

A COW'S BARN IS HER CASTLE

BETTER FORAGE, SHELTER AND CARE



Photo: Denis Marchand

Putting livestock in their place: Stabling cattle for a few hours a day helps farmers to control their feeding and weight gain.

DENIS MARCHAND

The Kisozi region of Burundi rises to an altitude of 2200 metres. It is only 90 kilometres from Bujumbura, the capital of this tiny Central African country, but the trip takes more than two hours by car.

The road to Kisozi is narrow and winding, filled with mud and strewn with rocks and roots. Washed down by the seasonal rains, all this debris is becoming as much a part of the landscape as landslides and farmland erosion.

The forests have almost completely dis-

appeared from the slopes which are very steep in places. They have given way to housing, commercial tea plantations, and subsistence crops. Every bit of land is used. With 147 people per square kilometre, the area is the country's most densely populated.

Farm holdings are generally very small—not much bigger than two hectares. Despite this, agriculture is the main activity of the local people, providing them with the means of survival and income.

On market days the women and children bring the surplus of corn, bananas, pota-

toes, and cassava from the fields to the main road. There it is picked up by trucks and taken to market in Bujumbura.

In the glens of the high plateaus, cattle graze lazily. Wandering freely on communal pastures, these animals belong to the small farmers of the Kisozi region. Most of the cattle are of the Ankole breed, characterized by enormous horns. Unfortunately, it is known for its low productivity.

"I used to let my cows graze on poor-quality pasture infested with parasites," says a farmer named Janvier. "Only half

their calves survived initially and, of those, half died in their first year. Now I realize that if I want healthy animals, they must have nutritious diets. These days I take better care of my cattle," says Janvier, pointing at two well fed cows eating cornhusks.

Janvier is one of the eight farmers who volunteered in 1984 to work with the Institute of Agricultural Sciences of Burundi (ISABU) to test a new cattle production system integrated with agriculture. As with the other farmers, ISABU provided Janvier the poles to build a barn with stalls and gave him a crossbred Ankole-Sahiwal cow in exchange for one of his Ankole cows.

Easier manure collection

The cattle graze for several hours a day in natural pastures. They spend the rest of their time in the barn stalls which makes it possible, among other things, to check their state of health, provide them with a rich and complete diet, groom their coats, rid them of ticks, and collect manure for use as fertilizer.

The manure is important to improving soil fertility and, therefore, crop production. It is placed in a shallow pit and covered to protect it from the rain which would otherwise leach out the nutrients. After accumulating manure for a year, the

farmers spread it on their maize and other crops or mix it with topsoil when the land is being prepared.

On carefully tended narrow lots, Janvier now grows his own forage crop, *Seteria splendida*, between the cassava and corn. The forage, which is grown in hedges, also helps to retain the soil on slopes. The other farmers have also planted Guatemala grass for forage.

To feed his cattle during the fallow season, Janvier stores his surplus forage in a deep hole which he covers with a thick layer of straw, followed by earth. Although this is a remarkably simple method, experiments by ISABU have shown that it is effective and conserves the silage for more than six months.

"We have no choice but to improve the system of raising cattle in Burundi—it has to be done," asserts Mathias Banzira, a researcher at ISABU. He explains that better management of cattle will do more than increase the production of meat and milk. It will also improve crop yields and reduce erosion of slopes by providing a cover of vegetation. "Although feeding cattle in barns constitutes a radical departure from traditional practice, the program has already been more successful with the farmers than we expected," adds Mr Banzira.

There are now about 50 experimental

farms like Janvier's. Most of the animals are in excellent health and their productivity has gone up considerably compared with cattle left to roam. The sale of milk and calves provides farmers with a sizable income, enabling them to buy more cows. The farmers who have been with the project since 1984 when it began now have two or three offspring of the Ankole-Sahiwal crossbreeds and are selling off some of their Ankole cattle.

According to Jean Berchmans Berahimo, the ISABU's head of animal production, the project meets obvious economic and nutritional needs. First, Burundi annually imports more than 1000 tonnes of powdered milk. Secondly, annual consumption of meat is less than 5 kilograms per person, and milk consumption is only 7 1/2 litres.

Greater numbers needed

There is still a way to go before this cattle production system is widely adopted. The research project is only one stage in a program to intensify cattle raising in Burundi. The animals still have to be bred in much greater numbers.

"We are snowed under with requests from farmers who have seen the results on the experimental farms and want to buy selected animals," says Mr Berahimo. "To meet the demand, the breeding centre would have to produce 400 head a year, whereas its present capability is limited to about 100."

Widespread dissemination of the program will require at least 500 breeders on the hoof. Two ISABU technicians are scheduled to be trained in Canada in the techniques of artificial insemination. On their return, they will work in Kisozi and at the Mahwa Livestock Research Station.

To date, ISABU experiments have shown that the Sahiwal-Ankole crosses are more disease resistant and more adaptable to the environment than the temperate breeds of cattle.

But Mr Berahimo's concerns go even further. As he sees it, increasing national milk production is simply one step leading to the establishment of policies on the processing and marketing of agricultural foods. "Even if our dairy system is currently operating below capacity, we have to start thinking about setting up a network for sales on the home market. Couldn't the 400 million Burundian francs we now spend on importing milk products be better spent on the processing industry?" ■



Surplus forage is placed in a hole and covered with straw and earth to preserve it. Farmers with the necessary resources construct stone-and-mortar walls around their store.

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