

**RECOMMENDATIONS
FOR
Transforming CTAHR's Research Station System to Meet
Future Research Needs**

Submitted
To
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March 24, 2000

Review Committee
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By
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INTRODUCTION

Self-evaluation and external reviews performed at regular intervals provide information that can be used to help guide organizations to stay relevant and avoid crises. A review of the University of Hawaii, College of Tropical Agriculture and Human Resources, experimental and demonstration farms was conducted in early 1996. It was done "for the purpose of making recommendations to improve the experiment station system, to find areas in which funds could be saved", and to "develop and recommend options... for the most efficient use of resources to support CTAHR's field stations." Implementation of the recommendations was delayed, by and large, because of the college reorganization initiated by Dean Charles Laughlin in late 1996. In May 1999, Dean Laughlin asked for an updated assessment of the farms and for the development of an implementation plan. Thus, a committee, consisting of Dave Oka, Kelvin Sewake, and D. P. Schmitt, was given the charge of developing an organizational plan for an experiment station system that would be more efficient and provide for better utilization of resources.

CURRENT STRUCTURE

Experimental farms vary in their management and supervision. Farm managers manage most of the research farms. The supervisor of the farm manager is the County Administrator. Two farms with a primary focus on animal research are under departmental control, but are managed day-to-day by a farm manager. One plant research facility is totally under departmental control. Three facilities are operated and managed by the Cooperative Extensive Service.

GENERAL ASSESSMENT OF FACILITIES, OPERATION, AND RESOURCES

Little change at the farms has occurred since the June 27, 1996 report entitled "CTAHR EXPERIMENT/EXTENSION status report: Needs, Utilization, and Structure." In most cases, the land and human resources are adequate to meet the research and educational needs of the CTAHR research and extension staff. In fact, most farms have a labor pool that exceeds the requests of researchers. Plot allocations are few compared to the resources available. However, two farms do not have sufficient personnel to meet the demands on their facilities. Equipment still has not been upgraded. Many abandoned plots still have not been addressed as to their fate. Plans for the farms have not been developed concerning a strategy for their use. Security remains a serious issue. The number of personnel has decreased in the past three years and this fact may be related to morale problems within the system. The administrative structure described under "Current Structure" is still viewed as a problem. Funding for research farms has continued to decline since the 1996 report. As a consequence, entrepreneurial activity has become an attractive alternative for raising funds. Various approaches are being explored; some activity already exists. This issue has legal and practical implications that will require special attention.

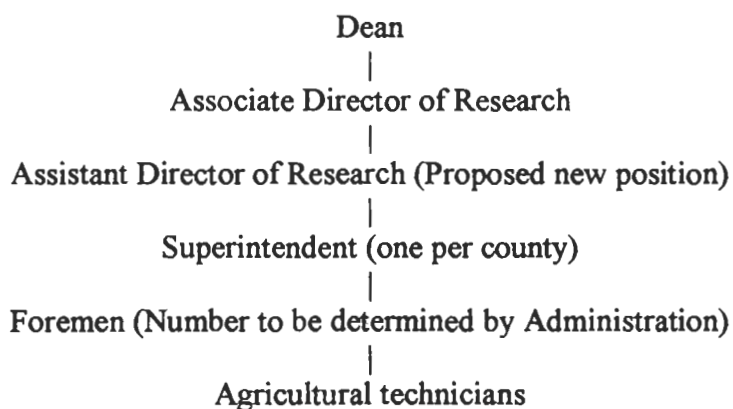
ACTION PLAN

The issues and needs on the research farms and in the experiment station system are so numerous that a long-term approach will be necessary to address even some of the needs. Thus, a list of many of the major concerns and needs for the research farms was developed for the record, but it was deemed necessary to prioritize the most critical ones for immediate or short term implementation.

Method used to determine priorities and action.

The issues identified and the recommendations for general and specific improvements were developed from data collected during a review of every farm, meetings with research station personnel and researchers, and discussions with interested individuals from the commercial sector. The committee attempted to determine the potential usage of plots on the farms by researchers within CTAHR, USDA, and other agencies. They also studied trends in staffing over the past 10 years and assessed the potential trend for hiring new faculty during the next five years. Trends in kinds of research were evaluated and then projections for future types of research were based upon those that occurred during the past 5 to 10 years. The final recommendations that appear in this document were the committee's best judgement of the probable types and quantity of research that will be conducted on CTAHR research farms during the next 5 years.

