Case study

Rearing chickens as a livelihood option in Cambodia – key lessons to avoid failure

Overview

The Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) introduced improved chicken farming techniques to coastal communities in Cambodia as a supplementary livelihoods option. Despite considerable early setbacks which saw the death of many birds, those participants who put into practice the new skills they had learned managed to reap benefits and were able to raise better quality chickens in a shorter time period. This case study highlights the good potential for non-fisheries related livelihoods in coastal communities but recognizes some of the risks that such activities can present.

Key lessons learned

- There is a strong demand for non-fisheries related livelihoods options in coastal communities such as chicken raising, as high demand exists for this product and local resources (e.g. fish wastes that can be used as feed) are available.
- It is vital to select reliable suppliers of quality vaccinated chicken stock as poor quality birds may quickly die and also infect any existing stock, if not separated at least initially.
- Simple techniques such as feeding, watering, preparing natural medicines and basic hygiene are key factors leading to successful chicken rearing.
Context

Small-scale fisheries management programmes cannot effectively reduce fishing pressure on stocks without reducing the number of fishing boats and fishers and/or introducing and enforcing temporary fishing closures.

However, fishers are generally poor and have few other livelihood options if their fishing income is reduced. Therefore, the strengthening of existing livelihoods, while promoting alternative income opportunities is essential. These actions generally have the double aim of reducing fishing effort while raising the standard of living of coastal fishing communities or individual fisher households.

The initiative

RFLP worked to reduce vulnerability and enhance livelihoods in 15 Community Fisheries (CFis) in the four coastal provinces of Cambodia. As part of its livelihoods component RFLP undertook a comprehensive evaluation and feasibility study of potential activities which it could support. Amongst the key selection criteria were that actions needed to be affordable and suitable to the local context. Subsequently chicken raising was identified as an action with good potential for success.

Chicken rearing is very common in Cambodia with chicken one of the most popular dishes to eat. However, the traditional rearing technique is rather poor with chickens moving freely around villages and eating only rice. Fishers also had little knowledge of what to do to prevent disease outbreaks and spread.

The Centre d'Etude et de Développement Agricole Cambodgien (CEDAC) was therefore engaged to provide training courses on chicken raising to the members of seven CFis.

Training focused on how to prepare a chicken farm, producing feed from kitchen wastes and fisheries production left-overs, preventing and curing diseases, hatching, breeding and selecting breeder chickens.

Following the training, RFLP provided support to participants to form chicken raising groups with 148 families including 99 women registering. Each family was provided with five hens and one cock in order to commence their activity.

Impacts/Results

To the inexperienced eye chicken rearing may appear easy. However chickens are susceptible to disease as many of the participants of the training found out.
**Unexpected death of delivered chickens**

Between 29 September to 4 October 2012, birds were delivered to communities. However, many of the birds provided were in poor health and subsequently died.

Data collected from the villages showed that the chickens appear to have been infected and very weak when delivered. They also did not appear to have been vaccinated by the supplier, despite this being stipulated in the contract. Considerable time was taken to deliver the chickens to various communities meaning that the birds remained in the truck for many hours. In addition the chickens were of various sizes and seemed to have been procured from a number of sources.

Below are the survival rates of chickens (based on household observation and interviews).
- **CFi Trapaing Ropov:** survival rate - 20%;
- **CFi Angkoal:** survival rate - 12 %;
- **CFi Koh Krisna:** survival rate - 15 %;
- **CFi Koh Kchang:** survival rate - 13 %;
- **CFi Thmor Sor:** survival rate – 10 %;
- **CFi Chang Hoan:** survival rate – 12 %; and,
- **CFi Koh Rong Sanloem:** survival rate – 7%.

**Farmers committed to continue rearing chickens**

As a result of these widespread deaths the chicken rearing groups were unable to function effectively. Despite this, group members demonstrated their capability and commitment to continue chicken raising and did not let this initial setback deter them.

New skills were put to use including site selection, breeder selection, the construction of new chicken pens and cages, producing feed from kitchen wastes and fisheries production left-overs, preventing and curing diseases, hygiene, watering techniques and traditional medicine production.

Some trainees reported that using the techniques they had learned resulted in them being able to rear chickens to market size quicker, as well as being better prepared for disease outbreaks. For example Mrs. Pon Nhnong and Mrs. Vong Pov from CFi Trapaing Ropov were successful in preventing their chickens from succumbing to disease.

**A change in rearing practice took place**

Significant change took place at CFIs in terms of rearing techniques. New chicken rearing skills have replaced traditional methods that many have practiced all their lives. For example, villagers have started making their own feeds using waste from fisheries products and locally available fruits and vegetables.

About 80% of the households followed the newly introduced feeding techniques by using mixed feed comprising four important groups such as rice, rice bran (energy), vegetables (vitamins), fish/crab (protein) and fish shells (minerals). Meanwhile, 51% used fruit/herbal fermented juices which can boost the growth of their chickens.

Households have started to clean cages and pens more frequently. Once a month, they use lime to clean and kill the germs. More attention is also being paid to vaccinations and medication. Traditional medicines have furthermore been found to be effective in...
curing and preventing chickens from succumbing to disease.

