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## ALFALFA HAY FOR BEEF CATTLE?

Alfalfa hay may be more valuable than cottonseed cake as a supplement to range feed, according to recent experiments by the Oklahoma Agricultural Experiment Station. Cattlemen generally agree that the commercial cow herd should be carried through the winter on the minimum amount of supplemental feed that will maintain the health of the cows and produce a high percentage of vigorous, fast-gaining calves. If the cow's ration is deficient in any one essential ingredient, calves may be small and weak at birth, resulting in heavy calf losses at calving and lightweight calves at weaning time. Proper care of the cow during the winter months also insures an adequate milk flow at calving time, which will get the young calves off to a good start. Many southwestern ranchers believe that the most profitable method of wintering beef cattle is to leave them on the range, supplementing the cured range feed with cottonseed cake, prairie hay, or other feeds, if necessary. This method of management is practiced in many areas and may be the most profitable method under conditions of abundant range feed and high costs of supplemental feed.

Recent experiments by the Oklahoma Station at Stillwater, however, shed new light on this important problem of wintering beef cattle. Three lots of 20 cows each were used in the experiments. Lot 1 grazed throughout the year at the rate of 12.25 acres of native blue-stem pasture per cow and was fed about 8½ pounds of alfalfa hay per head daily during the winter months. Lot 2 was grazed for 7 months and during the 5 winter months was confined to a 10-acre tract and fed about 12½ pounds of prairie hay and 5 pounds of alfalfa hay daily. Lot 3 was left on the range throughout the year and fed about 2½ pounds of cottonseed cake during the winter months. A summary of the results of this study in 1947-48 is shown in the accompanying table.

With alfalfa hay valued at \$22 per ton, prairie hay at \$18 per ton, and cottonseed cake at \$100 per ton, cows wintered on alfalfa hay and range feed returned an estimated \$17 more profit per cow than cows wintered on range feed and cottonseed cake and \$20 more than those wintered on prairie and alfalfa hay alone. On the basis of 1949 prices of \$60 per ton for

### SUMMARY OF MANAGEMENT SYSTEMS FOR COMMERCIAL COW HERDS

	LOT 1 Grazed year-round; fed alfalfa hay November-April	LOT 2 Grazed 7 months; fed prairie and alfalfa hays November-April	LOT 3 Grazed year-round; fed cottonseed cake November-April
Date winter period started.....	Nov. 7, 1947	Nov. 7, 1947	Nov. 7, 1947
Average weight gain per cow for the year	128	115	109
Percent calf crop.....	90.0	70.0	95.0
Average birth weight per calf.....	76	70	71
Average weaning weight per calf.....	506	451	464
Cost of year's feed per cow—1948 prices	\$36.24	\$48.13	\$32.86

SOURCE: *Feeding and Breeding Tests with Sheep, Swine, and Beef Cattle*. Progress Report: 1948-49, Oklahoma Agricultural Experiment Station, Stillwater, Oklahoma, May 1949.

cottonseed cake, \$23 per ton for alfalfa hay, and \$18 per ton for prairie hay, the difference in profit per cow still would be about \$9 and \$20, respectively, in favor of alfalfa hay. The larger profit per cow for the cattle wintered on alfalfa hay and range feed was largely the result of lower feed costs and heavier calves. These results are essentially the same as those obtained by a similar experiment the previous year; and while the experiment has not run sufficiently long to be conclusive in every detail, the difference in weaning weight of calves and the fact that cows wintered on the alfalfa hay and range feed returned a higher net profit than those under the other management systems are strong evidence in favor of alfalfa hay.

Another interesting result of this experiment is that blood analyses of the cows in the different lots showed that cows fed prairie hay and only about 5 pounds of alfalfa hay per head daily had an abnormally low level of inorganic phosphorus—an element essential to efficient utilization of feed. The blood analyses of cows fed 8½ pounds of alfalfa hay per head daily, as well as those fed cottonseed cake at the rate of about 2½ pounds per head daily, showed that the level of inorganic phosphorus was normal throughout the experiment. The scientists conducting these experiments feel that the low level of inorganic phosphorus in the blood of cows wintered on prairie hay and a small amount of alfalfa hay may not permit maximum performance of the animals. It is interesting to note that this low level of phosphorus persisted even though the cows were given free access to steamed bone meal, which is very high in phosphorus.

