

*Sudan Pasture  
for Beef Production*



**TEXAS AGRICULTURAL EXTENSION SERVICE**  
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# *Sudan Pasture For Farm Beef Production*

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**F**ARM BEEF PRODUCTION as discussed in this publication includes the purchase of Good to Choice grade feeder steer calves in the fall, wintering them on small grain pasture or feed, grazing them on Sudangrass in the spring and summer and finishing in drylot. About a year is required to complete this operation. Heifer calves may be used instead of steer calves, but heifers mature more rapidly than steers and will fatten in less time. Grain is fed heavily in the drylot finishing period. Protein supplements are used in wintering on silage or hays and in the finishing period.

Sudan for pasture ordinarily is planted in 36-inch rows at the rate of 10 to 12 pounds of seed per acre. It can be grazed as soon as the plants become firmly rooted so they will not be pulled up, or when they are about 18 inches high. The front cover shows a field of Sudan which is advanced enough for grazing.

Young, fresh and green Sudangrass is highly palatable and contains about twice as much protein as it does when mature and dry. Sudan is considered a safe grazing crop in Texas, but should not be grazed immediately after it has been wilted by frost.

Sudan should be kept as palatable and short as possible, but the acreage allowed per head should be large enough to permit an accumulation of feed during periods favorable for growth. Excessive growth may be mowed to get palatable regrowth if moisture is favorable. Management here must compromise between feed quality and quantity. Acreage required per head will vary from year to year and between localities, but any farm usually has a limited acreage for Sudan. For example,

the Beeville Experiment Station allows about 1 1/3 acres per head for yearlings wintered on the Station. This acreage usually furnishes grazing for about 4 months, but during summer drouth it furnished grazing about 2 months.

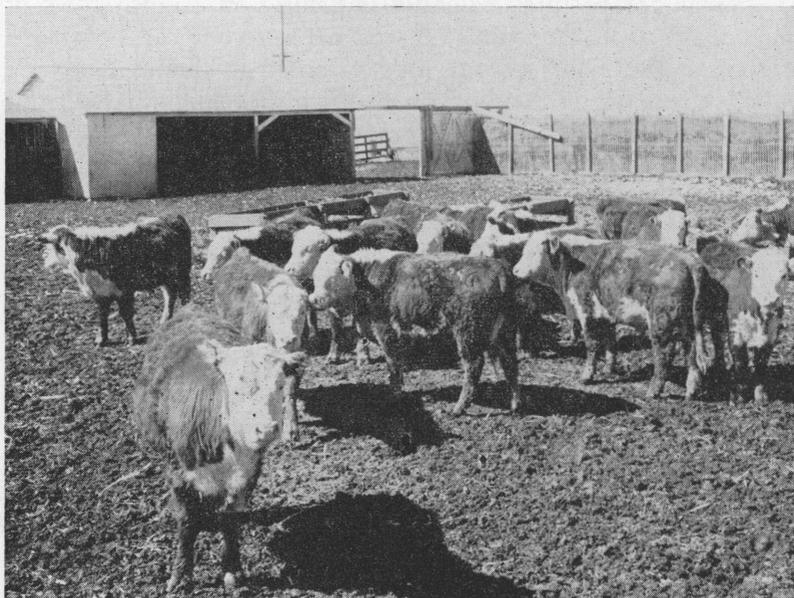
### **KIND OF FEEDERS TO USE**

Good to Choice grade feeder steer calves, Figure 1, are best adapted for farm beef production. The farm grazing and feeding plan, using Sudan, produces 500 to 600 pounds of marketable gain per head in 10 to 14 months. The gain on high-quality cattle may be sold at a higher price than the gain on low-quality cattle.

Lower grades of stockers or feeders also may be profitable. Ordinarily, the producer does not invest as much time or feed in lower grades as he does in higher grades.

### **TIME TO BUY**

The fall purchase of high-quality calves is recommended because such calves usually are plentiful at that time. Feeders or stockers usually are higher in price at the start of spring grazing



**Figure 1.** Good to choice quality stocker or feeder steer calves.

than in the fall. Wintering calves for spring sale is often profitable since they are then available for Sudan grazing.

Many Sudan users buy cattle when the grass is ready to graze. Desirable stockers may be scarce at that time and they usually cost more than during the preceding fall. Thin yearlings with good conformation are desired because they can make rapid gain. If buyers wait until Sudan grazing is assured, the numbers bought may be adjusted to the feed supply.

### **WINTER DEVELOPMENT FEEDING**

Steer calves being developed for the use of Sudan pasture in the farm beef production program should gain more than 1 pound daily, during the winter, especially if they are to be fed on Sudan or following the use of Sudan.

