



Malawi Agricultural Research Project

Center for Tropical Agriculture
International Programs
Institute of Food and Agricultural Sciences
University of Florida

The Department of Agricultural Research
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**OBSERVATIONS AND SUGGESTIONS CONCERNING
LIVESTOCK RESEARCH IN MALAWI**

Dr. H. D. Wallace, Chairman
Department of Animal Science
University of Florida
Gainesville, Florida

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INTRODUCTION

The two week visit to Malawi, from April 11-23, 1983 was undertaken for the following reasons:

1. To review the livestock/pasture research program.
2. To confer with and assist the Livestock Task Force in developing inputs for the Master Plan reorganization for Agricultural Research in Malawi.
3. To gain needed insight to improve backstopping procedures at the University of Florida.

It was my privilege, as a result of the planning and coordination efforts of Dr. Dick Gray, to see most of the livestock/forage research and development programs presently underway in Malawi. These visits included the Bvumbwe ARS, Lunyangwa ARS, Mbawa ARS, Chitedze ARS, Chitala ARS, Mikolongwe Veterinary Center, Choma Veterinary Center, Central Veterinary Laboratory, Lilongwe, Mpamba Training Center, Malawi-Canada Dairy Project, Kuti Ranch, Lifidzi Ranch, Dzalanyama Ranch, Bunda College and several small holder farm operations. During these visits I met many wonderful people who were friendly and helpful.

I have also had the pleasure of meeting and conferring with many persons in high office concerned with Agricultural Development in Malawi.

As a first time visitor to Malawi, I was impressed with the natural beauty of the country, the domination of agriculture as the main national resource, and the people -- their industry, friendliness, and determination to improve life in Malawi. The

national goal of "Health for all in the year 2000" is most commendable. It is a lofty goal and can be achieved only if agricultural education and development lead the way. Land and water resources must be utilized more efficiently and conservation of these vital resources must be given very high priority.

Although I have seen and learned much about animal agriculture in Malawi during these two weeks, I must not be considered an authority on local conditions in Malawi. It would be terribly presumptuous to make specific recommendations. I hope that the general comments and suggestions which follow may provide some additional pertinent insight to help facilitate the establishment of an economically sound and pertinent livestock research program.

THE IMPORTANCE OF ANIMAL AGRICULTURE

It is obvious that Malawians love their animals and great tradition exists relative to this relationship. Management practices such as communal grazing of cattle, and free run systems for goats, swine and chickens are major constraints toward greater efficiencies. To overcome or find suitable substitutes for these traditional practices of the small land holder will in the short run be difficult. Nevertheless, major expansion and improved efficiencies in all phases of livestock production are needed. A balanced and strengthening agricultural economy cannot be achieved without livestock as a major component. Animals are extremely important, especially in Malawi, for the following reasons:

1. Animals fulfill a basic need of humans -- a desire to be

wanted and accepted and to have something rely on us for attention and care.

2. Animals are vital contributors to improved human nutrition. More meat, eggs and milk are greatly needed in the diets of Malawians, especially the children.
3. The use of farm animals allows more complete recycling of nutrients. Plant nutrients in animal wastes are utilized by plants and result in increased yields and a reduced need for scarce and expensive commercial fertilizers.
4. Production of cereal grains is accompanied by about an equal dry weight of crop residues. Thus many tons of crop residues that are unsuitable for human consumption can be utilized by livestock.
5. In the processing of crops such as grains, vegetables and oilseeds, many by-products are produced. Animals make productive use of such otherwise wasted products.
6. Farm animals make productive use of non-crop producing lands. Without animals these lands would produce little or no food.
7. Numerous useful animal by-products come from animals including tallow, greases, insulin, hormones, hides, skins, bones, etc. Numerous useful products can be manufactured from these by-products.
8. Animals are an effective method of food storage.
9. Animal draft power makes a major contribution to food production and transportation.

In summary, let it be said that contributions of livestock are so great that animals are essential to the well being of humans all over the world, and especially in Malawi. It is my

hope and recommendaton that livestock research in Malawi be given high priority and strengthened substantially in the new Master Plan.

NEEDED LIVESTOCK RESEARCH

Forage and Pastures

No area needs continued, intensive research more than forage evaluation and establishment. Suitable plant material must be identified which will improve the livestock carrying capacity of the land on a year around basis. Dr. Gray and Dr. Hodges have initiated a very pertinent and ambitious research program. All livestock research centers and veterinary multiplication centers should participate, provide demonstrations, short courses, and help disseminate suitable propagation material as quickly as possible.

Animal Nutrition

Animal nutrition research in Malawi has been woefully neglected and the opportunities are great. The shortages of critical feed ingredients and the lack of feed formulation control standards emphasize the seriousness of the deficiency. Good animal performance is a direct reflection of properly formulated rations. The farmer should be provided the needed dependable information on commercial feed ingredients and mixed feeds.

At least one well equipped animal nutrition research laboratory should be established and placed in operation as soon

as possible. The logical place for this laboratory is at the Chitedze ARS. Some of the needed equipment is presently on hand and finalization of this project should receive top priority.

Such a laboratory could provide leadership and services to all animal nutrition research throughout Malawi. It could provide backup services for the pasture and forage work and needed research in feed formulation, feed preservation, storage and processing.

Animal Breeding

Large scale comprehensive breeding and genetics research programs should not be undertaken in Malawi at this time. Available worldwide information of this nature should provide the needed information for logical breed selections for use in Malawi. The Malawi Zebu should continue to provide the main germ plasm base for beef cattle production. Specific crossbreeding research designed to upgrade the Malawi Zebu in terms of performance potential should be continued and implemented commercially in keeping with improved management capabilities. The crossing of breeds for use in smallholder dairy production systems seems justified. However, purebred Jerseys and Holsteins will serve the sophisticated commercial dairy enterprise more efficiently.

Reproductive Physiology

Low reproductive rates in livestock is a serious problem in Malawi. A combination of factors -- poor breeding management, inadequate culling, poor nutrition, inadequate health programs and

climatic stresses, all contribute to this problem. At least one scientist trained in reproductive physiology should be brought on line to coordinate and provide educational leadership to improve reproduction in Malawi livestock.

Food Handling and Processing

Food science research and the establishment of better food processing and preservation methodology should be high priority considerations. A concerted effort should be made to correct deficiencies which cause undue food wastage and contribute to health hazards. It was gratifying to learn that Bunda College is developing programs in this area.

COORDINATION OF LIVESTOCK RESEARCH, TEACHING AND EXTENSION

A striking observation was the need for better coordination of all livestock programs. There is much opportunity for greater efficiencies and effectiveness. Suitable integrated planning committees should be established to help insure relevant and productive research projects. At least one country wide coordination team should be established to function in this regard. It could provide all livestock personnel a better understanding of priorities, program objectives, and type and location of current programs.

TRAINING

Well trained people will constitute the ultimate ingredient

for progress in Malawian agriculture. The UF/USAID project has placed much emphasis on this component of the project. Many of the key agricultural research people are presently in training in U.S. Universities. These departures have disrupted some on-going programs and make it difficult for team members to establish and conduct certain research projects. However, the long term payoff is the important objective of the training. UF/USAID team members should be especially cognizant of the need for continuity in research and should place special emphasis on complete, understandable, properly filed documentation of all projects and data generated therefrom. It is hoped that USAID funding in Malawi will be long term. Unless it is, Malawian agricultural research people are facing difficult times and some unsurmountable problems.