



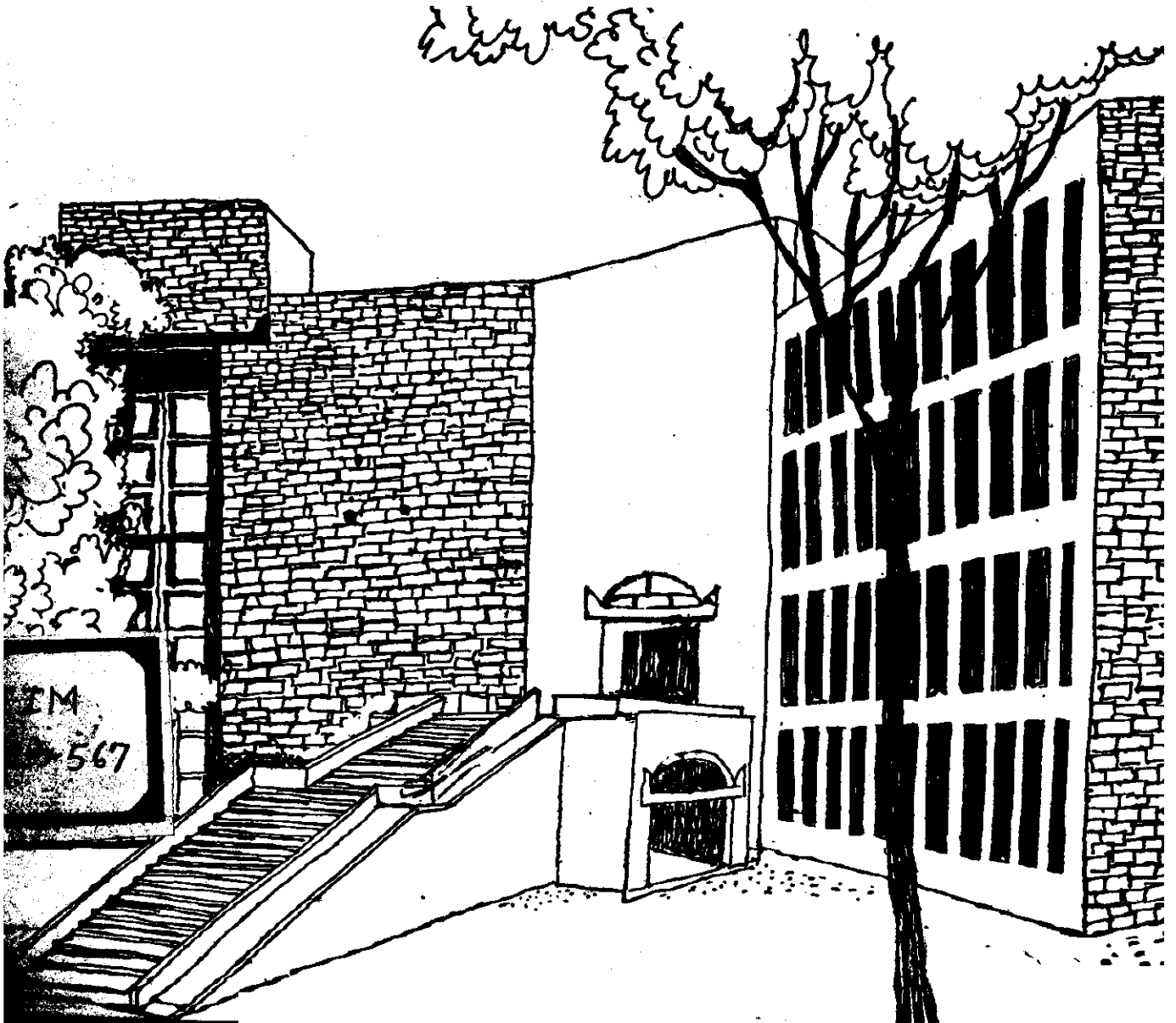
विद्याविविधयोगादिकासः

**IIM**

AHMEDABAD

W. P.  
56

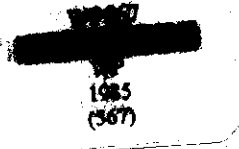
# Working Paper



RURAL DEVELOPMENT PROGRAMMES:  
A MANAGEMENT APPROACH

By

S.K. Barua  
Gurdev Singh  
S.P. Seetharaman



W P No. 567  
July 1985

The main objective of the working paper series of the IIMA is to help faculty members to test out their research findings at the pre-publication stage.

