieties of chick which in turn may give good returns to the farmers. This will not only reduce the pressure of unemployment in rural and sub-urban areas but also help in increasing per capita consumption of poultry meat and eggs and thus strengthen the economy of our country.

In the modern nomenclature of poultry industry, the term hatchery covers the sector which is engaged in production and supply of one-day old chicks by artificial incubation. A hatchery can be a part of a breeding farm or it can be a franchiser or sub-franchiser for producing parent and day-old chicks of broilers or layers. The term hatchery can be extended to an organisation which does not maintain any breed stock (mating stocks) but only procures hatching eggs for producing (supplying) day old chicks. The organisations producing day old chicks only for replenishing their

own requirements of birds are not covered under the term hatchery.

MARKET POTENTIAL

Fast urbanisation, changes in life style and food habits of consumers, improvement in standards of living etc. have resulted into increase in per capita consumption of egg and poultry meats but per capita consumption of these commodities in our country is still far below that of developed countries showing enormous potential/scope for poultry development. Increasing number of poultry farms in different areas has emphasised that hatcheries should be set up in potential areas. Exorbitantly increasing transportation cost and mortality during transportation of day old chicks have also emphasised that hatcheries should be set up on decentralised basis hereby.

In India, the hatcheries in private sector had their emergence in early sixties in collaboration with some famous main hatcheries based in Canada and America. Such collaborations are still continuing involving many more foreign based hatcheries. However, some old hatcheries have taken up their own Poultry Breeding Programmes. In public sector too, significant contribution has been made by the Central Poultry Breeding Farms, Ministry of Agriculture and the ICAR in developing high yielding commercial chicks. But due to tremendous increase in poultry farms in different areas, it could be said that these hatcheries set up so far are not adequate to meet the increased demand of one day old chicks of broilers or layer poultry birds which shows good scope for hatcheries.

BASIS AND PRESUMPTIONS

The project profile has been prepared based upon the following presumptions:

(i) Working hours/shift	: 8 hrs.
(ii) No. of shift/day	: 1
(iii) Working days	: 300
(iv) Total number of working hrs.	: 2400 hrs.
(v) Working efficiency	: 75%
(vi) Time period for achieving maximum capacity utilisation	: 3 years
(vii) Labour charge	: As per the minimum Wages Act of State Govt.
(viii) Margin Money	: 25% of capital investment.
(ix) Rate of interest on working capital	: 15% P.A.
(x) Rate of interest on fixed capital	: 15% P.A.
(xi) Operative period of the project	: 10 years
(xii) Value of machinery and equipment	: Taken on the basis of a particular supplier of machinery & equipments

	ruling at the time of the preparation of the project.
(xiii) Value of raw material, packing materials and others	: As per the local market rates on whole sale basis.
(xiv) Construction charges	: Rs. 75/- per sq. ft.
(xv) Break - even point	: Calculated on full capacity utilisation basis.
(xvi) Pay-back period	: 4 years

IMPLEMENTATION SCHEDULE

The project may be implemented in 6 months after the sanction of the loan. The implementation schedule has been worked out as follows:

(i) Project preparation	0-1 month
(ii) Site selection, acquisition of land and development etc.	1-2 months
(iii) Sanction of loan	1-3 months
(iv) Construction of poultry sheds	3-4 months
(v) Sanction of electric power and telephone connection	3-4 months
(vi) Procurement of parent stock chicks	4-5 months
(vii) Construction of hatchery building and other civil works	3-5 months
(viii) Procurement of machinery and equipments	4-6 months
(ix) Electrification & installation of Machinery	6-7 months
(x) Recruitment of Staff and labour	7-8 months
(xi) Trial Run	8-9 months
(xii) Commercial production	9-10 months

The project may yield result by the 11th month.

