

Poultry in Poverty Alleviation Programmes
Lecture notes; KVL: Hans Askov Jensen - 1997

Go to the people
Live among them
Love them
Learn from them
Start from what they know
 BRAC

Case from Orissa, India.

The activities to be performed have to be organised from mobilisation of staff and beneficiaries to the target, alias a sustainable smallholder model comprising primary production units and the required supply and service activities a phased programme leading to such a smallholder model.

Activity Flow Chart

Phase:	Mobilisation	Awareness	Pilot	Innovation
Activities:	<u>Establishing:</u> - Confidence - Acceptance * Surveys * Establish structures * Introduction of visible technologies	<u>Project staff</u> * observance of local practice * Study tours * Literature * Short-term consultants <u>Target group</u> *Introduction of low-cost technologies and improved management practices * Training of CLWs * Village training	<u>Project staff</u> * Identification and testing of production units. * Skills training manuals <u>Target Group</u> * Introduction of new technologies and improved management practices * Introduction of cooperative technologies	<u>Project staff</u> * Establishment of an implementation organisation * Establishment of a Technology Information System * Involvement of NGOs * Establishment of implementation procedures for: -Production -Supply -Service <u>Target group</u> * Organisation in village groups * Information about smallholder poultry model
Objectives	Confidence between the project staff and the target groups	Awareness of poultry as an income-generating activity	Documented sustainability of new production model	Sustainable smallholder model ready for implementation

Mobilisation Phase

The first phase in the development of the 3-lined system for poultry improvement is concentrated around the mobilisation of the target group.

The basic background information must be gathered through surveys. The basic structures for dissemination of technologies have to be established, and technologies that give visible results have to be developed.

Awareness phase

Awareness applies to the project staff as well as for the beneficiaries. The project staff shall be acquainted with known technology packages and have a vision of the end of project situation. The beneficiaries shall change their views of poultry keeping from just 'something' that is around which is useful for festive occasions and when guests arrive to considering it as an important cash income activity.

Project staff

The main sources of technology information come from:

- * Observing the present system and identifying the main problems;
- * Research papers available on the subject from India and abroad;
- * Study tours to other locations in India and neighbouring countries, especially Sri Lanka and Bangladesh;
- * Master courses abroad for future key staff;
- * Visits from short-term consultants with specific knowledge of the technologies intended for implementation.

Beneficiaries

Introducing very low-cost technologies, which have a visible effect, is the best way of establishing the beneficiaries' awareness of poultry as an income-generating activity.

Pilot phase

The cornerstone in a smallholder model is the end-user, the producers of chicken meat and eggs. These normally constitute 90 to 95% of the beneficiary groups.

The first step will therefore probably be to develop and test a small rearing farm to rear a flock of 100 to 300 chickens in confinement to an age of 6 to 8 weeks and distribute the chickens to a number of smallholders with 4 to 10 hens each.

Project staff

- * Identify and establish a rearing unit and the smallholders (producers) associated with it;
- * Produce skills training manuals for the establishment and operation of rearing units and smallholder operations;
- * Provide documentation of the viability of the pilot scheme;
- * Identify research objects for students' master thesis.

Beneficiaries

- * Training in rearing and production practices;
- * Experiences in cooperation regarding supply, services and marketing.

Innovation phase

The previous phases have mainly dealt with the technical development of new technologies and the institutional building associated with this. Innovations of a model ready for implementation is primarily related to the establishment of the supply and service facilities including institutional building to make the model replicable.

POULTRY ACTIVITIES FOR THE FIRST TWO PROJECT YEARS

The main aim of the activities is to establish awareness of poultry as an income-generating activity and to introduce simple technologies that require cooperation between farmers.

Regarding staff development, emphasis shall be placed on making known technologies available and learning through practice in the development of new technologies as well as on documenting the effect of new technologies tested.

Staff development

The main source of staff development during the first phase is experiences gained through observance during their fieldwork and the introduction of a health precaution package. However, it is important that staff also have a vision of the end of project situation and are acquainted with known relevant technologies.

The following staff development activities are recommended:

Experiences from other projects: Even though the resource base for extensive poultry holding is scarce, some research papers and other publications do exist. Attached to this report is a list of literature, including relevant papers from projects mainly from Sri Lanka, Bangladesh and Ethiopia. However, a type of network should also be established to exchange experiences, at least between DANIDA-supported poultry projects.

Study tours: At least one study tour to either Bangladesh or Sri Lanka should be provided. Bangladesh has by far the most developed smallholder poultry sector and Sri Lanka is probably the country where most research has been conducted on traditional poultry holdings, mainly supported by Australia. A tour programme should be prepared based on experiences from the planned visit of the PULDEP staff to Bangladesh.