Prior to the experiments with alfalfa hay, two systems of managing the commercial cow herd had been studied by the Oklahoma Agricultural Experiment Station: (1) grazing cows throughout the year at the rate of 12.25 acres of native bluestem pasture per cow with cottonseed cake fed as winter protein supplement and (2) grazing cows 7 months of the year at the rate of 8.6 acres per cow and confining the cows to a small area during the 5 winter months and feeding prairie hay and cottonseed cake. Under both systems of management the cows had free access to salt and a mineral mixture

consisting of equal parts of salt, ground limestone, and bone meal. The conclusion after several years of study was “. . . that there was no difference in the condition of the cows at the end of the experiment nor in the size of the calf at weaning. The most economical method was to graze the cows year-long and supplement the cured winter grass with cottonseed cake.”

The later experiments have substantiated the economy of year-long grazing but have shown further that under certain price relationships alfalfa hay is more economical than cottonseed cake as a supplement to range feed. In these experiments cows wintered on range feed and alfalfa hay produced larger, more vigorous calves that were heavier at weaning time.

## OUTLOOK FOR 1950 IS GOOD, SAY EXPERTS

Meeting in Washington the first week in November, leading economists of the Department of Agriculture and of state colleges and universities generally agreed that 1950 is likely to be a profitable year for American agriculture. They pointed out, however, that it probably will not be as good as the high postwar years but that incomes and profits will be well above prewar levels and will average close to those obtained during the war years.

Demand for farm products is expected to continue at relatively high levels, inasmuch as no serious decline in general business activity, employment, or consumer income is anticipated during 1950. The pressure of increased production of many commodities will cause prices received by farmers to continue the present downward trend throughout next year. Furthermore, prices paid by farmers, although expected to decline somewhat, are not likely to fall as rapidly or to the extent as prices received by farmers. Thus, net income also will be reduced.

Foreign demand for most American farm products probably will continue at relatively high levels, but the quantities that can be exported will depend to a very great extent upon the amount of dollars made available to foreign countries through ECA and other aid programs. It is generally believed that this amount will be somewhat lower than in 1949.

With respect to some of the most important commodities, the experts had this to say:

*Cotton*—Government support price probably will be only slightly—perhaps 1 to 2 cents per pound—lower than the support price in 1949, with production below 1949 by as much as 3,000,000 to 4,000,000 bales because of acreage allotments and probable marketing quotas. Market price probably will fluctuate very close to the government loan rate.

*Wheat*—Prices for the 1950 crop probably will be at or slightly below the government loan rate, which will be perhaps 5 to 10 cents per bushel below the 1949 support price. Production is expected nearly to equal the 1949 crop because of favorable moisture conditions and another large seeded acreage.

*Rice*—Prices are expected to be at or near the support levels, which, under the new price-support program, may be as much as 20 cents above the 1949 loan rate. Acreage allotments are probable, but marketing quotas are unlikely.

*Meat animals, poultry, milk, and other dairy products*—Outlook is for a continued strong demand, with prices only slightly below the levels of 1949.

Many of the delegates at the Washington conference anticipate a relatively profitable period for American agriculture during the next 5 to 10 years. They believe that farm incomes, although below those of the immediately postwar years, will be maintained at relatively profitable levels and that farm families will continue to increase their standard of living by the addition to their farm homes of electricity, telephones, running water, refrigerators, and many other modern conveniences. Principal reasons given for this optimistic outlook were: (1) the anticipation of a continued relatively high level of business activity in this country, which, together with the normal increase in population, will insure a strong domestic demand for farm products; (2) the continuation of some foreign aid programs, which will provide an outlet for substantial quantities of farm commodities; and (3) a general increase in the efficiency of the American farmer.

## FARM MANAGEMENT

### Dairy Cows Need a Rest

Six to 8 weeks' rest prior to calving is essential for maximum milk production during the following lactation period and the production of a strong, healthy calf, according to A. M. Meekma, assistant extension dairy husbandman of Texas A. & M. College. This "rest period" allows the cow to recover from the previous milk-producing period, build a strong, healthy calf, and store up body reserves. Proper feed and care during this period often increase milk production as much as 25 percent during the next lactation period. During the "rest period," cows should have access to good pasture or to hay and silage and may also be fed some grain, particularly if they are unusually thin. The same grain mixture that is fed to the milking herd can be fed to the dry cows.

