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BEEF CATTLE TIPS FOR CENTRAL TEXAS

A carefully planned beef cattle enterprise may provide a profitable supplement to the income of Blackland and Grand Prairie farms in Texas, according to a study by A. C. Magee of the State Agricultural Experiment Station. A study of 40 farms in Bell, Bosque, Coryell, and McLennan Counties during 1952-54 indicates that the addition of beef cattle could increase annual earnings $200 to $1,200 on farms in the area. The establishment of permanent pastures and the introduction of close-seeded grains, legumes, and grasses in the rotational system have created an interest in livestock enterprises to consume the extra forage produced.

Fairly good recent cost figures were available on the additional investment needed to handle small herds on Blackland farms, as the beef cattle enterprise was relatively new on many of the farms in this area. Costs for remodeling barns, construction of earthen water tanks, additional fencing, creep-feeding pens, feed troughs, and hay racks averaged approximately $720 per farm.

In addition to the facilities, the acquisition of beef cattle materially increased the farm investment. A common practice among farmers with limited capital was to buy a few cows and keep heifer replacements to build up herds.

The following management practices influenced returns on the 40 farms studied.

■ Sound planning was important. The land-use program and the beef cattle project were planned to supplement each other. Beef cattle utilized permanent grassland and also grazed from small grains and crop residues. The successful operator was able to manage both his crop and livestock enterprises with a minimum of conflict for his time and equipment.

■ Additional water supplies usually were provided to care for the cattle herd. Water facilities in the area frequently are limited, and earthen tanks are not always a dependable water source. Beef cattle should not be added to the farm program unless adequate water is available, since severe financial loss may occur in disposing of animals at an unfavorable time.

■ Adequate feed was almost as important as adequate water. The Blackland farms averaged 3 acres of permanent pasture per cow, and considerable dependence was placed on Sudan grass, crop residues, and small grains for winter grazing. Hay was fed during the winter. The acreages of permanent pastures on Grand Prairie farms were larger than those on Blackland farms, and these pastures were expected to furnish grazing for about three-fourths of the year, at a stocking rate of one cow per 8 acres. Small grains and grazing of crop fields were other important forage sources on Grand Prairie farms. A reserve of 1¾ to 3 tons of dry forage per cow is needed during the winter, when little or no grazing is available. A few farmers obtained very good results from feeding silage. Steer herds were more flexible in making adjustments to variations in feed supplies than were cow herds.

■ Some advantages in favor of larger herds were observed. One bull was needed on all

farms, whether the herd consisted of 10 or 30 cows. Also, it took more than half as much time to feed and care for 12 cows as it did for 24. The investment per cow in improvements — such as fences, shelters, and water facilities — usually declined as the size of the herd increased.

■ Sheds and barns were functional, but not costly. Pole-type buildings provided relatively inexpensive storage for hay and shelter for animals, when needed. Mainline fences were barbed wire, but most of the cross fences on small grain or other fields were electric, which helped greatly in keeping down investment costs.

■ Slaughter cattle of successful operators were "well sold," and stocker and feeder cattle were "well bought." Most animals were purchased at relatively light weights — usually from September through December, when prices generally are at or near the year's low point. A large proportion of the calves fed for slaughter was marketed during the late winter and spring, when there was a strong local demand for butcher cattle. Calves usually were not kept on feed after they would grade Good or Low-Choice, since these qualities were in demand at the markets where most of the animals were sold.

■ The easiest breeding program to manage was that of allowing the bull to run with the cows all year. This resulted in the calving season extending over a period of several months — if not the entire year. Under this system, spring calves are sold off cows in the fall, or they are weaned and put on feed. Calves that were dropped late in the spring or summer usually were held over through the winter.

The practice of fall calving is an alternate plan gaining in popularity. Since a calf eats little grass before it is 3 months old, calves dropped in October, November, or even December will be eating grass by March 1 and will be able to consume considerable green forage during the lush season. Consequently, they are fat and ready for market by or before June 1, at a time when prices for butchers usually are seasonally high. Fall calving should not be undertaken without a good supply of forage — either pasture or hay — since wintering is more of a problem with cows suckling young calves.

Silage May Produce Poisonous Gas

At silo-filling time, farmers should watch out for nitrogen dioxide — a poisonous gas that may form in fresh silage, advises the United States Department of Agriculture. The gas causes "silo-filler's disease," a recently discovered hazard to farmers and their families, as well as to livestock.

Symptoms of silo-filler's disease are severe coughing and burning or choking pains in the throat and chest. The pains disappear after a time, leaving the exposed person free of discomfort for 5 to 12 hours. Then, severe illness can strike, because of lung irritation caused by the gas. A person with symptoms of silo-filler's disease should contact a physician promptly.

Recognizing the hazard of nitrogen dioxide, scientists with the Department of Agriculture recommend the following safety precautions in filling tower silos.

1. Run the blower for 10 minutes before going into a partly filled silo. Always keep the blower running while you are inside.

2. Be alert to irritating odors. Nitrogen dioxide is heavier than air and collects near the surface of the silage. The gas tends to settle in the silo chute and around the base of the silo.

3. Watch for yellowish-brown fumes, which are a sign of nitrogen dioxide gas. If the silo is dark, use a flashlight.

4. Keep children and animals away from the silo while it is being filled.

5. Wait at least a week after the silo is filled before entering it. Do not let children or farm animals go near the silo. If neces-

sary, use a temporary fence to help keep them safe.