Small grain winter pastures should be used as fully as possible. Gains from such pastures approximate 1.75 pounds daily, and calves so wintered make high gains on summer pasture. It is not necessary to feed supplements if the small grain pasture is good.

Feeding concentrates is necessary when steer calves are not on pasture. Sorghum silage, free choice, plus 2 pounds each of cottonseed meal and ground sorghum grain are used at the Beeville Experiment Station. Gains may average 1.75 pounds daily.

Concentrates other than cottonseed meal and ground sorghum grain may be used. When limited concentrate and high roughage rations are used, adequate protein is important. A balanced ration for calves full fed sorghum silage, fodder or hay requires about 2 pounds of cottonseed meal daily per head. Protein needs are met when calves are on small grain pasture.

### **GAINS ON SUDAN PASTURE**

About 1.5 pounds daily per head is a good rate of gain for a 90 to 120-day Sudan grazing period. Thin feeder yearlings of good breeding, as shown in Figure 2, may average 2.5 pounds daily for the first 60 to 70 days. Yearlings which have been wintered in strong flesh make only moderate gains, but may be grass fat at the close of the Sudan grazing season. Such yearlings are marketable as heavy feeders or as grass-fed yearlings.

## FEEDING ON SUDAN PASTURE

Concentrate feeds fed on Sudan pasture increase the finish and make early marketing possible. The cost of such gain is more than the cost of gain resulting from Sudan grazing without feed. Feeding on pasture, however, requires less labor than drylot feeding because cattle harvest the necessary roughage and the manure is left on the field.

Cattle full fed concentrates on pasture consume little of the pasture. If the pasture produces low-cost gains, pasture without additional feed is used.

The use of limited amounts of concentrates, 2 to 4 pounds daily per head, from the outset of Sudan grazing, has not been effective. The choices available are not to feed, feed heavily, or feed only during part of the grazing season. The Beeville Station feeds a moderately heavy concentrate ration only during the last 30 to 40 days on Sudan, or after the Sudan becomes dry, less palatable and low in protein. Eight to 10 pounds of concentrates are fed daily, depending on the capacity of the cattle. The object is to maintain the rate of gain, clean the field and



Figure 2. Thin yearling steers making rapid gains on Sudan pasture.

get the cattle well on feed before moving them to drylot. Over-feeding grain at this time may result in a few cases of founder.

### **SELF-FEEDING ON SUDAN PASTURE**

Steer yearlings may be full fed ground earcorn, cottonseed cake and bulky feeds while on Sudan pasture. If a self-feeder is used, keep it filled to prevent steers from getting hungry and over-eating between fillings.

Steers are not expected to eat large amounts of concentrate at the start of the grazing period, but as the Sudan becomes less palatable the amount of feed consumed increases. For example, a group of 755-pound yearling steers consumed an average of 6.7 pounds of cottonseed cake daily per head when self-fed from May to mid-September. The average daily consumption for each of the five 28-day periods was, in order, 4.8, 4.4, 5.9, 8.5 and 9.8 pounds. Similar steers self-fed ground earcorn averaged 7.2, 8.7, 12.2, 15.6, and 17.5 pounds for the respective periods, and 12.3 pounds for 140 days. The two groups of steers made equal gain and sold at the same price, but the corn-fed steers graded higher, Figure 3.



Figure 3. Steers self-fed ground ear corn on Sudan for 140 days.

A lot of steers self-fed cane molasses and another lot on pasture without feed required an additional 56 days of drylot feeding to reach the same finish as steers fed corn and cottonseed cake.

### **FEEDS TO USE WITH SUDAN PASTURE**

While ground earcorn and cottonseed cake may be used separately, it is well to combine these feeds. Grain only or a mixture of 5 to 10 percent cottonseed meal and 90 to 95 percent grain is suggested when Sudan is fresh and green. When Sudan is mature and dry, use 10 to 15 percent cottonseed meal. A mixture of three parts ground sorghum grain and one part ground sorghum bundles may be used instead of ground earcorn.

### **FEEDER CALVES TO FAT YEARLINGS**

Following is an example of farm beef production taken from the 1953-54 records of the Beeville Experiment Station. Steer calves were received September 5 at an average weight of 464 pounds, and were sold in San Antonio at 1,072 pounds November 5 of the following year. The market gain in 426 days averaged 608 pounds per head. The steers had 136 days on pasture only, 140 days on pasture with supplemental feed and 150 days in drylot. In addition to pasture, each steer was fed 300 pounds of cottonseed meal, 1,650 pounds of ground sorghum grain and 2 tons of sorghum silage. Oats and Hubam clover were pastured in winter and spring and Sudan in summer.

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