INDIAN INSTITUTE OF MANAGEMENT  
AHMEDABAD-380015  
INDIA

## I. INTRODUCTION

Planners consider certain features as essential ingredients while screening programmes for inclusion in the portfolio of rural development programmes (RDP). These are, favourable labour capital ratio (labour intensive), foot-loose nature of the activities, adaptability of the programme to backward regions and their compatibility with socially and economically backward people. Once identified on the basis of the above criteria, several concessions in the form of <sup>direct</sup> subsidies, concessional rate of interest, preferential market, etc. are provided to make the programme acceptable to weaker sections of the society living even in remote areas. These programmes are generally implemented through the existing cooperatives/ government corporations or <sup>govt. itself</sup> by forming of new cooperatives. It is assumed that such organizational forms would provide the desired continuity, momentum and strength to the programmes.

The experience in implementing such RDPs show a particular pattern. Schemes needing backward and forward linkages such as poultry farming, milch cattle rearing, sheep breeding, setting up of agro-based or village industries have not succeeded. On the contrary, programmes like road building, deepening of village tanks, land levelling and bunding, providing sewing machines, setting up of repair shops or custom service centres that do not need infrastructure have met with some success. The main reason for the failure of the former category of RDPs is the lack of appreciation of the fact that they are enterprises and their success depends on the management of infrastructure needed to support the activities. In the absence of

---

*Authors are thankful to govt for financing this study.*

proper infrastructure the participants in the programmes have to take a considerable amount of risk. The latter category of RDPs (labour/service oriented programmes) involve no risk for the participants. These programmes provide wages for the work done or they provide the missing services in the area. Unfortunately there is an inherent limitation in generating such labour oriented schemes due to paucity of funds and the difficulty in identifying new meaningful activities. An attempt has been made in this paper to show through a specific example, how enterprise kind of programmes can be managed better by formulating an appropriate economically viable approach.

The example chosen is the poultry development programme. This choice is due to an opportunity we got of studying the poultry programmes promoted by different states in the country under cooperatives and corporations with a view to suggest suitable strategy to hasten poultry development through cooperatives. This paper is primarily based on that study.

The brief introduction in this section is followed by a section on the working of the poultry programmes in the country where we have identified the major reasons for the failure of poultry programmes. In the third section we have examined the sub-systems comprising the poultry industry and suggested an approach to ensure acceptability of the programme to socially and economically backward people. The fourth section describes a model scheme and the necessary organisational arrangement to implement the scheme. The last section summarizes our observations and discusses the replicability of the model.

## II. THE POULTRY PROGRAMME

Poultry rearing has been accepted as one of the most appropriate ROPs for generating employment among the socially and economically backward people in most of the states in India. For example, in Gujarat, a hundred bird unit costing Rs. 6500 is given at 75 and 90 per cent subsidy to adivasis and scheduled castes, respectively. If these beneficiaries form a cooperative society, then each member is given Rs. 3000 as share capital loan. In addition, the society is given a loan of Rs. 33,750 and a subsidy of Rs. 14,250 to meet the cost of purchasing necessary poultry equipment, vehicles for transporting feed and output, constructing godown for storage of feed, eggs, etc. The salary of the managerial staff is also subsidised by the government. This subsidy is withdrawn in a phased manner. The scheme also provides for the appointment of an officer from the veterinary department to assist the cooperatives in health care of birds.

Once such a poultry scheme is formulated, the entire development machinery is geared to identify beneficiaries, form them into cooperatives and release the loan and subsidy component of the scheme. The state department monitors the physical and financial targets closely and pressure is put on the field staff to achieve the targets within the given time frame. Despite all this the poultry programme have not made a headway because of several reasons.

- a) The selected beneficiaries are not adequately exposed to the techniques of rearing birds.
- b) The bird care needed at chick rearing stage is not available.

- c) The arrangement for health care of birds is poor and hence it reduces the yield of eggs and also results in high mortality rates.
- d) The arrangements for supply of good quality feed are inadequate.
- e) The prices for eggs are not always remunerative.