TECHNICAL ASPECTS

Process of Manufacture

One day old parent stock chicks of improved species of broiler or layers are procured from the reliable parent stock suppliers. Procured chicks are transferred to poultry sheds. These poultry birds are given balanced nutrition like poultry feed, feed mixes, medicines, etc., depending upon their age and variety upto laying stage. The layed eggs are collected and transferred to hatchery section. The eggs are cleaned thoroughly to get rid of foreign

matters and checked for their suitability for hatching, eggs having cracked shells and unfertile eggs are segregated and disposed off by selling at subsidised rates. Thoroughly cleaned eggs are stored in air conditioned room in order to bring down normal to suitable temperature. The conditioned eggs are transferred to setter incubators and incubated for 18 days. A temperature of 99.9°F and relative humidity of 82% is maintained in the setter incubators. At the end of 18th day, eggs are transferred to holder incubators maintained at a temp. of 98.9°F and

relative humidity of 87% and incubated for 3 days. At the end of 21 days, chicks come out after breaking egg shells. Egg shell and membranes are removed and each chick is checked for its sex and separated out. Each and every chick is vaccinated by Marex-D vaccine and packed in chick baskets and are sold to the poultry farms.

In order to produce healthy day-old chicks of high potentiality in the most economical manner, proper planning of hatchery is needed which involves application of sound scientific and business principles.

Quality Control and Standards

Day old chicks are produced keeping in view the customer's requirements. The Bureau of Indian Standards has laid down specifications for day old chicks (layer/broiler) under the following ISI Specification:

IS: 9800:1981: Basic requirements for day old chicks (layer/broiler)

Entrepreneurs interested in getting ISI mark shall have to abide by the specifications laid down. However, it is optional to get ISI mark but the hatchery must maintain the quality of chicks to compete in the present day cut-throat competition.

Production Capacity (per annum)

- a) Quantity : 2 lakhs day old chicks
- b) Value : Rs 28,72, 500

Motive Power 15 K.W.

Pollution Control

If hatchery is run on scientific lines, no significant pollution is created. However, hatchery unit must take care

in maintaining proper hygienic and sanitary conditions, in and around hatchery and poultry sheds. Proper disposal facility should be made available for dumping refuse and discharge of water from the hatchery. Litter should be replaced at frequent intervals and disposed off early. Dead poultry birds, diseased birds, spoiled eggs and other refuse and rejects should be dumped in disposal pit without any delay. Entrepreneur should get No Objection Certificate from State Pollution Control Board.

Energy Conservation

Main energy source in a hatchery is electricity and to some extent diesel to run generator in emergency. Electric bulbs of only required wattage should be fitted in poultry sheds where these are required otherwise tube lights of improved design having electronic choke should be fitted and lighted only when required. Best use of natural light should be made as far as possible. Generator should be well maintained and serviced at regular intervals and should be run only in case of electric failure/load shedding. Only essential equipments should be run when generator is in operation and the load should be kept to its optimum. Proper ventilation and cooling should be maintained in generator room.

FINANCIAL ASPECTS

A. Fixed Capital

(i) Land and Building		Amount (In Rs.)
i) Land 20000 sq. ft.	Value	1,50,000
ii) Land Development	L.S.	25,000
	Sub Total	1,75,000

Built-up Area and other Civil Works	Amount (In Rs.)
i) Hatchery-cum-office building (60'x120') 7200 sq.ft.	5,40,000
ii) Store (30'x60') 1800 sq.ft	1,35,000
iii) Layer/Breeder House/Sheds (100'x30') 3000 sq.ft.	2,25,000
iv) Disposal pits	10,000
v) Water storage tank	30,000
vi) Boundary wall/barbed wire fencing, etc.	35,000
Sub Total	9,75,000
Total	11,50,000