I. PROPOSED ORGANIZATIONAL STRUCTURE



The Assistant Director will be responsible for the overall management (but not day-to-day operational management) of all research farms including research farm budgeting, planning, training, plot allocations, and oversight. The superintendent and foreman will be responsible for day-to-day operations such as planning work schedules, job assignments, and immediate supervision of the agricultural technicians. The superintendent should have sufficient authority expedite actions at the local level.

II. RECOMMENDATION FOR ACTIONS FOR SPECIFIC FARMS

The farms were placed into three categories for recommended actions. Category 1 includes those farms where research activity has been minimal and will likely continue to be minimal. Farms placed in Category 2 are those that have a sufficient number of plot allocations to justify additional support to improve the facility. They also have the potential to sustain or increase the amount of research activity on them. Category 3 farms generally have adequate support staff and adequate infrastructure to provide services to meet requests for plots. These farms need the least in terms of additional funding to allow them to function.

Category 1

Annually review, reduce activity, suspend operations, or close

The farms cataloged in this category are difficult to justify for continuation of their operation. Most of them have few if any requests for plots. The personnel either exceeds requests for work or personnel have to be moved to the work site whenever work is required. These farms have a high demand for maintenance not related to plot requests; thus the agricultural technician's time is shifted away from more relevant activities. Further, they cause an additional financial drain on a fiscally stressed system. Finally, usage will probably continue to decline on these farms based on the indicator data.

The following farms are proposed for closure (i.e. stop all activity on the farm, however, CTAHR could still retain the land), reduction in activity, phase out, or annual reviews:

Farm	Proposed action	Rationale
Captain Cook	Close, move germplasm of value, eradicate fruit and nut trees.	Pig problem; hazardous conditions for moving machinery (currently done by private vehicle since station trucks are inoperable); land is leased from a private owner.
Haleakala	Close	No evidence of usage for past few years with no indication that situation will change. (The committee is not sure if this station is still controlled by CTAHR)
Hamakua	Phase out	No longer used for cattle; road access can be hazardous; a single project extant; little prospect of future utilization.
Lalamilo	Phase out	Used for seed production that could be done elsewhere; history of little plot usage; no indication that land and facilities will be requested.
Malama-Ki	Close; demolish all structures; abandon land; eradicate fruit and nut trees.	Major security problem; largely a land maintenance operation; no utilities; safety issues; remote; little utilization (one plot).
Maui Low elevation	Reevaluate in 2001	Short-term need while heliconia varieties are being released; major security problem; poor water quality; little usage.
Paddy	Review annually and consider phase out.	Although highly suitable for wetland crop research, little or no relevant research for state of Hawaii; most utilization is for rice research contract.
Pulehu	Review annually for potential phase out and closure	Currently utilized for taro and protea, but is privately owned and for sale (sale apparently not imminent). Fate beyond taro project uncertain.
Volcano	Review in 2002	Some utilization; unsure of future utilization.
Waialeale	Reduce operations: eliminate swine unit, reduce dairy herd by 50% or more, and phase out sheep.	Difficult to maintain standards for swine unit; income from dairy operation does not meet expenses; sewage overload; little usage for education; feed is expensive; costly veterinary care; buildings need repair.

Category 2
Focus for resources

It seems clear that the time has come to concentrate resources in strategically located facilities. There is not sufficient evidence and justification from faculty that we need all of the present facilities and environments. The future hiring trend also is indicative of a research thrust that is not likely to require field plots, at least in the foreseeable future. On the commercial agricultural scene, cropping patterns are changing in Hawaii. These changes requires new research sites. To address this aspect, some research is being conducted on private farms. Since there is consider activity in diversified farming on the Hamakua Coast, discussions are recommended concerning the development of a new research site in this area. Thus, the following recommendations for focusing resources:

Farm	Proposed action	Justification
Kona	Add resources; upgrade physical plant; develop as an education-research center with demonstration plots	It is in the center of the coffee industry and is a developing urban area. Infrastructure is already present for an education-research center, but capital improvement will be necessary.
Mealani	Develop education-research center	Station is strategically located for the cattle industry. Land and facilities exist. With some capital improvements, a wide variety of activities could be accommodated in plant and animal education and research. The key is interest from extension faculty and researchers, relevance of effort, and administrative priority.
Poamoho	Add resources; upgrade physical plant; enhance security; destroy fruit tree plots without valid plot allocation; address irrigation cost; move extension staff to this location	This is the center of diversified agriculture on Oahu. Soil is representative.
NEW-Hamakua Coast	Develop a low elevation research facility	Much trial and error farming is being attempted in this recently abandoned sugar cane production area. The developing diversified agricultural industry in the Hamakua coast would have a source of relevant research.

