

A REPORT ON THE SERICULTURE DEVELOPMENT PROJECT IN THE PHILIPPINES

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This is a brief report on my three years stay (Jan 1983 - Jan 1986) in Republic of the Philippine as a volunteer under Japan Overseas Cooperation Volunteer (JOCV). My assignment office was Philippine Textile Research Institute (PTRI) which was playing the leading part in Filipino sericulture under Ministry of Trade and Industry (MTI). PTRI has Main-Office at Manila and three branches in Benguet, Misamis Oriental and Claveria province. I mainly worked at Benguet branch located in a mountainous district of northern Luzon.

When I started my activity at PTRI in Jan 1983, PTRI had two staffs who had been trained in Japan, two more staffs had been trained in China and India, the rest of the staffs had also at least two years experience. PTRI had enough basic facilities.

Their primary target were: 1) Maintenance of purelines, 2) experimental production and rearing of F_1 hybrids. I was assigned there as the technical consultant of the general sericulture. At that time, PTRI had few cooperative farmers but there were two private sericulture plantation in Mindanao and one in Laguna. Total of three plantation's mulberry fields were about 200 hectares and they were exporting dried cocoon to Japan for experimental purposes (importing quota for the Philippines was 20 metric tons.)

OBSERVATION:

A. Rationalization of Mulberry Field Management:

During the three years of my stay, I did not have much chance to take a part in the management of mulberry field, but still I could observe some problems in the field. First, they do not have scheduled field management through the year. One reason for this, rearing schedule of silkworm was not organized. And at same time, lack of knowledge of physical condition of mulberry trees. For example, timing of cultivation and fertilization. Within two weeks after harvest is the best time to have cultivation because of less damage for roots but this was not practiced there.

And propagation of mulberry tree was done by cutting and they said the ideal cutting season was during the rainy season because of convenience of watering, but it is not sure that the physical condition of mulberry tree is suitable for cutting during rainy season. We must reconsider propagation season from physical condition of mulberry tree. Similarly, interval of harvesting was two month in this office. But from my observation, it seemed we forced mulberry tree heavy physical stress. If it is under intensive management, it will not be problem but under extensive management like preceding procedure - two month interval- we can not expect good yield, but it is also affecting silkworm rearing because of poor leaf quality. According to the study of Mr. Hiyama, it says two month is enough but his study was based only one year experiment and he did not consider leaf quality, so that it is appropriate to widen harvesting interval.

Talking about weeding, consider our terrain and growing speed of weeds, I recommend sod culture. This method does not remove weeds but control their height and apply weedicide only around mulberry tree. The advantages of this method are: 1) labor-saving, 2) can control erosion, 3) cut weeds become organic material for mulching, and 4) preserve water during dry season.

Further more, they are continuously requesting supports both materially and scientifically from Shinshu University's experimental farm

which is acknowledged in variety preservation of mulberry. I found that there are very few information about tropical sericulture, so it will be a great help for them to establish Filipino sericulture if our farm work with them.

B. Breeding of Silkworm:

It is needless to say, PTRI's main objective is breeding but it is sad to say that breeding work had not been done well. At first, they do not have objectives of breeding. It is useless to keep on rearing silkworms without knowing what kind of silkworm variety they want to breed. The silkworm which is needed now in the Philippines must have strong resistability to survive extensive rearing. With sacrificing other characters, they have to breed the silkworms which have strength, as the feeder's technique is improved and they must also attach importance to the productivity of silkworms. I hope PTRI can utilize their advantage that they can rear silkworms throughout the year.

Secondly, the maintenance of purelines have not been done well as a duty. Rearing has been done aimlessly, without proper selection, so that deterioration of quality is clear cut. They do not realize the character of each pureline so that they were not able to segregate mutants. I had tried to make correct sampling and proper statistical analysis to realize the characters of each pureline since I started the duty. Unfortunately, I could not get full cooperation at the sampling, and I did not complete the analysis before the end of my contract. I think in the future, there will be a possibility to lose the purelines. To avoid that, I deeply hope that pureline maintenance and analysis be improved.

C. Quality Control;

In the Philippines, when we buy vegetables at the market, the vegetables in big baskets are mixed-good ones and bad ones, and we have to select the good ones from that basket. If we go the market

late, we can find only bad ones, but the price is still the same. The worth of quality can be used for excuse of high price but it will not be a reason of discount. When farmers should sell their products to the middlemen, their interest is not quality, but weight. I think the effort to improve the quality is fruitless in there, because of there is no system to evaluate it.

Silk is an expensive good. Even if it is expensive, silk is still bought for its quality and as a status quo, which means that quality is everything for silk. Before, PTRI was buying cocoons from farmers at the same price, not considering quality. Recently, PTRI started to buy class, even considering some problems like; 1) both farmers and PTRI are not familiar with the system of classification, 2) there is no clear standard for the classification, and 3) the difference of price between the class is too small, I like to appreciate their seeing up high values. The sericulture industry which shows clear tendency of intensiveness, every each process are needed perfection for quality control, so that the expensive silk will exist as a commodity. To extend this kind of industry in the country which is far from the idea of quality, they have to pull up the level of self-satisfaction, meaning, they have to establish the system which can evaluate the effort to improve the quality and pay commensurate remuneration.

RECOMMENDATION:

Aside from private companies, which are exporting the dried cocoons for Japan, PTRI has been trying to organize farmers for cocoon production which will be sold to NARDA'S (local handweaver and manufacturer). In outline, I accept the project but I feel there are still some problems. The problems are;

- 1) The number of farmers to be organized which PTRI has been planning is clearly beyond PTRI'S supporting ability.
- 2) NARDA'S is planning to establish machine reeling to accomodate

the number of farmers to be organized. For NARDA'S, silk reeling is unknown field, and they cannot expect to get good cocoons suitable for reeling machine.

- 3) NARDA'S will take the initiative in controlling the price of cocoons, if NARDA'S is the only buyer and PTRI will act as the middleman.
- 4) In case they cannot expect high quality products, they have to put additional value for their products by hand made, exotic folk art article, but they cannot expect those additional value from NARDA'S silk products, because NARDA'S products will be considered as mass-produced goods.
- 5) In this project, they cannot utilize idle labor like old men and children in the rural area.

From these problems, I recommend the following plan; To get a stable and long term policy and budget for sericulture development projects, request tie-up with Japan International Cooperation Agency (JICA). During the project survey, it will be the chance to find the future figure of the Filipino sericulture with realistic and long term vision. In the project, I recommend sericulture as small-scale industry. The difference from the present project are, after they harvest cocoons, instead of selling cocoons, the farmers should try reeling under small scale because they do not need high quality raw silk for folk art article and they do not need to spend much for starting reeling, and they weave their raw silk at their local place and use their own facilities so that farmers can make final products without exploitation from the middlemen, and put additional value to their own products. In this process, they do not need to pay much capital for starting, for the weaving, people in Benguet has skill and facilities already, but those skilled persons are getting old. I believe this time would be the last chance to utilize their skill because of old age. And technically, PTRI will be able to give them support with JICA and for marketing, they will find consumers in local and overseas market easier. In this

program, it is necessary to improve the quality but some bad quality can be changed to their advantage.

This report covered the most important aspects which need close, if not, drastic change since these are the most important aspects for the improvement and development of the sericulture industry in the Philippines.

However, my stay there had been the most fruitful and enjoyable since I came to know about the need of the Filipino people in the field of sericulture. I would like to extend my deepest gratitude for the warm accommodation and hospitality afforded me.