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PASTURES — NATIVE VERSUS IMPROVED

During the 4-year period 1949-52, steers grazed on improved pastures in southeastern Oklahoma produced 13,500 pounds more beef than those grazed on native-grass pastures on the same type of soil, according to tests conducted by Oklahoma A. & M. College.

In order to determine the value of pasture improvement on overgrazed native grassland, a 300-acre experimental site was selected in southeastern Oklahoma. The experimental site was representative of thousands of acres of shallow, overgrazed, or abandoned fields found in the area.

In this section of Oklahoma, climatic conditions — particularly rainfall and temperature — generally are favorable for growth of adapted species of desirable forage plants. A grazing season of 180 to 200 days is normal, but in unfavorable years, there may be several weeks of either severe drought or ex-

tremely wet weather. Forage species of both grasses and legumes should be tolerant to these extremes or be able to reseed under unfavorable conditions.

Soils in the area generally are acid and low in available phosphorus, calcium, and potassium. Cash crops cannot be produced profitably on much of the land because of low fertility levels, and many fields previously cultivated have been abandoned. Most of the soils in the area are low in soil nitrogen and organic matter; consequently, a pasture-improvement program must be based on improving soil fertility levels.

The 300-acre experimental tract was divided into two 150-acre pastures with similar soil types and conditions. Each pasture contained about 50 acres of land too steep or stony to cultivate, approximately 15 acres of bottom land, and 85 acres of tillable upland.

COW-CALF PRODUCTION ON IMPROVED AND NATIVE-GRASS PASTURES, 1949-52

Southeastern Oklahoma

	1949	1950	1951	1952	Average
IMPROVED PASTURES					
Stocking rate					
Cows.....	25	25	28	26	26
Calves.....	20	20	26 ¹	21 ²	21.8
Calf weight at weaning (pounds).....	413	478	398	397	421.5
Total calf weight (pounds).....	8,260	9,560	10,340	7,940	9,025
NATIVE-GRASS PASTURES					
Stocking rate					
Cows.....	15	15	18	16	16
Calves.....	12	12	18	14	14
Calf weight at weaning (pounds).....	326	452	388	398	391
Total calf weight (pounds).....	4,950	5,424	6,690	5,535	5,649.8

¹Two calves died.

²One calf died.

On the improved pasture, the bottom land was cleared of timber and planted to a local strain of Bermuda grass and Big Hop and white clovers. Forty-six acres of the upland were cleared of persimmons, disked, and fertilized with 40 pounds of phosphate per acre. The land then was planted to a mixture of Kobe and Korean lespedeza at a rate of 20 pounds of seed per acre, drilled in 14-inch rows. In order to furnish some winter and early spring pasturage, about 38 acres of tillable upland in the improved pasture were plowed and planted to rye and vetch each year.

Cow-calf herds were grazed on the pastures from 1949 through 1952. The carrying capacity of the pastures, the number of calves produced, and calf weights at 9 months were used as measures of pasture productivity.

During the first 3 years of the experiment, a larger number of calves, with heavier weaning weights, were produced on the improved pasture. In 1952 the weaning weights of the calves on the two pastures were about the same, but more calves were raised on the improved pastures.

Don't Feed Steak to Horn Flies

Horn flies during the summer months result in an annual loss of 20 to 30 pounds of beef per animal, according to F. M. Fuller, extension entomologist with Texas A. & M. College.

The pests — which are about half the size of ordinary houseflies — suck the blood of livestock, causing irritation which results in loss of weight, indigestion, and other disorders.

Horn flies can be controlled simply and at a nominal cost. A spray of .5 percent DDT, toxaphene, or methoxychlor applied with a hand- or power-sprayer gives control which should remain effective for 3 weeks or longer.

Some producers use cable-type rubbing devices, but Dr. Fuller believes that a good spray program provides better control.

Mosquito Control

Mosquitoes are costly to a farmer since they reduce productivity of livestock, according to entomologists at the Texas Agricultural Extension Service.

The insects often drive livestock away from lush pastures, resulting in weight losses or reduced gains of the animals. Also, mosquitoes may cause poultry to lose weight and lay fewer eggs.

To get rid of the insects, eliminate breeding places by removing standing water. Ponds and irrigated pastures should be sprayed or dusted with insecticides.

There are several sprays and dusts which are effective under different conditions. Local county agricultural agents can supply information on the recommended mixtures and rates of application.

Check for Poultry Ticks

Poultry heavily infested with fowl ticks — commonly called blue bugs or chicken ticks — become unthrifty and may lose weight during the summer if control measures are not followed.

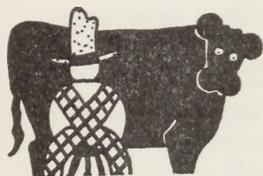
The insects hide in the cracks and crevices of poultry houses during the daytime and then emerge at night and suck the blood of poultry, according to Ben Wormeli, Extension poultry specialist at Texas A. & M. College.

When poultry houses are infested with the ticks, masses of the insects usually can be found in cracks and under loose planks in the houses.

