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GOVERNMENT OF NAGALAND

**EVALUATION REPORT
ON
HORTICULTURE RESEARCH FARM
AT
PFUTSERO.**

**Evaluation Department
Govt. of Nagaland. Kohima.**

PREFACE.

This Evaluation Study on Horticulture Research Farm at Pfutsero was taken up at the instance of the Phek District Planning & Development Board to which the report has since been submitted.

The data relating to the study covered about a three decade long period from 1964-65 to 1995-96 and the evaluation study team was handicapped in its effort to conduct the study due to non-availability of required data on quite a few aspects of the study.

The report has suggested some measures for improving the performance of the Horticulture Research Farm. It will be considered to have served its purpose if the recommended measures are implemented.

The Evaluation Department gratefully acknowledges the help and co-operation received from the officers and the staff of the Horticulture Department particularly the Horticulture Research Farm at Pfutsero.

The study was conducted by an Evaluation Team headed by Shri Chungpongchiten Jamir, District Evaluation Officer Phek and the report was finalised under the supervision of Shri N. Zeliang, Joint Director of Evaluation. All of them deserve appreciation.

Dt. Kohima the
April/1998.

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MAIN FINDINGS AND SUGGESTIONS.

1.1. Some of the main findings and suggestions that emerges out of the present study are given below.

ON MAINTENANCE OF RECORDS.

1.2. It is strange to see that the implementing agency does not maintained any records. Vital records such as category wise posts sanctioned by the Government, production of nursery seedlings, income derived from the sale of seedlings and fruits, total quantity of chemical fertilizer and pesticides received from the competent authority etc are not at all maintained. In the absence of such important records it is not possible to make any systematic assessment of the progress or otherwise of the Farm. The department should in future ensure that proper records are maintained in all the activities of the farm. Due to the non-availability of records the study report on Horticulture Research Farm, Pfutsero could not be brought out as originally planned.

ON SHORTAGE OF TOOLS.

1.3. The Horticulture Research Farm covers an area of 365 acres of land. On order to grow the different kinds of seedling/plants in a healthy way, clearing of farm area by cutting down the grass were done at least twice or thrice in a year. For this purpose, necessary tools and other related articles are required. During field investigation it is reported that, these required tools which were supplied during 60's and 70's has already been damaged and no new tools has been supplied to the Farm by the authority. As such, the clearing of the Farms area are done with the personal belonging of the Mallicks.it is therefore suggested that the approximate immediate needs of the farm as listed below may be supplied to the Farm without delay: -

1.	Dao	20 Nos
2.	Spade	20 Nos
3.	Scature	20 Nos
4.	Budding and grafting knife	20 Nos
5.	Prenness saw	15 Nos
6.	Sprayer	5 Nos
7.	Wheel trolley	5 Nos

ON FENCING OF FARM.

1.4. The fencing which were done during 60's has already been damaged. The official of the farm reported that due to the lack of proper fencing, considerable quantities of fruits were used to be stolen away every year. In addition to that, domestic animals like cows, goats etc. used to entered the farm area and eaten up or destroys the young plants of different fruits. As such permanent fencing should be provided to the farm area. This farm land is also likely to be encroached upon by the private individual in the near future unless proper fencing is provided.

ON SHORTAGE OF STAFF.

1.5. It is surprised to see that the implementing agency has no record or knowledge on how many posts of different category has been sanctioned for the farm. However, during field investigation it is observed that the farm is facing shortage of man power especially the Mallicks. At present, there are 13 Mallicks, and to clear up the farm area covering 365 acres of land at least twice or thrice in a year by those 13 mallicks may be difficult. It is reported that at least 7 more mallicks posts should be created for this farm. It has also been reported that due to the absence of U.D.A/Accountant post, it is difficult to deal with the financial matters and as such an experienced UDA/Accountant and one Lower Division Assistant (LDA) should be posted. The Department may consider for creation of such posts.

ON STAFF QUARTER.

1.6. All the staff quarter were constructed during the last part of the 60's and early part of 70's and most of the quarters are partly damaged. These staff quarters are required to be repaired at the earliest before they are further damage.

ON ABSENCE OF RESEARCH EQUIPMENTS.

1.7. Another finding of the study is that though it is a Horticulture Research Farm it does not have a single item of research equipments available to the farm and the official and staff are simply looking after the old plants of different fruits which were planted during 1967-68 with the same old methods of practising nursery seedlings. This research farm is expected to do the research works on horticulture for the state other-wise the purpose of establishment of a research farm with the present system of working has defeated the very purpose for which it was established.

