



Keith Kirkman centers his African Angus breeding program around some of the top sires in this country. His entire Donnington Farm cattle operation made quite a positive impression on author Anya McGuirk while she was visiting Zimbabwe (formerly Rhodesia) last fall—she offers a glimpse of that vastly different world here.

A native of Bel Air, Md., Anya McGuirk traveled to Zimbabwe after completing her master's degree in agricultural economics at Reading University in England (through a Marshall scholarship received from the British government). She completed her undergraduate work at Virginia Tech, Blacksburg, and currently is pursuing her doctorate in agricultural economics at Cornell University, Ithaca, N.Y.

DONNINGTON FARM

Angus In Zimbabwe

by Anya McGuirk

Aberdeen Angus, which originated in Scotland in the 19th century, have spread to virtually every major beef producing country in the world. Zimbabwe, Africa, where cattle are the second most important agricultural commodity, is no exception. Although Angus only represent a small proportion of the total cattle numbers on commercial farms in Zimbabwe, they have the potential to play an even bigger role.

Keith Kirkman, (a Rhodes Scholar) owner and manager of Donnington Farm in Norton, Zimbabwe, has proven how Angus can successfully play an important part in beef cattle ranching. Donnington Farm is a composite of seven individual farms totalling 17,500 acres. It could be classified as a mixed farm as Keith and his wife Charlotte

run 5,000 head of cattle and also plant 2,000 acres of crops each year.

A look at Donnington Farm demonstrates many differences between farming systems in the United States and Zimbabwe; many of these contrasts can be attributed to the differences in climates. Zimbabwe has a subtropical climate and capricious seasonal rainfall occurring mainly between the summer months of November and March. The overall rainfall average varies from less than 12 in. annually in the low altitude areas to over 40 in. in the higher altitudes.

Further contrasts in the management of farms in Zimbabwe and the United States can be explained by differences in the availability and expense of labor. In Zimbabwe, for example, the minimum wage for farm laborers



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is \$51 per month (this figure refers to Zimbabwe dollars—a current exchange rate shows the equivalent to be \$55 American dollars). Because of the low minimum wage and large available labor force, it is presently more economical and politically desirable to make use of this labor rather than become more mechanized. Donnington Farm employs 100 male laborers as well as some part-time female help when needed. Because of the large number of employees, the farm manager's role is predominantly one of labor management.

Cheap Labor and Subtropical Climate

The impact of both the climate and abundance of cheap labor is easily evident in the cropping system of Donnington. Not only is the natural growing season confined to the rainy months, but the total rainfall and its distribution are the overriding limiting factors of production.

Despite the fact that last year was quite a serious drought year for Zimbabwe, Donnington Farm (which lies in a high rainfall area) had 30 in. of rain. Coupled with the clayey type soil found on the farm (as opposed to the more predominant sandy soil),

Unlike the United States, Zimbabwe has a statutory marketing system which guarantees a market and price for fat cattle.

the higher rainfall enables the Kirkmans to farm relatively intensively. Last year's crops included 1,000 acres commercial corn, 500 acres soybeans, 250 acres sorghum and 300 acres hybrid seed corn. The average expected yields per acre were 105-122 bu. of corn, 1.2 tons of soybeans and 3 tons of sorghum. The basic rotational system is two years corn, one year sorghum, and one year soybeans.



Keith and Charlotte Kirkman run Angus cattle, Zimbabwe style. Donnington Farms, their 17,500-acre African operation, combines crops, commercial cattle and three purebred herds.

Although cheapness of labor helps make an operation of this size feasible, Donnington Farm is more mechanized than one would expect. The lack of mechanization is really only noticeable in the seed corn operation in which the corn is all husked, shelled and graded by hand.

Angus-Tuli Cross Works Well

The climate is the major factor affecting the system of cattle production as well. Environment affects not only the type of breed which is most successful, but also the grazing management system and health program.

The largest herd of cattle on Donnington is the commercial unit of 1,500 cows, mainly Angus-Tuli cross. Angus have played a role in the Donnington commercial herd since 1935. They are used in the crossbreeding program primarily because of their fertility, milk and mothering ability. Kirkman believes that one of the indigenous breeds should be used in the F_1 mother because of their disease and insect resistance, and their heat tolerance. He uses Tuli as it is the most fertile of those breeds.