In short, all the five determinants of success of a poultry enterprise, namely training in poultry, low mortality, quality feed, high productivity and remunerative prices for eggs are not adequately taken care of in the implementation of these schemes.

In addition to the above, if due to one or more of the above reasons the first cycle fails, then despite the fact that the beneficiaries have gained valuable experience and insights in managing poultry, no additional capital is made available because defaulters are not entitled to a second loan. The poultry cooperatives managed either by a departmental official on deputation or by their own appointed staff fail to cope up with these problems due to lack of experience. Hence the efforts of the development department and the beneficiaries, and the capital provided by the state and commercial banks fail to generate the desired results. The root cause of this disaster is not the choice of the programme but poor implementation strategy.

### III. THE POULTRY INDUSTRY

The poultry industry consists of eight sub-systems: pureline breeding, poultry medicine, poultry equipment manufacture, hatchery, feed mixing, bird rearing, storage and processing and marketing of outputs as shown in Figure 1. Some observations on the different sub-systems would be useful in formulating a strategy for poultry development.

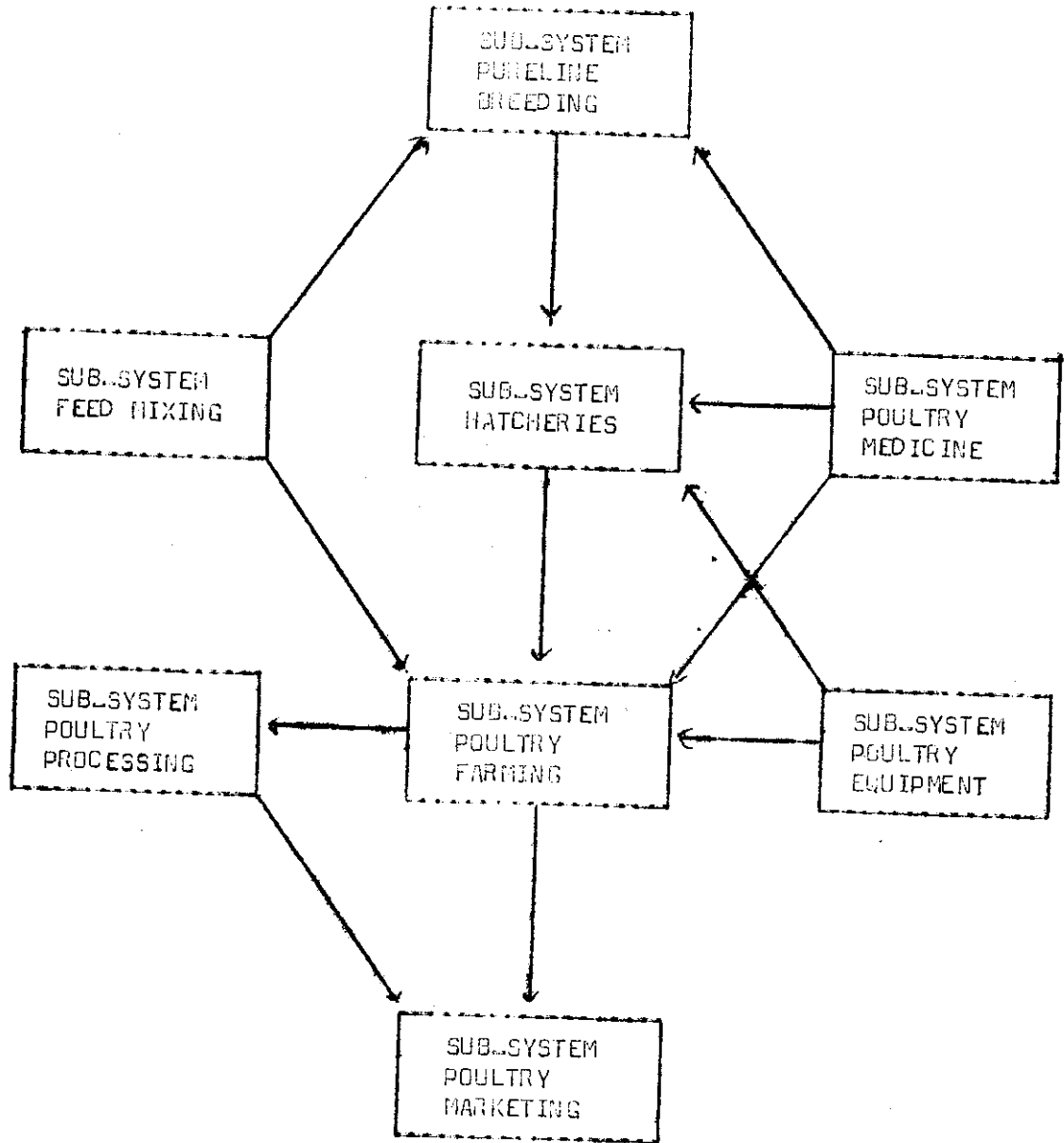


FIGURE 1 : THE POULTRY INDUSTRY

- i) Pureline breeding is a well organised, capital intensive, high technology, profitable and fast growing sub-system. Since there is overall shortage of excellent breed all the pureline breeding units are able to sell the parent stock they produce to the hatcheries. With the implementation of the government's decision to ban import of parent stock, the profitability of these units is likely to increase.
- ii) Despite working at less than full capacity, the hatcheries command remunerative prices for their chicks because each hatchery has developed a market for its product. Out of the 282 hatcheries in 1982, 127 were in private sector. Since quality of chick is only one of the many factors affecting the output of eggs, all types of hatcheries are able to survive, because it is difficult to trace low productivity to quality of chicks supplied.
- iii) Poultry medicine is critical for the hybrid birds. Several pharmaceutical companies (some of them multinationals) are producing vaccines and medicines for poultry and these are available without much difficulty.
- iv) Poultry equipment ranges from very simple earthen feed and water pots to sophisticated dressing plants and incubators. Except for the latter category of equipment all other equipments are produced in the unorganized sector. Their availability is not a constraint.
- v) In poultry industry, feed constitutes a major cost. The profitability of the industry is highly dependent on the feed cost. Some ingredients like maize, oil extraction or their substitutes may be locally available,