Report of Commission on Industrial Uses of Farm Products

The need for a dynamic and imaginative approach to farm-product utilization as a means of solving problems of farm surpluses is emphasized throughout the final report to Congress made recently by the President's Commission on Increased Industrial Use of Agricultural Products.

The report completes the work of the five-man, bipartisan Commission directed by the Eighty-Fourth Congress to make recommendations for a long-range program to widen the industrial use of farm products — particularly surplus commodities. In carrying out the assignment, the commission members received help from almost 200 of the country's outstanding leaders in agriculture, industry, and science.

The Commission set out to find answers to the question: "Can industrial markets absorb enough excess farm production to minimize — or possibly even eliminate — costly restrictions, supports, and surplus-disposal operations?" The conclusion was: "The Commission believes the answer is an emphatic *Yes,* provided the necessary steps are taken to make possible and encourage such a development."

The following are some of the Commission's recommendations.

1. Increase participation by public and private institutions in an effective research network.

2. Greatly expand basic research on the use of farm products.

3. Increase the use of grants, fellowships, and scholarships to increase the Nation's supply of scientists.

4. Place more emphasis on government-industry sharing of research costs.

5. Expand research and development work with new crops.

6. Make wider use of commercial-scale trials of new products.

7. Offer economic incentives to growers and processors to bridge the gap between research and established industrial uses of crops.

"FA" Cotton Promising

Cotton is proving itself as much a "miracle" fiber as any from the test tube, according to the United States Department of Agriculture. Recent experiments by the Department's Southern Utilization Research and Development Division at New Orleans have resulted in a chemical treatment that adds valuable man-made qualities to the inherently good natural characteristics of cotton.

The new treatment produces "fully acetylated" (FA) cotton. Although still in the laboratory stage, this modified cotton is considered better for some purposes than the partially acetylated (PA) cotton developed by the Division several years ago.

FA cotton has shown greatly improved heat and rot resistance, as well as the ability to retain most of the natural abrasion resistance and other good qualities of ordinary cotton. The new fabric is superior in strip breaking strength to both PA cotton and untreated cotton fabrics. Although it is heavier than untreated cotton, it dries faster. Solvents that dissolve some synthetic fibers do not affect FA cotton. The new fabric requires a relatively short dyeing time and can be dyed a full range of shades and colors.

Results of recent research indicate that FA cotton may have a wide range of uses. Its quick-drying and easy-ironing characteristics should make it popular for clothing. Heating FA cotton under tension for a short time produces a very strong fabric, with little give, that should be useful for making power-transmission belts, conveyor belts, and other products requiring a fabric which will maintain constant strength. Its electrical resistance promises to make it a good insulating material, and its good dimen-

COTTON DEFOLIATION GUIDE AVAILABLE

The lateness of the cotton crop and high rainfall in Texas this year may make cotton defoliation even more important in most sections of the State, according to Fred Elliott, cotton specialist with the Texas Agricultural Extension Service. An exception is the High Plains area, where farmers need the maximum amount of maturity for the crop before frost occurs.

The **Cotton Defoliation Guide for Texas,** recently released by the Extension Service, contains valuable information on the use of defoliants in 1957. Included is a chart showing names of defoliants, percent of active ingredients, rates of application per acre, and information on dilution. The bulletin tells when to apply the defoliants and contains sections on precautionary measures and on the care of equipment.

Copies of the defoliation guide, L-145, may be obtained from local county agricultural agents or from the Agricultural Information Office at College Station, Texas.

sional stability should be valuable in uses where a fabric is exposed to varying conditions of atmospheric moisture.

Tolerances for DDT Residues

Regulations of the Pure Food and Drug Administration have established tolerances of seven parts per million for residues of DDT in or on the fat of meat from cattle, hogs, and sheep, according to F. M. Fuller, entomologist with the Texas Agricultural Extension Service.

Residues of DDT in beef fat are likely to exceed the tolerance if beef cattle are fed forage on which DDT applications have been made or if the animals are fed silage made from DDT-treated forage. Spraying, dipping, or dusting beef cattle with DDT is equally likely to result in an excess of the seven-parts-per-million tolerance.

Hogs and sheep can be dipped or sprayed with DDT preparations without exceeding the tolerance level if they are kept at least 30 days before slaughter.

No tolerances have been established for residues of DDT in milk, but studies indicate that application of DDT to dairy cattle feed or to the dairy cattle themselves will cause DDT residues in milk.

More Income for Poultrymen

Scientists of Texas A. & M. College have discovered that a quarter's worth of molybdenum in 2 million pounds of poultry feed can mean an extra $18,000 worth of chickens at market time. Molybdenum, a "trace" mineral, is inexpensive and has proved capable of producing birds which are 15 percent larger than those whose diets lack the mineral.

According to the poultry scientists, the "add-a-quarter-and-get-back-$18,000" story goes this way: About 1,000 tons of feed are required to produce 200,000 chickens for market. Figuring a 15-percent increase in weight in the chickens getting adequate molybdenum in their feed, the live weight added would be 90,000 pounds. At 20 cents a pound live weight, this would mean an extra $18,000 from the poultry.

Molybdenum has a high tolerance before becoming toxic, and about 10,000 times too much of the mineral would have to be fed before it would injure the birds by causing a decrease in weight.

The *Agricultural News Letter* is prepared in the Research Department under the direction of J. Z. Rowe, Agricultural Economist.