Category 3

Farms to be maintained at their current level of activity

These farms have sufficient plot allocations to continue operations with existing personnel. However, some additional resources may be required to manage plots and provide routine maintenance of the area and equipment.

Farm	Status	Recommendation
Kapaa	Station resources and facilities exceed user requests.	If requests decline for plots and farm resources, consider reducing the amount of managed land and greenhouses. Encourage researchers to address production issues limiting grower income and urban plant health problems. Develop a plot area to demonstrate plant growth technology.
Kula	Station fully utilized, primarily for protea and taro. Physical facility generally good.	Continue focus on protea, taro, and the display garden. More thrust on developing the station into an educational center is encouraged. Site is suitable to cool climate vegetables.
Maui Ag Park	Eleven acres with six acres cleared for plots; no buildings. Generally well utilized for research plots.	This location is a logical extension of the Kula Research Station complex. Foster and encourage more researcher utilization. Develop plans to erect a greenhouse to replace the facility at Pulehu when that land is sold.
Waiakea	Located at the edge of Hilo. Modest utilization of space and resources. Many tree plots that no longer have plot allocations.	Eradicate trees. Develop an educational center with plots demonstrating plant growth technology.
Waimanalo	Facility is being improved and has relatively effective utilization of land. Major security problem.	Although there is relatively "good" usage of the land for plots, concerns about some of the utilization indicates a need for formal annual reviews with monthly visits by the Manoa-based administrator to determine the direction, utilization, and mission of this farm. Must install state of the art security system.

III. CONSIDERATIONS TO MAKE THE ORGANIZATION MORE EFFECTIVE

Some basic administration functions must be changed to enhance effectiveness of the farms operations within the system. Key issues affecting morale, economics, and relevance have been raised during the review of 1996 and again in the-1999-2000 review. The issues and proposed solutions are:

A. Centralize the administration of the farms.

Issue: Too many “layers” in the Experiment Station System.

Recommendation: Administration of research farms was addressed in part under the “Proposed Organizational Structure”. It is suggested from a variety of inputs that this position be located in Manoa and be given the rank of Assistant Director. This person should have budget authority to assure equitable distribution of resources (funds, personnel, and equipment) for operations. All farms including those under the control of departments and extension should be placed under one administrator.

B. One farm superintendent per island.

Issue: Need for consistent day-to-day management.

Recommendation: The superintendent, working with the foremen, would be responsible for the day-to-day management of the farms. The Assistant director and superintendent would jointly determine the need for foremen (number and locations). The superintendent and the foreman need to be skilled at public relations activities, personnel management, fiscal management, and resource maintenance and management.

C. Harassment:

Issue: Some researchers conduct research on farms without plot allocations. Intimidation (harassment) is the means used by the researchers to obtain plot land or special favors.

Recommendation: Protect farm managers or other farm staff members responsible for assigning plot space from harassment.

D. Communication.

Issue: Communication is seriously lacking at all levels concerning the farms.

Recommendation: Have frequent meetings between Manoa administration and local farm staff. For example, the Superintendent should meet no less than monthly with the entire staff and at least weekly or more often with the foreman (foremen). The Assistant Director should visit each farm no less than semiannually with the goal of assessing needs, articulating expectations, addressing issues, developing budgets, setting priorities, and discussing policies.

E. Funds for farms.

Issue: Funds are not adequate to operate an effective research station system; management of funds has not been uniform across stations; multiple numbers of people managing funds.

Recommendation: Place all funds for research farms into one account and give the Assistant Director fiscal responsibility for the system funds. Have researchers bear the cost of their experiments for all aspects except personnel and permanent infrastructure. The farm superintendent should have signatory power for farm expenditures.

F. Personnel training.

Issue: Agricultural technicians are not receiving adequate training for their job.