MARKETING OF THE PRODUCT.

1.8. The official of the Department reported that, the farm could produced about 10,000 Kgs. of different fruits in a year. Fruits being perishable item, unless they are sold at the right time, the fruits will perish within no time. But due to the non availability of market facilities and cold storage equipment for preservation of the fruits, most of the fruits were sold out in the local market at a throw away price and most of the unsold fruits were being either perished, eaten up by animals or stolen by the people. The concerned department should find ways and means for the disposal of all the products of the farm at the right time so that the miniature production of the farm is fully utilise without wastage and for earning more revenue to the State Government.

CONCLUSION.

1.9. In short, the objective of the Horticulture Research Farm at Pfutsero is to do research work on various kinds of seedlings and produced fruits to generate considerable income besides educating the people for taking up self employment through horticulture activities of rural people. A scrutiny of 30 years working of the farm it is found that the annual income is about Rs. 43,000/- (Rupees forty three thousand) only. Thus, the income derived from the farm may not even sufficient to meet the sundry expenses of the farm leaving aside the maintenance of 18 (eighteen) regular officers and staff. Any impartial observer will come to the conclusion that the farm should be properly managed so that it is allowed to run at least at a no gain no loss basis otherwise it has no justification for its continuation by wasting the state limited resources

INTRODUCTION OF HORTICULTURE RESEARCH FARM AT PFUTSERO.

2.1. The Government Horticulture Research Farm, Pfutsero is under pfutsero Sub-Division of Phek district, Nagaland. The farm is situated in an altitude of 6000 to 7000 ft above sea level. The total area of the farm is 365 acres or 150 hectares of land and the oldest horticulture research farm in Nagaland, This Horticulture Research Farm, Pfutsero was established in the year 1964-65 after proper survey conducted by the Agri Department Government of Nagaland. It was under the Department of Agriculture for about 22 years. But in the year 1992 when a separate Directorate of Horticulture was established it has come directly under the control of the Directorate of Horticulture, This Horticulture Research Farm at Pfutsero is purely a Government of Nagaland undertaken.

OBJECTIVES OF HORTICULTURE RESEARCH FARM.

2.2. Nagaland provides excellent conditions for growing all sorts of sub-tropical and temperate fruits. Procurement of fruit seedling and grafts/bulled materials from outside the State are normally found not only sub-standard ill health and pest incidents but also could not be done in time due to delay in transit causing more mortality rate even after plantation. In order to have the desired quantity and quality through systematic research works particularly for conducting research works on high altitude fruits this horticulture Research farm at Pfutsero was established in 1964-65.

OBJECTIVE OF THE STUDY.

2.3. The Horticulture Research Farm at Pfutsero was start functioning since 1964-65 with the objective to conduct research works of high altitude fruits. The farm is having the full requirement of staff and other necessary requirement from the conduct of research works. The State Government is by now supported to have being receiving the full benefit of the Farm.

As such, the Evaluation Department of Phek district was directed to undertake the study with the following as main objectives.

1. To assess its working and progress.
2. To ascertain its shortcomings and difficulties and suggest possible measures for removing them.

PERIOD OF THE STUDY.

2.4. Most of the plants of different fruits were planted during 1967-68 and since then new planting and replanting is in continuous operation. The study was thus cover the period right from the inception of Horticulture Research Farm at Pfutsero i.e. 1964 to 1995.

SCOPE AND METHODOLOGY.

2.5. This study was confined to the working of the Farm only. The impact of the Farm are not attempted in the present study. For the purpose of this study a structural schedule I. was used in course of field investigation to collect the required information from the implementing agency.

LIMITATION.

2.6. It was found difficult to work out year-wise achievement. As such, the cumulative achievement right from its inception i.e. 1964-65 upto the time. This study was conducted to assess the progress of the Farm. However records on earlier years are not maintained by the implementing agency, Records on financial involvement such as land compensation, purchased of vehicles, purchased of tools and equipment, construction of staff quarters etc are not at all available to the Evaluation team. Thus the analysis on financial target and achievement could not be attempted in this report.

CHAPTER-III.

ORGANISATION AND STAFFING PATTERN.

3.1. The over-all administrative and financial control rests with the Directorate of Horticulture, Kohima Nagaland. In the district level there are District Horticulture officer and subordinate staff in each district. However, Horticulture Research Farm at Pfutsero is under the independent supervision of a Research officer with its subordinate field staff viz: - Grapter, Field Assistant and Mallicks as well as other ministerial staffs.