A small power- or hand-sprayer containing .5 percent lindane, toxaphene, or chlor-

dane is recommended for fowl-tick control. The spray material should be applied to chicken coops and to roosts and interiors of poultry houses. Particular attention should be given to cracks, crevices, and fence posts. Repeated treatments may be needed to insure satisfactory control.

Dairy Surplus Decreasing



The surplus of dairy products obtained under price support operations gradually is being reduced, according to a report of

the United States Department of Agriculture. If total milk production remains low and demand continues strong, prospects are that the surplus will be reduced further before the end of the year.

The Department of Agriculture purchased the milk equivalent of nearly 6,000,000,000 pounds of dairy products during the marketing year ended March 31, 1955. This amount is about 5,000,000,000 pounds less than was purchased a year earlier.

The following factors are credited by the Department of Agriculture as being responsible for the reduction in milk surpluses.

1. The reduction in retail prices for dairy products in 1954 has helped to increase consumption.
2. Advertising and special promotions by the dairy industry are stimulating consumption.
3. More children are drinking increased quantities of milk at schools, as a result of the special school milk program.
4. More milk and dairy products are being provided to military personnel.
5. Needy persons are receiving greater donations of dairy products.

Higher Fall Egg Prices

Production of eggs from the Nation's laying flocks this fall is expected to be about 5 percent below that of last fall, according to John G. McHaney, Extension economist with Texas A. & M. College. This should result in a seasonal rise in egg prices this fall, with possibly higher prices for producers than during the same period a year ago.

United States farmers have raised 19 percent fewer replacement chicks this year, and it appears that the number of layers on farms will be 6 to 8 percent smaller than in 1954. Mr. McHaney says that poultrymen who bought replacement stock during the first 4 months of this year will profit the most, but raisers starting chicks in September still may be able to take advantage of some of the expected favorable prices during the second quarter of 1956.

Supplement Dry Grass

Minerals and plenty of roughage are needed to keep livestock healthy and growing during the dry summer months when green grazing is short, according to U. D. Thompson, Extension animal husbandman of Texas A. & M. College.

Mr. Thompson suggests supplementing the roughage — whether it be dry pasture, baled hay, or bundles — with 2 pounds of cottonseed meal or cake for each animal daily.

Research has shown that 41 percent protein supplements are the most economical to feed. Granulated salt and steamed bone meal, fed separately or in combination, supply necessary minerals.

By creep-feeding nursing calves, mother cows can be maintained through the summer in better condition and the calves can be marketed at heavier weights. The calves should be started on oats; then the amount of oats fed should be reduced and corn added

to the ration. The addition of 10 pounds of cottonseed meal to each 100 pounds of grain mix is recommended when all green grazing is exhausted.

Oil Controls Johnson Grass

Farmers can control Johnson grass in row crops without swinging a hoe, reports Homer E. Rea, agronomist for the Texas Agricultural Experiment Station.

Spot application of diesel- and naphtha-type oil sprays in four treatments killed 99 percent of all Johnson grass in cotton stands in one season. In comparison, four trips over a similar field with hand hoes eliminated only 44 percent of the grass.

According to Mr. Rea, the commercial preparations to use are Varsol 1, Lightfoot 23, No-weed Oil, Lion 1, and Flit 38. A mixture of 50 percent of one of these oils and 50 percent diesel fuel applied with an ordinary knapsack sprayer provides effective control. Approximately one-third of a teaspoon of oil mixture on the stem near the base of each plant is sufficient, with best kills being obtained on young grass.

To eradicate the grass roots completely and prevent resprouting, repeated spot oilings at intervals of 7 to 10 days, or approximately 4 to 6 treatments, may be necessary. Within hours of the initial treatment, Johnson grass usually is shriveled and killed to ground level. Although the costs of controlling Johnson grass with spot oil treatments will vary with the amount of oil used and the degree of Johnson grass infestation, Mr. Rea has figured the cost of application, including oil and labor, at \$14.10 an acre.

New Barley for the High Plains

Kearney — a new, cold-resistant, green bug-tolerant variety of barley—is now available to growers in the Texas Panhandle. The variety was developed by the Nebraska Agri-

cultural Experiment Station, and its adaptation to growing conditions in the High Plains has been tested at Amarillo since 1950. The new barley:

- Is unusually cold- and green bug-resistant.
- Heads only from fall seeding.
- Is late-maturing.
- Yields well under cold conditions.
- Has a good test weight.
- Provides good winter and spring grazing.

No Kearney barley seed is available to farmers from the Texas Agricultural Experiment Station, but foundation seed for the production of certified seed may be obtained from the Nebraska Experiment Station at Lincoln, Nebraska. Limited quantities of the seed also will be available from commercial seed growers.

New Fertilizer Applicator

A new liquid-nitrogen applicator developed by the United States Department of Agriculture and North Carolina State College will handle low-pressure and nonpressure nitrogen solutions. It is simple in design and operation, inexpensive, and easily and cheaply repaired. The pump unit weighs about 25 pounds and can be mounted on a tractor or a tractor-drawn cultivator or plow.

Liquid nitrogen is easier to handle than dry fertilizers and costs less per unit of plant nutrient. In the past, however, liquid-application machinery has been relatively expensive; and, in general, only operators of large farms have found it economical to purchase such equipment.

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