Recommendation: Provide training at regular intervals to maintain and improve the skills of the workers. Safety training is crucial and should be on-going. In addition, the opportunity for education typically provides incentives for workers. Leadership and management training should be mandatory for superintendents and foremen.

G. Develop strategic plans, farm policies, and guidelines.

Issue: Neither the system nor the individual farms have operational direction.

Recommendation: Develop a strategic plan with policies and guidelines for each farm and for the system. The purpose and expectations need to be clearly articulated.

H. Entrepreneurial activity.

Issue: Concern about cost-return factor and legal aspects of production on University farms to raise revenues.

Recommendation: Obtain legal advice from University lawyers. Develop policies that are in concert with the mission of the experiment station system. Perform an economic analysis to determine if the production is sufficiently profitable.

I. Tree collections.

Issue: There are many germplasm collections, most of which do not have plot allocations. Some of these collections have been in existence for many years with little or no maintenance and no data collection.

Recommendation: It is imperative that action be taken to concentrate the valuable germplasm and remove all plantings for which there is no further justification for continuation of the collection. Develop a plan for preservation and destruction of existing material. New plot allocations must provide a plan for disposition at the termination of the experiment.

J. Security.

Issue: Several farms have major security problems.

Recommendation: Focus research efforts on fewer farms. These primary farms should have a residence available for the Superintendent or foreman. In addition, modern security and alarm systems should be installed to minimize theft and vandalism. At least one station on Oahu and one other island should have a station with "maximum" security for those projects that require that type of security. Further, all stations with significant plot activity and equipment should have a high-level security system that would deter most intruders. Since a considerable amount of theft is directed at harvestable fruits and vegetables, any plots that have been terminated must be destroyed.

K. Regulatory Compliance.

Issue: OSHA has worker safety requirements. Animal care must meet specific standards.

Recommendation: Provide the resources to make necessary improvements and then maintain facilities at a level that will readily pass the minimum standards. Wherever possible, concentrate functions requiring regulation, especially for animal research.

L. Servicing off station projects.

Issue: Project leaders request help from research station agricultural technicians for research conducted on private farms.

Recommendation: Develop clear guidelines and protocols. Determine if liability is a factor.

M. Plot allocations.

Issue: Some research is being conducted without a plot allocation. The plot allocation system has not been well managed. *In addition, some researchers use intimidation of farm managers to achieve their goal rather than following protocol.*

Recommendation: The existing plot allocation system is logical. Research should not be allowed unless approved through the plot allocation process. Enforcement of initiation and termination of plot allocation must be done at all levels in the process. The farm level

manager (superintendent or farm manager) needs administrative support to stop the intimidation process used by some researchers.

N. Farm supervisor's meetings.

Issue: Communication is inadequate from administration to the research farm leaders.

Recommendation: Superintendents and farm foremen should meet annually with the administrator to determine priorities for farm-needs and activities. These meetings should include training sessions and a business meeting.

O. Equipment.

Issue: Much of the equipment is old, obsolete; and/or inoperable.

Recommendation: Develop a schedule and priority system to purchase new equipment.

P. Position description updates.

Issue: Position and job descriptions are rarely updated to agree with job responsibilities as they change over time.

Recommendation: Develop a schedule to review and update job descriptions of agricultural technicians. This will be the joint responsibility of the Assistant Director and the Superintendent.

IV. PRIORITY FOR ACTION

Since there are many needs for the research station system and the individual research farms, it becomes necessary to establish logical priorities so that attention can be given to issues to start the process for improving the system. Administration is encouraged to immediately implement two or three of the higher priority aspects. After adequate time has been allowed for action from the implementation, a reevaluation should be done to determine the next level of priorities.

PRIORITY #1: Assign the overall leadership of the research station system to one person with that position located at Manoa. This administrator should be given complete budget authority as well as system wide management authority.

PRIORITY #2: Address regulatory compliance issues as recommended above under K.

PRIORITY #3: Incorporate all farms, including departmental and extension operated and managed farms, under the management of the director of the farm system. Establish an equipment and vehicle replacement program.

PRIORITY #4: Develop a system strategic plan and a plan for each farm based on relevance and need for the future that includes addressing the recommendations for closure, phase out, etc. Updating the job descriptions of the agricultural technicians is an essential component of the process in this priority.

PRIORITY #5: Review station situation with focus on impact of implementation of priorities 1-4 while considering other factors determined to be issues in this report.