



GTFS/RAS/198/ITA
Support to the Regional Programme for Food Security in the Pacific Island Countries

FAO/ITA/SAM/01
Chicken Production in a Permaculture Farming System

TERMINAL REPORT

By

FRANK FONG
National Project Coordinator

Ministry of Agriculture & Fisheries
Samoa

Contents

	Page
Executive Summary	3
1 Introduction	4
2 Project Organization and Budget Arrangements	4
3 Project Outputs	5
4 Major Issues and Concerns in Project Implementation	6
5 Conclusions	6
6 Recommendations	6
Acknowledgments	7

Executive Summary

Chicken production in the rural communities is not new to locals as it has always been a major contributor to the livelihoods of the people for many years. Whether it be for home consumption or mainly kept as a sideline for family faalavelave.

The adaptation though of local chickens to the permaculture farming system shows the correlation between raising livestock (particularly monogastrics) and crops in a confined area. For instance, chicken manure improving soil fertility hence encouraging plant/crop growth to be used as chicken feed, and is a cycle where underlying factors are interdependent of one another.

Also, the rearing and weaning of chicks in artificial brooders, from day-old up to six weeks of age, is a proven technology to saving chicks from early death due to predation, theft, and weak/stunted growth. And thus contributes to overall farm productivity and where chick mortality is greatly reduced up to 75%.

This technology is gradually being practiced throughout Samoa and so far nine demonstration sites have been set up around the country to exhibit to poultry farmers the success story behind this technology and for themselves to appreciate and embrace the development of the chicken industry in the country.

This project links well with the Ministry of Agriculture & Fisheries Corporate Plan 2005-2008 Long Term Goal 1 which states: 'To ensure that the supply of traditional food and other primary products is adequate'. MAF strives to ensure that all farmers are well equipped with the proper technologies through farmers training, radio talkback programs, dissemination of information leaflets etc, to enable them to understand the importance of sustaining agricultural production towards food security in these difficult times i.e. global financial crisis.

1. Introduction

Backyard chicken production has been in existence for many years and farmers are very well aware of raising such livestock on a small scale, mainly for home consumption thus improving the protein content of meals, or kept as security in times of faalavelave where families are obligated to contribute. It is these main reasons for keeping chickens where some form of financial transaction takes place thus allowing farmers to incur some income by selling surplus chickens to help sustain their chicken farms. Because of the nature, smallness in size, and scatteredness of the local backyard chicken rearing system, it is not the inevitable that any one farmer will uptake local chicken production to a higher level to commercialisation in the near future.

It is for these reasons that a proposal to the Food and Agriculture Organisation (FAO) was initiated in late 2003 under the Regional Program for Food Security (RPFS) to assist Samoa in the development of the local chicken industry. This project was called 'Chicken Production in a Permaculture Farming System' and is envisaged to increase rural employment, income generation, and import substitution through the local production of higher quality poultry meat. Given the main objectives and desired results to be achieved from this proposal, approval was received and FAO has since provided funding and technical assistance in order to achieve the overall objective, which is 'Improved and diversified local agriculture production for food security'.

The initial phase of the project started in mid 2004 and ended in late 2007. The project after successful completion of proposed activities was given an extension from mid 2007 to the end of 2008.

The primary objective thus of the project is to improve chicken production and quality by upgrading the traditional system of raising chickens in Samoa's rural areas to the permaculture system. That is, the development of a more efficient chicken production system that would fence in the flock and prevent losses through theft and predation whilst increasing protein levels of the local population. And is the way to enable households to sufficiently produce their own meat rather than purchasing cheap, fatty meats from local shops. Also, the project would also see the employment of the rural population and in return gain some income to make ends meet.

Activities of the project include the establishment of permaculture demonstration sites, monthly farm visits/monitoring to these permaculture sites for data collection, farmers training sessions to enhance farmer knowledge and skills in all areas of chicken production and management, upgrading of existing project facilities and infrastructure such as the poultry brooding and breeding units at Avele, implementing of the incubation program in the extension phase to obtain crossbred chickens for distribution to rural communities as a means of upgrading the local chicken.

2. Project Organization and Budget Arrangements

The project organization is comprised of the National Project Coordinator (Mr. Frank Fong), Project Manager (Ms. Donna Sila), Project Assistants (Msss. Tumema Tiai, Alice Papalii, Sey Keen Meleisea), Field Technicians (Mrr. Foki Aneti, Tom Apo). On a

larger scale, the steering committee envelopes the above-mentioned personnel and not excluding the CEO of MAF and ACEO of the Animal Production & Health Division. Also during the project life, technical assistance was also provided by Chinese technical experts namely Mr. Bo Chen (Livestock expert) and Mr. Huang (Livestock technician) under the Chinese technical assistance TCP/SAM/3001.