while others such as fish meal and minerals may have to be brought from far away markets. Mixing costs are very nominal and margins in this activity are often high. Farmers could mix their own feed but the major difficulty would be in maintaining hygiene and quality of feed. Bulk buying of raw material in harvest season is necessary to control costs but this poses problems of storage and inventory cost.

vi) Unlike the backyard poultry, organised poultry needs close attention to ensure adequate and timely availability of feed and water <sup>to</sup> and/prevent outbreak of diseases. Both the deep litter and the cage systems are used for rearing birds. The latter system has the advantage that every bird can be closely watched for health and productivity, but the initial investment required is considerably higher. This high investment is more than offset <sup>the</sup> by/savings in cost of feed every year due to lower wastage.

Two practices are in vogue in poultry rearing. In one practice chicks and layers are reared at the same place. In the other practice chicks are reared at one place and layers are reared at different places.

The veterinary services are provided to all units by the department of animal husbandary. Some large units also have their own arrangements for health care.

vii) Egg is the most important output accounting for about 75% of the total value of poultry produce in India. Traditional egg marketing channel consists of a wholesaler in production centre who collects eggs through agents from farmers. The eggs are sent to the nearest terminal market.

At the terminal markets, such as, Bombay, Madras & Delhi egg dealers have an association which determines the wholesale price everyday on the basis of stock on hand, expected arrival and demand. Wholesalers at terminal markets charge a margin of one paise per egg. From the terminal markets, eggs reach the consumers through semi-wholesalers and retailers. The margin charged by retailers could vary considerably from locality to locality, ranging from five to fifteen paise per egg.

The poultry farmers are paid on a weekly basis. The price paid would be the average of prices prevailing during the week less the handling and transportation expenses. The wholesalers make speculative gains through price fluctuations during the week. In addition their inventory is entirely financed by the producers. Thus the producers are completely at the mercy of the traders and have no power to ensure remunerative price for their produce.

The demand for eggs fluctuates widely over the year. The demand in summer months for example could be just about 50% of the demand in winter. The prices of eggs also fluctuate with the seasons. Thus unless the production cycle is perfectly matched with the demand pattern, the producers may lose out because of unremunerative prices. In short, the uncertainties about the profitability of producing eggs are quite high and need to be contained to ensure growth of the industry.