STAFFING PATTERN.

3.2. The Staff position of Horticulture Research Farm at Pfutsero are presented in table -1 below.

SI. No.	Name of the post	Total Number of post sanctioned	Total no. of posts in position	Educational Qualification
1	2	3	4	5
1.	Research officer	Not available	1	B.Sc (Agri)
2.	Grapter	-do-	1	B.Sc (Agri)
3.	Field Assistant	-do-	3	1) Class VIII standard. 2) Class X
4.	Mallicks	-do-	13	Illiterate to Class standard
5	Head Assistant	-do-	1	Under Matric
6	L.D.A.	-do-	1	P.U.
7.	Typist	-do-	1	Class X.
a	Driver	-do-	1	Class VI.
9.	Peon	-do-	2	Class VIII & VII
10.	Chowkidar	-do-	1	Class III.
TOTAL			25	

(Source - implementing agency).

3.3. Due to the non-availability of records from the implementing agency, the Evaluation team could not obtained the required information such as total number of post sanctioned by the Government for each category of posts, as indicated in Table-I (Col.3) above. However, the Research officer of the farm reported that one post of trained accountant or UDA and one experienced LDA with the minimum qualification of P.U. is required immediately besides 7 more posts of Mallicks and one farm Chowkidar and one Sweeper to run the farm effectively.

3.4. The Evaluation team has collected the information on how many field workers are trained in their respective line. The position is presented in the table-II below:-

SI. No.	Name of the post	Total number of posts	Total number of trained staff	Total number of Staff having no trained
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1	2	3	4	5
1.	Research Officer	1	1	-
2.	Grafter	1	1	-
3.	Field Assistant	3	3	-
4.	Mallicks	13	-	13
TOTAL		18	5	13

(Source: - Actual staff position as on date of visit).

3.5. The above table - II showed that all the field workers of different categories are trained staff except the Mallicks which of course does not required any specialised training for the performance in their duty. Most of the Mallicks are engaged in the farm for a number of years that they are found experienced in their respective activities.

OFFICE / STAFF ACCOMMODATION.

3.6. The Horticulture Research Farm is located 7 Kilometre away from Pfutsero town. The nature of works required that all the staff should be available in the farm itself.

3.7. Considering the importance of accommodation of the staff, the Evaluation team has collected information on availability of staff quarters and presented in table - III below: -

SI. No.	Type of quarter	No. of quarter	Number of staff.
1	2	3	4
1.	Type - 5	1	
2.	Type - 3	9	25
3.	Type - 1	5	
TOTAL		15	25

(Source: - Farm Record.)

3.8. During field investigation by the Evaluation team, the official of the farm reported that most of the quarters were constructed during 60's and some quarters are badly damaged that it is not possible to occupy such quarters. It is found that many staff are staying in rented house at Pfutsero Town. It is observed that many quarters are required to be repair for proper accommodation of the staff.

CHAPTER - IV.

WORKING OF HORTICULTURE RESEARCH FARM.

Nursery Seedlings.

4.1. It is reported by the Research Officer, Horticulture Research Farm, Pftusero that at the initial stage of the establishment of the Farm, most of the seedlings of different fruits were imported from the Horticulture Nursery Farm, Gauhati Assam, Himachal Pradesh, and Jammu and Kashmir.

4.2. Plantation of seedling was done in 1967-68 after the import of seedling from the above states. The Farm developed in the subsequent years and produces seedlings of various fruits and planted in the farm itself.

4.3. The Evaluation team during field investigation has obtained the various kinds of seedlings planted at the initial years of the opening of the farm and the reports obtained were presented in Table - IV. Below: -

SI. No.	Name of fruits	Year of planting	Total No of Seedlings planted	Total no of Seedlings died	Total no of Trees Survived	Total no of trees existing Including gap filling
1	2	3	4	5	6	7
1.	Apple					
2.	Plum					
3.	Peach	1967-68	20,000	10,000	10,000	15,000 (including Gapfilling)
4.	Pear					
5.	Walnut					

(Source: - Official record).

4.4. From the figure indicated in table-IV we find that out of the total number of seedlings of various fruits planted only 50% of the plants could survive. On enquiry by the Evaluation team, the concerned official reported that the rest 50% of plants died due to different kind of diseases like stem borers and root borers etc.

4.5. The concerned official has also reported that almost all the plants of different fruits were planted during 1967-68 and are about to die and as such re-plantation is going on every year.

