WEST TEXAS CATTLE FEEDING REQUIRES ADDITIONAL CAPITAL

West Texas farmers have centered their attention on the production of cash crops, often to the exclusion of livestock enterprises, according to a report from the Texas Agricultural Experiment Station. These farmers are now looking for profitable ways of marketing grain sorghums, and one of the alternatives being considered is marketing the crop through beef cattle.

Most west Texas farmers will need to build feeding pens and provide other facilities and improvements in order to feed cattle. Cattle feeders in the area were contacted to learn the additional investment required. Information obtained in Hale and Moore Counties was used in calculating the cost of suitable facilities for a cattle-feeding enterprise.

A total investment of approximately $4,800 would be required to provide facilities for feeding 100 cattle in west Texas. Nearly half of this amount is for a field silage cutter. This part of the investment can be avoided if custom harvesting is used. If grain storage is already available, the added investment can be reduced about $750. Facilities with which to make and feed silage and to care for 500 cattle in the feed lot would require an estimated investment of around $18,000.

Two hundred square feet of lot space should be provided for each animal fed. On this basis, a lot 100 by 200 feet would provide enough space for 100 cattle.

Satisfactory pens have been built by running six or seven strands of used oil field cable through evenly spaced holes bored in creosoted posts. The initial investment in feeding pens for 100 head of cattle will average about $4.50 per animal, while pens for feeding 500 cattle will cost about $3.80 per head.

The west Texas farmers obtained good results from the use of a feeding trough with a concrete bottom, 3 or 4 inches thick and 30 inches wide, and having one straight side and one sloping side of 2 by 12-inch rough lumber. The initial cost of such a trough is about $2 per linear foot.

The present water supply on most farms is ample for 200 feed-lot animals. However, additional pipe will have to be laid, and a drinking tank will be needed. Another well and pump usually will be required if more than 200 animals are to be watered. Cattle feeders use heaters to provide warm water during the winter, particularly in the northern part of the area. The cost of the additional water facilities probably will range from $3 to $4.50 per head.

Some farmers have adequate storage for grain used in dry-lot feeding, while others store the grain in nearby elevators and haul it to the farm as needed. The grain may or may not be ground or crushed on the farm. In either case, there is an added charge for this operation. A 2,200-bushel steel bin, which will provide storage for grain to feed out 100 cattle, can be installed for approximately $740.

Trench silos are satisfactory for storing silage for dry-lot feeding. Because of year-to-year variations in yield, a reserve of forage is needed in order to sustain a continuing feeding pro-
gram, especially under dry-land conditions. The size and number of silos required will depend on the feeding program; however, most feeders find it convenient to have more than one silo. Trench silos can be constructed for about 75 cents per ton, based on a capacity of 400 tons of silage for 100 head of cattle.

According to the Texas Agricultural Experiment Station, a small feeding enterprise does not justify owning a field silage cutter. In some localities, a farmer can hire silage cut and put in the trench. In Moore County, this work was contracted for in 1956 at the rate of $2 per ton. Farmers with small acreages of a silage crop preferred this method of harvesting, whereas large producers of silage owned one or more field cutters and put up their own crops.

Irrigated sorghum for silage is grown as a cash crop in a few localities. Green silage was delivered and placed in the trenches for $7 to $8 per ton. If available, this service is probably the most convenient and is a relatively inexpensive way to put up around 100 tons of silage.

A power scoop or front-end tractor loader, at a cost of $395, was included in estimating the cost of facilities needed for a cattle-feeding enterprise on west Texas farms. This tool would be used in loading silage and in cleaning out feed lots.

Farmers generally have the trucks or trailers required for the feeding of 100 head of cattle. However, a truck with a mixing bed would be needed for a large feeding enterprise. Such a truck would cost about $3,550.