The market for broilers is limited to institutional buyers and the relatively richer segment of society. The spent birds and the manure, the two byproducts of poultry industry are sold in unorganised markets where

the prices realized are largely determined by local conditions.

viii) Cold Storage of eggs during periods of excess supply so as to maintain the prices is not very common in India. Converting eggs into egg powder too is done on a very limited scale. There is only one plant located at Bombay which produces egg powder for the services. Poultry dressing plants are also not very common since the market for broilers has not developed.

From the brief description of various sub-systems of the poultry industry we observe that certain sub-systems like, pureline breeding, hatchery, medicine manufacture, poultry equipment manufacture and processing of poultry output are not the areas that need attention to strength RDP in poultry. The sub-systems that need attention are feed supply, management of bird rearing and marketing of eggs.

To popularize poultry among the socially and economically weaker sections, appropriate organizational and financial arrangements should be made to manage the risks associated with poultry. The poultry programmes are formulated on the basis of assumptions about mortality rate, yield of eggs per cycle, prices of eggs and cost of feed. The viability of a unit is established on the basis of values assumed for these variables. For example/<sup>in</sup>1984 the figures used were 7 per cent for mortality, 255 eggs for yield per cycle, 40 paise for price of eggs at farm gate, and Rs. 1.60 per kg. for cost of feed. The actual figures could turn out to be quite different from those assumed figures. The losses resulting from the deviations are borne entirely by the poultry farmers. Unless this risk of loss to the individual farmers is reduced, poultry has little chance of succeeding as an RDP.

Some of the risks associated with poultry rearing may be shifted by centralising some of the production activities. Chick rearing upto 20 weeks needs extreme care to reduce mortality rate and to enhance productivity of birds. There is also no generation of income during this period. This activity should be undertaken by a central organization and the individual farmers should be given 'ready to lay' birds. To reduce the cost of feed and ensure quality of feed, feed mixing should be another task to be taken up centrally. Finally, the organization should train the beneficiaries in bird rearing activities.

We also feel that marketing of poultry produce should be an integral part of the programme on poultry development. Unless the producers' organization has a control over the market, it would be impossible to ensure remunerative prices for poultry produce, primarily eggs. Marketing is thus another activity which should be centralised.

This logic has been used to design a viable scheme for development of poultry in the next section.

#### IV. MARKETING OF EGGS

Retailer and consumer surveys were carried out <sup>in Delhi & Ahmedabad</sup> to understand the market for eggs. Delhi represented a metropolitan city and a large market, while Ahmedabad represented a growing market for eggs. The idea was to understand the economics of retailing as well as the needs of the consumers so as to design a suitable marketing strategy for eggs.

The retailer survey indicated that the average margin charged at Delhi was about 5 paise per egg while it was about 10 paise per egg in Ahmedabad. These were the margins charged in summer. In winter the margins were still higher. The retailers received their supplies from wholesalers on credit and a typical retail outlet where egg was a major item sold between 100 to 300 eggs per day. The wholesalers themselves earned a margin of 2 paise per egg and received credit from the producers. Thus the channel earned about 7 to 12 paise per egg without locking up any capital.

The consumer survey indicated that the consumers were sensitive to price but they rarely sought to verify the reasonableness of the prices charged by the retailers. They were also unaware of the sources of information of wholesale prices of eggs. The consumers preferred being served at their door-steps. Nearness of an outlet was a major reason for purchasing from the outlet. There appeared to be a popular belief that eggs were not good for health in summer. The consumption of eggs reduced significantly in the summer months.

In addition, we found that number of eggs sold in Delhi was estimated between 10 to 15 lakhs per day while estimate ranged between 2 to 3 lakhs for Ahmedabad.

Two important guidelines emerged for marketing of eggs from the above surveys. These are:

- a) The cost of marketing should not exceed about 10 paise.
- b) The eggs should be supplied to the consumers as close to their residences as possible.