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### 100-Bushels-to-the-Acre Corn in East Texas

Reports of corn yields in excess of 100 bushels per acre have been coming out of east Texas this fall. Several communities have reported more than one farmer achieving this high yield. No doubt, the favorable growing season was an important factor in obtaining these high yields, but probably more important were the management practices followed by these progressive farmers. An example of how high yields were obtained is found in the case of a Wood County farmer who increased his per acre corn yield from 10 bushels in 1948 to 142 bushels in 1949. The corn was planted on the last day of March in 3-foot rows and spaced 12 to 14 inches apart. The seed used was Texas Hybrid No. 20, and 450 pounds of 5-10-5 fertilizer per acre were applied at the time of planting, with a side dressing of 200 pounds of ammonium nitrate per acre applied later. The field was given three shallow cultivations for weed control.

This experience is unusual, but the use of hybrid seed, heavy applications of fertilizer, and the use of crop rotations, including soil-building crops, are enabling many Texas farmers to double or triple their average corn yields.

### Control Cattle Parasites

Elimination of grubs, ticks, and lice will increase profits from cattle by reducing feed costs on the breeding herd and by increasing the value of the hide on slaughter cattle, according to James A. Deer, assistant extension entomologist of Texas A. & M. College. Mr. Deer recommends the use of a power sprayer, using 200 to 400 pounds of pressure, and a spray material consisting of 7½ pounds of 5-percent rotenone dust to each 100 gallons of water. The nozzle of the sprayer should be held not more than 4 inches from the backs of the animals. Approximately 1 gallon of spray is needed for each animal, and from 10 to 15 seconds usually are required for proper application.

Control of lice and ticks can be obtained by treating the cattle with a solution made by adding 8 pounds of 50-percent wettable DDT powder to 100 gallons of water. This can be used as either a spray or dip. Cattle should be given two treatments, the second about 2 weeks after the first. This second treatment will kill the lice that hatch after the first treatment. Mr. Deer warns that in treating dairy cattle, methoxychlor should be substituted for DDT in order to comply with health regulations, which do not permit the use of DDT in dairy barns or on dairy cattle.

### Deferred Grazing Pays

Factual evidence of the value of deferred grazing is found in the experience of a Menard County, Texas, ranchman who reports that a 640-acre pasture which was rested from June to October 1948 produced 2,925 more pounds of mutton and about 1 more pound of wool per head of sheep than the same pasture grazed continuously during the previous year.

Deferred grazing permits the range grasses to produce maximum feed and also permits the better grasses to reseed and constantly improve the carrying capacity of the range.

### Management Hints for November

According to the Oklahoma A. & M. Extension Service, November is the month for farmers to:

1. Get a supply of anti-freeze and winterize their cars, trucks, and tractors.
2. Select turkey breeding stock before the Thanksgiving market tempts them to sell all but the culls.
3. Protect young trees against rabbit damage.
4. Spread cottonseed hulls to give plenty of time to decay before spring.
5. Get the farm machinery out of the weather; paint-up and grease possible rusting places.
6. Check farm water pipes and cover to sufficient depth to prevent freezing.
7. Attend some of the big livestock shows.
8. Plan to feed the dairy cows according to their production records.
9. Mulch that strawberry bed after the plants have been partly conditioned by snappy weather.
10. Treat cattle for cattle grub if the need arises.

## ANNOUNCEMENTS

### Texas Citrus Market News Available

Official market reports on the movement and condition of the Texas citrus crop may be obtained by writing to the Fruit and Vegetable Market News Office, Production and Marketing Administration, United States Department of Agriculture, Weslaco, Texas. These reports are issued daily and give the number of cars leaving the Valley, auction prices at principal consuming centers, the citrus supply and demand situation, and other important market information.

### Meetings

The Texas Farm Bureau Federation State Convention will be held at the Baker Hotel in Dallas, November 21-23.

The International Livestock Exposition will be held at Chicago, Illinois, November 26-December 3.