(ii) Machinery and Equipments

Sl. No.	Description	Qty./No.	Amount (In Rs.)
1	Egg Hatcher (Automatic)(capacity 4500 eggs)	2 No.	1,40,000
2	Egg setter (capacity 13500 eggs) (Automatic)	2"	2,00,000
3	Electric egg tester	1"	600
4	Electric Deb-eaker	1"	1250
5	Egg weighing scale (1-100 gram cap.)	1"	750
6	Feeder, waterer and brooder	LS	35,000
7	Misc. items like buckets, trays, baskets etc.	LS	10,000
8	Weighing balance	1 No.	5,000
9	Generator (10 KVA)	1"	90,000
10	Air conditioner (1.5 TR)	1"	25,000
11	Veterinary clinic instruments/equipment	LS	6,000
12	Office equipments/furniture	LS	20,000
13	Refrigerator	1 No.	25,000
14	Electrification and installation	LS	25,000
	Total		5,83,600
(iii)	Preliminary and Pre-operative Expenses like Legal Expenses, Establishment Cost, Travelling, Start up Expenses, Consultancy Fees, Interest during Construction, Trial Run Expenses etc.		30,000
(iv)	Other Fixed Expenses for Purchase of About 1500 Nos. Day-old Parent Stock chicks and Feeding Charge up to Laying Stage		1,50,000
	Total Fixed Capital (i+ii+iii+iv)		19,13,600

B. Working Capital (per month)

(i) Personnel

Sl. No.	Staff/Labour	No.	Salary/month	Amount (In Rs.)
1	Hatchery Manager	1	4,000	4000
2	Supervisor	1	2,000	2,000
3	Operator	1	1,800	1,800
4	Sexer	1	1,600	1,600
5	Accountant-cum-clerk	1	1,600	1,600
6	Skilled worker (Stockman)	1	1,300	1,300
7	Unskilled workers	6	1,000	6,000
8	Watchman-cum-peon	1	1,000	1,000
	<i>Perquisites @ 15%</i>			2,895
	Total			22195
	Say			22000

(ii) Raw Materials and Packaging Materials

Sl. No.	Description	Qty/No.	Rate No.	Amount (In Rs.)
1	Parent stock chicks	225 Nos.	75	16,875
2	Poultry feed	8 Tonnes	6000	48,000
3	Feed Mix	LS		5,000
4	Medicine/vaccines/antibiotics	LS		20,000
5	Chemicals/sanitizers/lime etc.	LS		10,000
6	Chick baskets	175 Nos.	35	6,125
	Total			1,06,000

(iii) Utilities

	Total (In Rs.)
Power 3000 KWH units @ Rs. 2.5	7,500
Water 400 K.Lt. @ 3	1,200
Fuel like Diesel, K/oil etc. LS	1,850
Total	10,550

(iv) Other Contingent Expenses	Amount (In Rs.)
Postage and Stationery	1,000
Telephone	500
Consumable stores	1,000
Repairs and maintenance	1,000
Transport charges	5,000
Advertisement and publicity	5,000
Insurance	650
Taxes	500
Sales expenses	2,000
Misc. expenditure	8,000
Total	24,650
(v) Total Recurring Expenditure (i+ii+iii+iv)	1,63,200

(vi) Working Capital	Amount (In Rs.)
Recurring expenditure (for one month)	1,63,200

C. Total Capital Investment

	(In Rs.)
Fixed Capital	19,13,600
Working Capital (For 1 month)	1,63,200
Total	20,76,800

MACHINERY UTILISATION

At 75% efficiency, the indicated machinery and equipments have capacity to produce about 3 lakh day old chicks per year. During the first year of the implementation of the project, about 2 lakh day old chicks will be produced per year and hence capacity utilisation will be 66%. During second year, capacity utilisation has been worked out at 80%. The capacity of the hatchery may further be enhanced by installing additional setter and hatcher incubator in the same premises.

FINANCIAL ANALYSIS

1. Cost of Production (per year)	Amount (In Rs.)
a) Total recurring expenditure	19,58,400
b) Depreciation on building and other Civil Construction @ 5%	48,750
c) Depreciation on machinery and equipments @ 10%	50,000
d) Depreciation on hand tools and misc. equipments and poultry equipments @ 25%	7,000
e) Depreciation on office equipments and furniture @ 20%	4,000
f) Interest on Total capital @ 15%	3,12,000
Total	23,80,150
or Say	23,80,000

2. Turnover (per year)	Amount (In Rs.)
a) By sale of 200000 Nos. of day old chicks @ Rs 13.75	27,50,000
b) By sale of 2500 Nos. of unfertile eggs @ Rs. 2	5,000
c) By sale of 2500 Nos. of culled birds @ Rs. 45	1,12,500
d) By sale of 500 bags litter @ Rs. 10	5,000
Total	28,72,500