These guidelines were used to design a system for retailing one lakh eggs per day. The figure of one lakh was arrived at on the basis of two considerations: full utilization of the capacity of a standard truck to be used for transporting eggs and acquiring a significant market share to be able to control price of eggs. The specific figure of one lakh though in no way reduces the generalisability of the inferences drawn. As would be evident later the costs vary linearly with integral multiples of a lakh. The economics has been worked out for two systems of retailing eggs, namely, the fixed outlet system and the mobile outlet system.

Fixed Outlet System: These outlets would be located close to residential colonies, each manned by one salesman. Eggs would be supplied to these outlets twice a week from a central godown. A uniform price would be charged by all the outlets in a city. This price would be advertised in local dailies to increase consumer awareness.

The physical facilities for this system would include a truck for transporting eggs from the production centres to the godown in the market, furniture and fixtures for the office and the outlets, and pick-up vans for transporting eggs.

Assuming an average sale of 500 eggs per day per outlet, 200 retail outlets would be needed to sell one lakh eggs per day. The various expenses for such an arrangement are listed in Table-1.

Mobile Outlet System: In this system eggs would be brought to the godown and from where they would be carried on autorickshaws to various residential colonies for sale. Each autorickshaw would have a driver and a salesman both of whom would participate in selling eggs. The price of eggs would be prominently displayed on each autorickshaw.

The physical facilities for this system would be the same as the facilities needed in the first system except that instead of furniture and fixture for the fixed outlet xxxxxxxx pick-up vans, autorickshaws would be required for selling eggs.

Assuming an average sale of 2,500 eggs per day per mobile outlet, about 45 autorickshaws <sup>would</sup> be needed to sell one lakh eggs per day. The various expenses for this arrangement are listed in Table-1.

The breakeven level for the mobile system is 45 percent while it is 82 per cent for the fixed system. This shows that selling eggs through mobile outlets is superior. Incidentally this method of selling incorporates the consumers' preference for door delivery of eggs.

#### V. ORGANIZING PRODUCTION OF EGGS

Supplying one lakh eggs a day to the consumers would require a certain level of production activity. On the basis of normal mortality rate of 8 per cent in the cage system, 1.65 lakh one day old chicks per year would have <sup>to</sup> be reared to produce about 1.52 lakh 20 weeks old ready to lay birds. These birds with laying performance of 70 per cent and assuming 7 per cent

Table 1 : Comparative Economics of Fixed and Mobile Outlets for Marketing One Lakh Eggs per Day.

Particulars	(Rs. '000)	
	Fixed outlets	Mobile outlets
I. Investment in vehicles, furniture and fixtures, etc.	670	2150
II. Annual fixed costs		
A. Depreciation	67	215
B. Administrative overheads	1976	926
III. Annual variable costs		
A. Other overheads	534	60
B. Fuel and maintenance of vehicles	100	400
C. Trays	200	200
D. Eggs	14822	14822
TOTAL	17699	16623
IV. Working Capital requirements	3447	975
V. Annual revenue	18250	18250
VI. Breakeven %	82	43



loss of birds due to culling and death, would lay about 375 lakh eggs a year. Assuming  $2\frac{1}{2}$  per cent breakage at egg assembly and distribution stages about 365 lakh eggs will reach the consumers homes. Assuming an average price of 40 paise per egg, a revenue of Rs. 150 lakhs will be generated for the producers. Additional revenue will come from 1.41 lakh spent birds and from manure, at the end of the cycle.

Egg production activity can be easily divided into two stages. In the first stage one day old chicks can be reared to 20 week ready to lay birds and in the second stage these layers can be reared for production of eggs. Clearly the first stage is the investment stage when no income is generated. Further this stage is quite sensitive to management and veterinary care. We thus propose to have a centralised chick rearing investment activity and decentralised bird rearing production activity. Since egg supply ought to be uniform, phasing of the two activities would be useful. There would be five successive flocks of chicks in a year. In this way we have minimised the overheads as we need only  $1/5$ th of the investment for chick rearing.

The centralised chick rearing unit will have its own veterinary services and also its own feed mixing plant. These two services will be available to centralised chick rearing unit and decentralised egg production units which may be supplied feed and veterinary help at their doors. For this size of production activity about 7500 tonnes of different feed mixes would be required. Another function which could be centralised is assembly of eggs. While collecting eggs from individual units feed may be supplied to them. For these services, the centralised unit may charge a commission.