Field monitoring showed that 91% and 89% of households applied de-worming and disease prevention techniques using commercial medicine respectively. Meanwhile 92% and 62% applied disease treatment by traditional medicine and commercial medicine respectively. They reported that their chickens grew well and faster after having applied these techniques, resulting in improved survival of the chickens and reduced time to reach market size.

Household visits and observation of 20 households confirmed that more than 85% of the trainees constructed new cages and pens following the instruction of CEDAC trainers. At least 60% of the trainees completely changed the locations of their chicken coop based on the training. Their chickens generally looked very healthy.

Villagers knew how to cure common chicken diseases and understood why in the past their practices had not been successful during changing weather (too hot or too cold), etc. Watering and warming techniques from the training had also proved very useful. In addition, beneficiaries learned to separate young chicks from the breeding birds.

Most importantly, by using new techniques rearing times were reported to have been reduced from 6-7 months using traditional chicken rearing methods to 4 months using improved rearing techniques. Below is a successful case from one of the beneficiaries.

Mrs. Pon Nhong, a fisher-farmer from CFi Trapasing Ropov, Kampot said, “After I used the feeds I made myself following the CEDAC training, my chickens grew faster and were healthier. Previously it took me between 6-7 months to raise chickens until I could sell them. Now it takes me only 4-5 months. It saves me a lot of time so that I can start a new production cycle quicker.” Ms. Pon also learned techniques to produce traditional medicines from CEDAC and has made four types of medicines in preparation to fight disease, while previously she did not know what medicines to give. She is especially serious about hygiene, making sure that before anyone enters the chicken pens, they first step on lime to prevent the transmission of viruses and disease. Ms. Pon’s family now spends more time raising chickens and has reduced its fishing activities. “Chicken rearing is a home based job and not as risky as fishing,” she added.
were able to supply more chickens for both family consumption and sale. Some 45% of the households visited were able to sell chickens with 50% of them earning a total gross income of Khmer Riels 50,000-200,000 (or US$ 12-50 per batch) and 37% earned up to US$ 70-100 per household per batch after the training. This provided a significant additional contribution to household income of poor fisher households.

In Mrs. Pon Nhong’s case, she was able to sell up to 60 kg of her chickens at the market (from May 2012 to June 2013) after having received training and the birds from RFLP. The price of her chickens was often higher than other chickens in the market (e.g. if the price of chickens in market was 15,000 Riels per kg consumers would pay her 18,000 per kg without negotiation and during the high demand season, she was able to sell her chickens for up to 22,000 Riels per kg). In total, she could earn around 1,000,000 Riels (about US$ 250) per year from chicken rearing. Mrs. Pon also confirmed that before she could barely sell the chickens as most of them would die before harvest time.

Lessons learned

- With the techniques learned from chicken rearing training, CFi members were able to move from traditional livestock production methods to more effective methods that include correct use of veterinary medicines. This helps to reduce the risk of disease outbreaks. Similarly, the techniques for feeding and protecting chickens from cold weather, hot weather, cage construction etc., were new to all beneficiaries and have proven to be very useful and profitable.
- Chicken rearing is considered as a good income generation activity for CFi members because of high market demand and locally available resources, especially a plentiful supply of fish catch waste which can be processed as a chicken and animal feed.
- It is vital to select good and reliable suppliers for stock supply. The lack of good chicken stock resulted in large-scale initial deaths and was a major barrier to expanding chicken production.
- The chicken breeders should be selected from other nearby communities to avoid disease transmission or chicken stress during transportation.
- Chickens should not be provided to existing chicken farmers (with many chickens and other poultry already) as this creates an increased risk of disease outbreak.
- Field monitoring and technical back-stopping is very important so that the specialist can advise farmers on their current practices and recommend how they can resolve the issues they face, especially disease outbreaks which are common for chicken rearing.
- Although most of the trained beneficiaries have made significant progress in chicken rearing, some still have limited ability to implement the promoted techniques as they pay more attention to their main job, usually fishing.
- It is important to agree on a percentage of ‘payback’ by project beneficiaries to the community. For example each recipient should return a number of chicks to the community which can then be passed to other households which may wish to take up chicken farming. This also motivates households to do their best when implementing activities because assistance was not given for free and because of peer pressure to succeed for the community as a whole.
Recommendations

- Greater emphasis should be placed by relevant government agencies (especially agricultural extensionists) on providing non-fisheries related livelihoods options such as chicken raising in coastal communities.
- Further capacity building should be provided to chicken groups on making collective purchases of inputs (e.g. buying birds together rather than individually in order to get a better deal) as well as feed processing.
- Experience and information sharing and exchange among group members should continue and be facilitated in order to help further build capacity.
- For long-term sustainability, routine follow-up and coaching are needed to ensure that those newly trained in raising chickens continue to apply and practice techniques provided by RFLP. Special emphasis should be placed on helping them strengthen their technical and marketing skills.

About RFLP

The Regional Fisheries Livelihoods Programme for South and Southeast Asia (RFLP) sets out to strengthen capacity among participating small-scale fishing communities and their supporting institutions in Cambodia, Indonesia, the Philippines, Sri Lanka, Timor-Leste and Viet Nam. The four-year (2009 – 2013) RFLP is funded by the Kingdom of Spain and implemented by the Food and Agriculture Organization of the United Nations (FAO) working in close collaboration with the national authorities responsible for fisheries in participating countries.

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