3. Net Profit (per year) (before Income Tax)	4,92,500
4. Net Profit Ratio	17%
5. Rate of Return	24%
6. Break-even Point	

i) Fixed Cost	Amount (In Rs.)
a) Depreciation on machinery and equipment	50,000
b) Depreciation on hand tools	7,000
c) Depreciation on office equipment and furniture	4,000
d) Depreciation on building and other civil works	48,750

Fixed Cost	Amount (In Rs.)
e) Interest on Total investment	3,12,000
f) Insurance	7,800
g) 40% of salary and wages	1,05,600
h) 40% of other contingent expenses	1,15,200
Total	6,50,350

2. Net Profit (per year)	4,92,500
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$$\begin{aligned}
 \text{B.E.P.} &= \frac{\text{Fixed cost} \times 100}{\text{Fixed cost} + \text{profit}} \\
 &= \frac{650350 \times 100}{1142850} \\
 &= 57\%
 \end{aligned}$$

ADDITIONAL INFORMATION

For more technical details, entrepreneurs may contact the State Directorate of Animal Husbandry and Veterinary Services, Veterinary Colleges located in different States, and Central Veterinary Research Institute, Izzatnagar, Bareilly (UP).

Addresses of Machinery and Equipment Suppliers

- 1) M/s. Farm Equipment Enterprises
32, DSIDC, Industrial Complex
Jhilmil, Taharpur, Shahdara,
Delhi-110032.
- 2) M/s. Diamond Poultry
Equipments
B-16/8, Jhilmil Industrial Area,
GT Road, Shahdara,
Delhi-110032.
- 3) M/s. Dayal Poultry Appliances
WZ-16, Lajwanti Garden,
New Jail Road,
New Delhi-110046.
- 4) M/s. Eastern Industro
Commercial (India)
8/3A, Hathi Bagan Road,
Kolkata-14.

- 5) M/s. Famous Metal Works
10-2-284/A, Jama Masjid, A,
Battery Lane, Opp. ITI Shantinagar
Colony Road,
Hyderabad-500457.
- 6) M/s. Diamond Incubators
32, DSIDC, Industrial Complex,
Jhilmil Industrial Area,
GT Road, Shahdara,
Delhi-110032.
- 7) M/s. Jayant Brothers
425 A, Kilpauk Garden Road,
Chennai-10.
3. M/s. Aries Agro-Vet Industries Pvt.
Ltd.
Aries House, Plot No. 24, Deonar,
Govandi (East), P.B. No. 1,
Mumbai-400043.
4. M/s. Domes Pvt. Ltd.
Machavaram,
Vijaywada-24
5. M/s. M.J. Pharmaceuticals Pvt.
Ltd.
56, Jolly Maker, Chamber-1,
Nariman Point,
Mumbai 400021.

Addresses of Medicine Suppliers

1. M/s. Alved Pharmaceuticals Pvt.
Ltd.
5, Chandra Bagh Avenue,
Dr. Radha Krishnan Road,
Chennai-600004.
2. M/s.M.J. Pharmaceuticals Pvt.
Ltd.
Animal Health Care Division,
56, Jolly Maker Chambers,
Nariman Point,
Mumbai-400021.
3. M/s. Micro Labs Pvt. Ltd.
423, Kilpauk Garden Road,
Chennai.
4. M/s.Alarsin Marketing Pvt. Ltd.
12 K., Dubash Marg, Fort,
Mumbai-400023.
6. M/s. Blue Cross Farma
16-2-147/3, New Malakapet,
Hyderabad.
7. M/s. Venvet Chemicals Pvt. Ltd.
3-6-97 Shaheedyar Jung Road,
Opp. Tirumala Apartment,
Bhaseer Bagh, Hyderabad -29
8. M/s. Emco Industries
Royal Talkies, Sultan Bazar,
Hyderabad-1.
9. M/s.Mohan Traders
Injapur Village,
Ranga Reddy-500035
10. M/s. Khatauli Manure Mills
Khatoli,
Muzaffarnagar-251201(U.P.)
11. M/s. Standard Bone Manore
32, Madarsa Sadet, Hapur,
Ghaziabad (U.P.)
12. M/s. Rakshak Farm Aids Pvt. Ltd.
Flat No.9, Kochar Apartments,
Begumpet,
Hyderabad-16.