"The Angus-Tuli combination produces a superb cow, well-adapted to the local environment," says Kirkman.

He criss-crosses these two breeds using Angus and Tuli bulls. In addition, some of the Angus-Tuli cows are bred to a Charolais bull for a terminal cross. Charolais are used because of their excellent post-weaning

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growth rates, but offspring are sold because of the higher maintenance requirements of larger cows.

The cattle are bred to calve in September and October. Two hundred and fifty of the commercial cows are artificially inseminated with Angus semen and the rest are put to bulls at the rate of 25 cows per bull. The

overall average conception rate for the commercial herd is 85 percent and the weaning rate is 80 percent—well above average for cattle ranching in Zimbabwe as well as in the United States.

Donnington Farm raises its own replacement heifers. Heifers are usually bred at the age of two years or older. The Angus-Tuli steers are brought into the feedlot off grass (veld) at 2 years of age. They are fattened for 90 days on a high-energy, corn-based ration before being slaughtered. The Charolais-cross heifers and steers are brought into the feedlot at the age of 12-14 months and are fattened for a period of 150 days. Cull cows are also fattened due to the high demand for low-quality meat by lower-income groups.

In addition to pen feeding, there are two other systems of fattening cattle in Zimbab-

we. The first is a system practiced by the more extensive ranchers in which cattle are fattened naturally on grass with no supplement. These cattle are slaughtered at a later age, usually almost 3½ years of age. Under the second, less extensive system, cattle are fed a carbohydrate supplement in the summer (eight to nine pounds per head) and sold at 2½ years of age.

A Guaranteed Market

Unlike the United States, Zimbabwe has a statutory marketing system which guarantees a market and a price for fat cattle. This type of system was set up in 1938 with the establishment of the Cold Storage Commission. Weekly base prices are set for a full year in advance by the government in negotiation with representatives from the

Commercial Farmers Union. The price received by the farmer varies from the set base price according to the age, muscle development and fat cover of the animal. The degree of muscling is assessed by the relationship between the carcass length and hot carcass weight. Fat cover (amount and distribution) is analyzed visually. The price received for an average-muscled, 14-month-old steer with a uniform fat cover (.3 in.) last October was \$37 per hundred-weight.

Although the Cold Storage Commission is the main outlet for the disposal of slaughter stock, there are several alternative private channels which play an important role in the disposal of immature stock.

A Strict Health Program

As is generally the case in Zimbabwe, the cattle at Donnington Farm are kept all year round on the native grass fields. A rotational grazing system is practiced with an average stocking rate of one livestock unit per eight acres. Because of the long, dry winters, crop residues are used to supplement veld grazing. Protein supplements are also used

These cattle are the result of a progressive breeding program in Zimbabwe, but the corn husks which they forage were hand-husked. Management at Donnington utilizes modern technology where it pays, but some aspects of the diversified operation are more profitable with little mechanization.



The hospitality extended by Keith and Charlotte Kirkman was both warm and stimulating. An invitation is forwarded to all Angus breeders.

to provide the cattle with sufficient nutrients to maintain body weight and fertility.

In describing the health program on Donnington Farms, Kirkman explains, "In this environment, we operate on the principle that a sick animal is a dead animal. Therefore disease prevention is critical." In other words, by the time a sick animal is spotted it is usually too late to treat it successfully.

There are three main aspects to Kirkman's health program. First and foremost is a regular dipping program to control the disease-carrying ticks which thrive in the local climate. These ticks carry gall sickness, heart-water, etc. During the winter, all cattle are dipped each fortnight (two weeks). With the coming of the rains, dipping is stepped up to once a week. The cost of the dipping program is quite substantial, including the actual cash cost and the indirect stress on the cattle.

The Donnington health program also includes an extensive vaccination program. Vaccinations are given for brucellosis, rift-valley fever, black leg, anthrax, vibriosis, leptospirosis and lumpy skin. A regular worming program completes the program. Cattle are wormed three times a year; in January



These huts typify the homes of Donnington workers—the 100 employees each receive about \$55 per month. Plentiful labor and climate are perhaps the two most important factors behind contrasts in American and African farming.