Since our objective is to provide the individual producers certain facilities such as veterinary help, 20 week old birds, feed and collect their eggs for marketing, it may not be desirable to have only one centralised unit for producing one lakh egg a day, we propose three such units with fulfilled veterinary, chick rearing, feed mixing and egg collection arrangements. These units can be called as nodal organisation for organising production activities. This division of tasks is in line with our earlier observation that as far as possible activities which require close monitoring and control should be performed centrally and the rest decentralised. This would reduce the risk of loss due to high mortality and low yield from poor quality feed that may respectively arise from negligence towards chick rearing and feed mixing activities. At the same time decentralizing layer bird rearing provides several advantages the most important among them being they can choose the flock size that suit their financial strength and availability of time to devote to poultry.

Capital investment, working capital requirements, costs and returns and breakeven level of operations for such an arrangement of production activities have been worked out and shown in Table 2.

The nodal organization should be headed by a veterinary doctor so that expert guidance is available for all activities. This organization would provide the poultry farmers with layer birds, the necessary shed, cage and other equipment for producing eggs. The organization would also undertake training of beneficiaries in rearing birds. Such a scheme would ensure that farmers participate in the scheme with adequate knowledge about poultry and also receive cash income from the very beginning.

Table 2 : Economic Analyses for Components of Production Activity for Three Model Organizations

Particulars	Admini- strative sections	Feed Units	Chick units	Layer units	Egg coll- ection	All sections
I. Capital investment	1.20	3.90	12.05	68.31	2.91	88.37
II. Annual fixed costs						
A. Depreciation	0.07	0.35	0.99	4.90	0.26	6.57
B. Administrative and other overheads	2.31	2.25	2.54	-	0.23	7.33
III. Annual variable costs						
C. Chick/birds	-	-	9.90	37.95 <sup>~</sup>	-	9.90*
D. Raw materials/feed	-	112.50	23.29	83.48	-	112.50 <sup>~</sup>
E. Other variable costs	-	-	3.17	5.86	0.45	9.48
Total (A to E)	2.38	115.00	39.89	132.19	1.04	145.78
IV. Working capital needs	2.31	12.33	18.18	7.45	0.68	45.00
V. Annual revenue	-	120.00	41.12 <sup>**</sup>	178.31 <sup>***</sup>	-	161.48
VI. Breakeven (%)	-	35	74	10	-	28

\* Birds and feed being intermediary products are not included in total costs for the integrated system

\*\* Includes value of droppings and 20 week old birds. The birds value however is not included in overall revenue

\*\*\* Includes value of droppings, spent birds and eggs

Any state wanting to promote poultry programme should identify two or three districts and within them a few contiguous talukas where poultry programme is to be implemented. The district or taluka headquarters can be the location for nodal organizations. The bird rearing could be spread within a radius of say 20 to 30 kms around the location of the nodal organization.

At present the banks provide loan and subsidy directly to the beneficiaries. The recovery of these loans is extremely poor. Instead of this arrangement we suggest that the funds should be provided to the nodal organizations. The nodal organizations in turn would provide the necessary facilities to the beneficiaries and collect rent for the equipment supplied. A fresh flock of layers would be supplied at the end of each cycle. The rent would be determined in a way that the beneficiary becomes the owner of the assets at the end of five years. In case a beneficiary decides to withdraw from the scheme before five years, the facilities provided could be transferred to another beneficiary at the written down value. This way the investments made or productive assets would not remain idle.

#### VI. THE COOPERATIVE STRUCTURE

The form of organisation for this structure could be a cooperative, a corporation, a registered institution, or a joint stock company. If it is a cooperative the marketing organisation could be a Regional or State Poultry Cooperative Marketing Federation and the nodal organisations could be its member Primary Poultry Cooperative Societies. The financial

commitments at federation and society levels are shown in Tables 1 and 2 respectively. To generate these funds each farmer member has to deposit share money of Rs. 5 per bird. An equal share capital loan contribution from the government is assumed. With this share capital of Rs. 15.2 lakhs, the primary societies can contribute share capital to the federation and raise loans on the balance to meet their investment and working capital needs (See Table 3). The societies would contribute Rs. 1 per chick to the federation to that they would annually contribute Rs. 1.65 lakhs towards share capital of the federation. Here again an equal contribution will come from the government to the federation. This will enable the federation to raise loans for investment and working capital requirements (Table 3).