**Gibberellic Acid Tests on Texas Cotton**

Spraying of Texas cotton with formulations of gibberellic acid did not increase yield or fiber quality, according to the Texas Agricultural Experiment Station. The tests were conducted at the Weslaco and Lubbock substations and at College Station to determine whether gibberellins (which are known to increase cell size and the rate of cell division) increase yields of cotton grown in this State.

In subsequent research in Mexico and at College Station, dust formulations used on cottonseed produced a beneficial response on seedling emergence; treated seed emerged earlier and reached a maximum number 2 to 4 days earlier than untreated seed. No increase in numbers to emerge was found.

**Winter Care of Farm Machinery Profitable**

Proper winter care can add as much as 30 percent to the life of farm machinery, says W. L. Ulich, Extension Agricultural Engineer with the Texas Agricultural Extension Service. In addition, time will be saved in getting the machinery back on the job when it is needed.

Mr. Ulich makes the following suggestions for winter care of farm machinery.

1. Keep machinery under shelter when it is not in use.
2. Coat all bright metal and working parts of the machinery with grease or a rust preventative.
3. Block up rubber tires in order to take the weight of the machine off them while in storage.
4. Drain gasoline from auxiliary motors. Spark plugs should be removed, and 3 or 4 ounces of cylinder oil dropped into each cylinder. The motor should be turned over a few times and the plugs replaced.
5. Drain the cooling system on all motors not used during the winter season. Place a cover over the engine exhaust pipe to keep out moisture. Lubricate all machinery when it goes into storage, and charge all batteries. Remove batteries from motors and check them regularly to be sure that they remain fully charged.
6. Inspect the machinery thoroughly for worn and broken parts while it is in storage. Make a note of the repairs needed, so that they can be made before the machinery is used again.
The engineer points out that, with the continuing price-cost squeeze, proper machinery care can reduce farm expenses and machinery replacement costs and make the farm operation more efficient and profitable.

**Should a Dairy Farmer Mechanize?**

Dairymen who plan to mechanize their operations should carefully balance the estimated cost of new labor-saving equipment against the expected net returns from the enterprise, states A. M. Meekma, Extension Dairy Husbandman at Texas A. & M. College. Technological improvements have made mechanized dairy farming possible, but not every dairy farm can be profitably equipped with machines.

Mr. Meekma points out that few dairymen have had large enough operations to afford the investment and fixed costs which accompany a high degree of mechanization. In addition, farm buildings originally designed for nonmechanical operation often are outdated, and remodeling may only make them partly adaptable to mechanical handling of milk.

**Crop Residues Help Stop Wind Erosion**

Properly handled crop residues offer the best possibilities for stopping wind erosion of sandy soils in the Southern Plains, reports the United States Department of Agriculture. Planting grain sorghums in 20-inch rows may be the best method of establishing these residues.

In addition to providing protection from wind erosion, narrow-row planting of sorghums helps to conserve moisture and provides a mulch which prevents hardening of the surface soil. More moisture is retained in the soil since frequent tillage to control erosion is unnecessary. Moreover, weeds do not grow as readily in narrow rows as they do in the usual 40-inch rows, and fewer weeds mean less cultivation.

Under row-crop management, farmers of the Southern Plains usually have difficulty in maintaining effective residue in fields. Dry-land cotton produces very little usable residue. On the other hand, grain sorghums provide a good residue, but 40-inch rows of this crop are too wide to give complete protection to the more erodible sandy soils.

Although crop residues provide effective erosion control, they trap sand moving across from other fields. Wider use of residue management in such areas would reduce the over-all blowing problem, thereby increasing the effectiveness of erosion control over a larger area. Meanwhile, narrow-row planting of sorghums is feasible and will give excellent protection in areas where sand accumulation is not a serious problem.

**Birds of Tomorrow**

With constant progress being made in the manufacture of automobiles, almost everyone wonders what the cars of tomorrow will be like; and in view of the progress being made in poultry breeding, many people wonder what the birds of the future will be like, says W. F. Krueger, Associate Professor in the Department of Poultry Science at Texas A. & M. College.