4.6. The Evaluation team attempted to obtain the total number of seedlings of various fruits planted. But, such information could not be furnished by the implementing agency.

Chemical fertilizer and pesticides.

4.7. The information as furnished on the used of chemical fertilizer and pesticides are shown below in Table - V: -

Sl. NO.	Name of chemical fertilizer and pesticides used.	Total quantity received in year.	Source of received.
1	2	3	4
1.	Nitrogen		
2.	Phosphorous	5 metric tons	Dealers of different company
3.	Potash		

(Source: - Furnished by the Deptt. Official).

4.8. The detailed required information as desired by the Evaluation team could not be furnished due to lack of records. The available records are however presented in the above table. It is therefore felt that proper records should be maintained in future.

4.9. The concerned official of the Farm also stated that chemical fertilizer and pesticides received were quite inadequate compared to the requirement of the farm.

Tools and related items.

4.10. The Horticulture Research Farm, Pftusero is having an area of 365 acres of land. In order to clear up the farm twice or thrice every year, certain quantities of tools and equipments should be made available to the farm.

4.11. Considering the importance of tools and other required items for clearing the farm, the Evaluation team, tries to collect the information on the total number of tools and other related items which were used and in stock. But it is very discouraging to see that no tools are available in the farm. The official of the concerned farm reported that the tools supplied to the farm during 70's were all damaged and no new tools has been supplied so far. As such, clearing of farm are entirely done by the tools belonging to Mallicks only.

Nature and number of clearing the farm.

4.12. As per the information obtained from the implementing agency, clearing of farm are done twice or thrice in a year. Such clearings of farm are being done by the Mallicks of the farm who are paid a daily wages of Rs.25/- per head per day.

CHAPTER - V.

OUTCOME OF FARM.

5.1. The Horticulture Research Farm located in Pfutsero division of Phek district, Nagaland was established during 1964-65 and the first planting of different fruits were done during 1967-68. As per the reports of the implementing agency, a total number of seedlings of different fruits planted during 1967-68 was 20,000 seedlings.

5.2. In the subsequent years, the practice of nursery seedlings were started and considerable number of nursery seedlings were distributed to the needy farmers on free of cost at the earlier stage and now on cash payment. This process is still continuing till date.

5.3. The data on methods of disposal of the seedlings and the amount earned through sale of seedlings are collected and the information obtained were presented in table - VI.

TABLE -VI.

SALE PROCEED OF SEEDLING.

Sl. No.	Name of the fruits	Total number of seedlings produced in a year	Total number of seedlings distributed to private individual at the free of cost.	Total number of seedlings sold in cash.	Amount earned from the sell of Seedlings.
1	2	3	4	5	6
1.	Peach				
2.	Plum	10,00	5,000	4000-5000	Rs. 20,000
3.	Apple				
4.	Pear				
5.	Walnut				

(Source: - Furnished by the Department).

5.4. Due to non-maintenance of records, the concerned official could furnished Only an approximate figure. The data on fruit-wise seedling distributed and sold was not available.

5.5. The above figures indicates that out of the total seedlings of different fruits produced, 5000 seedlings were distributed to the desired private farmers at free of cost and about 4000-5000 seedlings were sold in cash and the annual approximate amount earned from the sale of seedlings is Rs. 20,000/-

5.6. As per the reports of the official of the implementing agency, normally bearing of fruits starts from 5-10 years after planting. Most of the fruits plants were planted

during 1967-68, and as such the farm starts producing certain qualities of fruits for a number of years. The information on fruit production as reported are presented below.

TABLE – VII.

ANNUAL PRODUCTION OF FRUITS IN THE FARM.

Sl. No.	Name of fruits.	Total quantity produced (In kg) in a year.	Total quantity Consumed.	Total quantity sold.	Source of Disposal.	Amount received Through sale.
1	2	3	4	5	6	7
1.	Peach					
2.	Plum	10,000 Kg	1,000Kg	8,000Kg	Local market	Rs.23,000/-
3.	Apple					
4.	Walnut					
5.	Pear					

(Source: - Furnished by the Department)

5.7. The above table, shows that the farm could produced 10,000 kg or 10 M.T. annually out of which 8,000 kg of fruits are sold in the local market. On the average the amount received through sale in the local market is Rs.23, 000/- annually. The remaining 1,000 kg. of fruits are reported to be either consumed by the staff or eaten by animal or stolen away by the miscreants as there is no proper fencing to protect the farm.