The 50 paise retail price of egg will be shared by the marketing federation and the primary societies in the manner shown in Table 4. It could be observed that in the way the production and marketing is arranged, there is not need for any subsidy from the government. At the farmer level, the size of unit for rearing layers is left to the individuals availability of time. From the day the rearing operation starts, farmer get regular income. The price of eggs is more or less fixed because the fluctuations in market price can be absorbed by the nodal society whose break even point of operation is 28 per cent. In other words the nodal organisation practically insures farmers against all the three risks: mortality, low yield and price fluctuations. Further the concept of providing rearing equipments on rent, assures, full utilization of investments. The marketing federation with viable operation (break-even at 43%) can easily stabilise itself in the market.

## VII. CONCLUSION

The major objective of this paper was to bring out the essential ingredients necessary for making an enterprise oriented RDP successful. As shown in the case of poultry three preparatory exercises should precede implementation of any enterprise oriented RDP. These are (1) Carry out a systems analysis of the proposed enterprise to identify the sub-systems which need to be included in the RDP scheme, (2) Identify various risky activities in the sub-systems and ensure that they do not affect the beneficiaries; and (3) Formulate a distinct marketing strategy for the output of the enterprise.

It is generally believed that subsidy is essential for ensuring success of an RDP. In the case of poultry we have shown that there is no need for any subsidy provided the scheme is properly planned and implemented. Another aspect is to make the activity size neutral at the beneficiary level so that size does not restrict entry.

There are several enterprise oriented programmes which could be developed as RDPs, such as piggery, pisciculture, sericulture, rural industries, agro-processing, etc. They offer tremendous potential but as shown here a right approach needs to be adopted for them to succeed.

Table 3 : Financing Capital Needs at Three Levels Under the Cooperative Structure

Particulars	Rs. in lakhs
<b>I. Individual level</b>	
Share capital contributions @ Rs. 5/- per bird	7.60
Loan for share capital @ 80%	6.08
Own contribution by the individuals	1.52
<b>II. Society level</b>	
Share capital contribution by members	7.60
Equal contribution by the government	7.60
<b>Total share capital</b>	<b>15.20</b>
Share capital contributions for the federation @ Re.1 per chick	1.65
Balance share capital with societies	13.55
Loan raising ability @ 9 times this balance	121.95
<b>Total capital available</b>	<b>135.50</b>
Capital requirement (investments plus working capital)	133.37
<b>III. Federation level</b>	
Share capital contribution by societies	1.65
Equal contribution by government	1.65
<b>Total share capital</b>	<b>3.30</b>
Loan raising ability @ 9 times	29.70
<b>Total capital available</b>	<b>33.30</b>
Capital requirement (investments plus working capital)	31.25

Table 4 : Distribution of Consumers Price of Eggs Between Producing and Marketing Agencies

Particulars	Costs/Margins		
	Rs. in lakhs	percent	per egg in paisa
I. Consumers price	182.50	100.00	50.00
II. Federation level (Marketing)			
i) Egg purchase price	148.22	81.22	40.61
ii) Gross margin (I-II:)	34.28	18.73	9.39
iii) Depreciation on investment	2.15	1.18	0.59
iv) Overheads	9.86	5.40	2.70
v) Variable costs	3.86	2.12	1.06
vi) Net margin (ii-iii-iv-v)	18.41	10.09	5.04
III. Society level (Production)			
i) Total Sales*	178.34	97.72	48.36
ii) Depreciation on investment	6.57	3.60	1.80
iii) Overheads	7.33	4.02	2.01
iv) Variable cost	122.73	67.25	33.62
v) Value of chicks	9.90	5.42	2.71
vi) Payment to farmers	24.33	13.33	6.67
vii) Net Margin (i-ii-iii-iv-v-vi)	7.48	4.10	2.05

\* Comprises of eggs, spent birds and manure



PURCHASED  
~~APPROVAL~~  
GRATIS EXCHANGE CMA Chai  
PRICE  
ACC. NO.  
VIKRAM SARABHAI LIBRARY  
P. M. AHMEDABAD.