The initial phase of the project received an approved budget of USD\$31,370 and was utilised 100% by the completion date. A series of activities were listed for implementation which included the construction of nine permaculture units, farmers training, conduct field days on permaculture demonstration sites, development of chicken production farm manuals, and quarterly reporting to authorities.

In the extension phase, some of the activities were ongoing such as monthly field visits to project sites, farmers training, regular maintenance of infrastructure, and new activities such as the set up of a new feeds processing facility that was later cancelled because of the timeliness of setting up such a facility and have it fully operational within the small extension period, the incubation program that supplied crossbred chickens out of a newly established breeding unit for improved birds that were soon distributed to farmers for upgrading their local chickens, and also setting up additional permaculture sites around the country. So by the end of the project life, about 80% of these planned activities were complete as the farmers training program was slow to be implemented.

3. Project Outputs

At the closure of the project in late 2006, eight permaculture project sites were established, four farmers training were conducted and 68 farmers were trained in various poultry production and health disciplines, four breeds of chickens were imported and reared to start up the breeding unit, and finally the construction of the breeding unit at Avele. The chicken production farm manual was also developed to provide as a technical guide to poultry farmers to enhance their understanding of raising chickens in permaculture environments.

Monthly farm visits were carried out to obtain information as well as collect vital data to help determine critical improvement strategies if needs be and such collected information and data is then processed and reported on a quarterly basis to FAO. Under this system of rearing chickens has seen a vast increase in flock productivity in terms of improved reproduction, health, and decreased mortality.

During the extension phase a total of fourteen settings were done under the incubation program that was devised for implementation. Insofar, around 2,000 fertile eggs were collected and about 56% were earmarked for incubation while the rest, not suitable for incubation, were sold to provide some income for MAF to help with its cost recoveries. There have been some eggs found infertile from crossbreeding identified in the breeding program and adds to the lot being sold. Given the average hatchability percentage of 65% of fertile eggs incubated, around 200 improved birds have been distributed to project sites, another 150 have been sold to various farmers around the country, and the rest were retained at the breeding unit at Avele to further the breeding and incubation programs.

The construction of additional permaculture units were deferred to the start of the 2009 owing to the unavailability of MAF resources according to planned dates for implementation. Therefore MAF strives to carry out this activity by the end of the current Financial Year.

4. Major Issues and Concerns in Project Implementation

Poor collaboration between the national counterparts made implementation rather difficult in some cases. For example, the Chinese livestock technician allocated under the project was less able at times to communicate his level of understanding across to APHD staff and farmers during farmers training.

It is recommended in future that personnel assistance to projects should be carefully screened for their abilities and capabilities to communicate efficiently.

5. Conclusions

As the primary objective states, improving the local chicken production and quality is by upgrading the traditional system in which Samoan chickens are raised, and that is by raising them in the permaculture system. This is the way to lead farmers into being self sufficient in operating their farms sustainably rather than being reliant on government for assistance.

The feedback from farmers is positive with the knowledge and skills that they have learned during farmers training sessions and monthly field visits carried out by MAF during project life. And as such has been of great support to MAF in implementing planned work programs of the project.

It is envisaged in future that households would be able to fully utilise available resources in the establishment and operation of their permaculture chicken farms as has been demonstrated and provided in the chicken production farm manuals.

The provision of crossbred chickens in the upgrading process has also shown positive results with the availability of improved birds in the rural communities. The breeding program has been successful in providing fertile eggs for incubation that has also seen day old chicks surviving up to 16 weeks and ready for distribution to farms around the country.

6. Recommendations

The results of project activities will greatly benefit other organisations outside of MAF pursuing livestock developments. On the other hand, experience obtained by MAF staff and also local farmers have to be safeguarded as it helps in the sustainability of the chicken farms around the country.

MAF strives to upkeep the skills and lessons learnt through its outreach farmers training program and other information promoting programs. The investment that MAF has is in its staff capacity building program for farmers and extension officers in order for the Ministry to be in a position to sustain the project through human resources capacity both in the government and in the communities.

Acknowledgements

Acknowledgement and many thanks should be noted to the following throughout the inception, implementation, and success of the project:

- FAO SAPA office in Apia for their continuous support in all areas of implementation, procurement, project performance assessment, capacity building
- Mr. Fang, Bo Chen, Mr. Huang (TCP team) – technical support in inception phase of the project
- Mafeo Bejo (Livestock Specialist) – overall support in proposed project extension activities in terms of planning, monitoring, and upgrading of project budget.
- F&P Consulting Partnership (Chiara Faglia & Antonio Pagani) – establishment of the Monitoring and Evaluation System that has made project planning and implementation more efficient and transparent
- MAF staff directly and indirectly involved in project implementation since its inception up to completion date