Mineral Mixture and Vit Pre-mix and Feed Supplement Suppliers

1. M/s. Roche Products Ltd.
28, Tardeo Road,
Mumbai-400034.
2. M/s. AGVET Industries
14-41/1, Prasant Nagar, Uppal,
Hyderabad.

Poultry Feed Suppliers

1. M/s. Yarana Feeds and Farms
B-55-56, Industrial Estate,
Gokul Road, Hubli-580030.

2. M/s. Mysore Feeds Ltd.
283-284, Old Tharagupet,
Bangalore-560053.
3. M/s. Godrej Soaps Ltd.
Animal Feeds Division,
Eastern Express Highway,
Vikroli,
Mumbai-400079.
 - a. M/s. Factory I Plot No. IB,
Industrial Estate, Ambathar,
Chennai-98.
 - b. M/s. Factory II Plot No. 2B,
MIDC Industrial Area,
Miraj-416410.
4. M/s. A-1 Feeds,
Kothapet Cross Road,
Hyderabad.
5. M/s. Nava Bharat Feeds
Saidabad,
Hyderabad-500569.
6. M/s. Momarla Feeds
Old Tharagupet,
Bangalore-560053.
7. M/s. Sudarshan Feeds
Jagadish Baug, Navanagar, Hubli,
Dharwad Road,
Hubli-580025
8. A number of poultry feed
manufacturing units are working
in local areas from where feed
could be purchased but proper
care should be taken in
purchasing feed from local market
to ensure the quality of the feed.
2. M/s. Hy Lay Hatcheries Pvt. Ltd.
No. 19, Mill Corner,
Seshadripuram,
Bangalore-560020.
3. M/s. Hi-Bred (India) Pvt. Ltd.
Karnal, Haryana.
4. M/s. Komarla Hatcheries
Old Tharagupet,
Bangalore-560053.
5. M/s. BLV Hatcheries
1-1-169/A, Charminar X Road,
Hyderabad-20.
6. M/s. Essex Farms Pvt. Ltd.
New Delhi
7. M/s. Deejay Group Street
Patricks Complex, Brigada Road,
Bangalore-560025.
8. M/s. Koteswara Hatcheries Pvt.
Ltd.
4A, 25th Woard, Cantonment,
Bangalore-560025.
9. M/s. R.O.
No. 5, Vimla Building,
Residency Road,
Bangalore-560025.
- 9A. M/s. United Hatcheries
504, Karancentre, S.D. Road,
Secunderabad-500003.
10. M/s. Tirumala Hatchery Pvt. Ltd.
2-287/B, Kishanpura,
Kanamkonda-506001.
11. M/s. Venkataramana Hatcheries
Pvt. Ltd.
16-11-310/14/6/3, Opp TV
Tower, Saleem Nagar Colony,
Hyderabad-500036

Parent Stock Suppliers

1. M/s. Venkateshwara Hatcheries
Pvt. Ltd.
13/6, Milestone, Poona Pansheel
Road, PO Gininagar,
Pune-411025.
12. M/s. Shree Nagar Hatcheries
Holilal Road,
Dharwad-580003.
13. M/s. South West Pearl Hatchery
Pvt. Ltd.
31, 2nd Main Road,

- Gangena Hall,
Bangalore-560032.
14. M/s. Perundurair Poultry Farm and Hatcheries
136-M Block, Connaught Circus,
New Delhi-110001.
 15. M/s. Kegfarms Pvt. Ltd.
8th Floor, Eros Apartment,
56, Nehru Place,
New Delhi-110019.
 16. M/s. Venco Research and Breeding Farm Ltd.
1316, Mile Stone Panshet Road,
P.O. Giri Nagar,
Pune-411025.
 17. M/s. Vedette India Breeders Pvt. Ltd.
101, 5th Main Road, Jaya Mahal
Extension,
Bangalore-560046.