CLW: (Couple Link Workers): It is considered to enter into an agreement with BRAC, an NGO in Bangladesh, to provide a training programme for all CLWs with emphasis on supply operations being established as an integral part of a smallholder model. These operations are all potential income activities for the CLWs. Such arrangements should be possible, as the project in Bangladesh is located just across the border, and because the languages are similar.

Short-term consultants: It is recommended that DANIDA provide assistance to PULDEP in Pudukkottai and the Integrated Livestock Development Project (ILDP) in Koraput for the training of trainers and setting up guidelines for implementation of low-cost technologies. The consultant should have extensive knowledge of the semi-scavenging model, and could be recruited from BRAC, Bangladesh.

Literature: Attached to this report is a list of relevant literature. However, the project should also subscribe to some journals - at least the Asian Journal For Animal Science and the Journal of the World Poultry Science Association. The latter has an Indian branch and it is possible to form work groups on special subjects, e.g. extensive smallholder poultry holdings.

TECHNOLOGIES

A number of low-cost technologies should be developed and tested. This process should take place on the farmers' premises and as such should be a participatory development. Below you will find a short description of potential technologies to be tested, but others may be learned through the process of creating awareness of poultry as an income-generating activity.

It is stressed that surveys shall be conducted to view the situation before testing a new technology and again after the introduction of a new technology in order to document the effect of the specific technology.

1. Exchange of hatching eggs

The low hatchability observed in the summer period is caused by the long storage period, which is three weeks at high ambient temperature, before the hens start brooding. By only using the latest seven eggs laid by the brooding hen itself and supplementing them with the first seven laid eggs in a clutch from another hen, the average age of the eggs will only be three to three days and they will therefore be suitable for hatching.

2. Creep feeding arrangement

One of the important causes of wastage in scavenging production systems is poor survival and low growth rate. Using a creep feeding arrangement can partly solve this problem.

3. Rearing in partial confinement

Rearing of the chickens by the brooding hen has two disadvantages:

- * The mortality rate is high and the growth rate is low;
- * The brooding cycle is long, about 80 days, due to a 40 day brooding period.

A number of farmers, perhaps 15, can establish a rearing house, either as a form of cooperative or through another arrangement. Approximately 150 newly hatched chickens can then be reared in confinement, separated from the brooding hens and fed with balanced feed for a 4 to 6 week period. The farmers can then have the adult chickens back in proportions to the newly hatched chickens supplied and also share the rearing cost at the same ratio.

The advantages of this system are:

- * The number of chickens for sale will be increased due to the lower mortality and higher growth rates;
- * The utilisation of the available scavenging feed resource base will be increased because small chickens are less efficient in utilising scavenging feed than adult hens;
- * The number of chickens produced per hen will be increased, probably from the present two batches to four batches per year.

4. Rearing in confinement

Rearing in confinement to an age of eight weeks can be introduced using a number of different technologies:

- * Local desi hens can be reared and sold at the local market;
- * HYV chickens can be reared and sold to a number of farmers in the village e.g. in flocks of six hens and one cock and the remaining males sold as 'broiler' chickens. The farmers can keep the hens in confinement and feed them partly with household refuse and partly with balanced feed. The eggs produced can be brooded by desi hens belonging to the farmer or sold as hatching eggs to neighbours. Surplus eggs can be sold as table eggs for consumption;
- * HYV chickens can be reared and sold to farmers as parent hens with a flock size of 10 hens and a cock. The eggs produced can be sold to a local hatchery. The hatchery can either be of the Chinese Rich Husk type or a kerosene type that is available in India.

All combinations between these three methods are potential technologies and there are possibly many more.

Chickens supplied from Government Poultry Farms can replace the hatchery function in the initial phase.

Potential for increased income

The table below shows a draft financial analysis of five production methods. The analysis aims to illustrate the potential only, as a more detailed analysis can only be produced when actual parameters have been verified through field observations:

1. Traditional system before vaccination;
2. Traditional system after vaccination against RD and FP. Vaccination costs are not included in the model;
3. Creep feeding arrangement;
4. Rearing of desi chickens in confinement and feed them with balanced feed;
5. Artificial hatching of desi eggs and rearing the chickens as in Model 4.

Financial analysis

Parameters	Method				
	1	2	3	4	5
Investment, Rs, 1)	0	0	50	5,000	8,000
8 week chicks/hen/year	4.8	12	25.2	43.2	56.7
Operational cost Rs/hen	1	3	126	670	992
Income, Rs/hen/year	120	300	756	1,728	2,268
Benefit, Rs/hen, 2)	119	298	630	1,058	1,276

1) Initial investment only. Model 4 rears chickens from 20 hens and Model 5 hatches eggs from 150 hens.

2) Income - Operational cost. Financing costs and labour costs are not included.