Egg producers likely will find a larger number of breeders favoring smaller-bodied birds. The smaller-sized bird, which probably will weigh 3½ to 4 pounds, will lay good-sized eggs and will require less feed for maintenance than do the large-bodied birds of today. In addition, greater uniformity of egg size will be emphasized.

Breeders will select birds with longer livability and sustained production. Average output will continue to rise, and breeders will begin work on the preservation of egg quality through breeding.

Mr. Krueger predicts that breeders of commercial broiler chicks will continue to select primarily for improved growth rate. Greater emphasis will be placed on market-quality characteristics, such as breast width, length of keel, skin color, flesching color, and general conformation.
Broiler parent stock for the production of hatching eggs will change materially in the future. Improvement in fertility and hatchability and higher and more sustained egg production can be expected. Male birds will continue to have a high percentage of Cornish breeding.

Mr. Krueger points out that the appearance of the turkey broiler and the need for greater efficiency are changing the turkey breeders' views with respect to the type of poult needed for the market. More white birds will be available in small, medium, and large sizes; and attempts will be made to improve fertility and hatchability in breeder flocks.

Earlier Ewe Selection Possible

The weight of ewes as yearlings just prior to first breeding is a fairly accurate indication of the birth and weaning weights of the lambs which they will produce, according to a recent study by the United States Department of Agriculture. Heavier ewes — regardless of breed or wool type — produced heavier, faster-growing lambs than did lightweight ewes in trials conducted by Jack L. Ruttle, Animal Husbandman with the USDA's Agricultural Research Service at Fort Wingate, New Mexico.

The earlier culling of animals that are not likely to improve lamb output results in quicker profits for owners of breeding flocks. Owners usually cull ewes after each animal has produced a lamb.

Mr. Ruttle gives the following reasons for selecting large ewes as breeders: (1) The body size of the ewe has a direct influence on lamb production. In order to produce a large, heavy lamb, a ewe must be large so that she can carry and nourish the lamb. (2) The greater skin area of large ewes provides more surface for growing wool.

A 4-year study of 500 ewes at Fort Wingate indicates that selection of heavy ewes for lamb production is possible earlier than it usually is done. The animals were divided into four groups according to their weight at about 13 months of age — 60 to 69 pounds, 70 to 79 pounds, 80 to 89 pounds, and 90 to 100 pounds.

Mr. Ruttle found that birth and weaning weights of lambs increase in proportion to the size of ewes at yearling age. Weaning weights used in the study were obtained from 446 lambs born when their dams were 2 years of age.

The lightest group of ewes averaged 65.4 pounds as yearlings, and the heaviest group averaged 92.7 pounds. This 27.3-pound advantage in body weight for the heavier ewes resulted in the lambs' weighing an average of 1.29 pounds heavier at birth and about 10.5 pounds heavier at weaning.

The weaning weights of lambs in the three heavier groups averaged 2.15 pounds, 3.25 pounds, and 5.02 pounds more than the weights of lambs in the lightest group. On the other hand, increases in birth weights for the heavier groups were only 0.71 pound, 0.35 pound, and 0.23 pound. Mr. Ruttle attributes the greater difference in weaning weights as compared with birth weights partly to greater milk production by the larger ewes and partly to the inherited factor for size of the lambs.

About 200 bolls of cotton are required to make a good white shirt, using three-fourths of a pound of cotton lint per shirt.

Hog producers can help the marketing situation by selling their animals at top weights of 200 to 225 pounds. E. M. Regenbrecht, Extension Swine Husbandman with the Texas Agricultural Extension Service, advises hog feeders against marketing overweight swine.

Plenty of shade and clean premises are the main considerations when using range for turkey production, says Ben Wormeli, Texas Extension Poultry Husbandman. Shade is essential for maintaining feed and water consumption at high levels and for obtaining peak rates of gain, while cleanliness helps eliminate disease and parasite hazards.