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IRRIGATED PASTURES FOR SOUTH TEXAS

Irrigated pastures offer good profits in milk and beef production and are the best-known method of soil improvement, according to tests at the Texas A. & M. College Experiment Stations in the Lower Rio Grande Valley and the Winter Garden area by agronomists E. M. Trew and Carl S. Hoveland.

When irrigated and managed properly, adapted warm-season perennial grasses produce high yields of good-quality forage in south Texas. The better grasses produce forage 8 to 10 months during the year and can be depended upon to supply the bulk of the forage in an irrigated pasture program. Cool-season perennial grasses appear to be impractical for south Texas, as they produce only 4 to 5 months and usually must be irrigated to survive the summer.

Based on the tests, Coastal Bermuda, buffel (T-4464), Rhodes, Blue Panic, and possibly guinea appear to be the better-producing perennial grasses for irrigated pastures in south Texas. Coastal Bermuda and buffel are best suited for use on loamy to sandy soils. Rhodes may live only 2 years because of damage from Rhodes grass scale, but it does well in rotation with row crops or alfalfa.

From the standpoint of grazing, guinea is difficult to manage because of its heavy, dense stools, which get larger in diameter and taller with age. Blue Panic produces less forage than the other four grasses but withstands drought better and is well adapted where the

supply of irrigation water is limited. Angleton — although not as high yielding as the other varieties — appears best for heavy clay soils. Although the latter grass is low in phosphoric acid and protein content, it is very palatable, and cattle stay in good condition while grazing it.

Late-fall and winter grazing can be obtained best from high-producing small grains alone or with a legume. Temporary pastures of small grains alone or with a legume supply green grazing in winter, when it is not available from cool-season grasses. Goliad barley should be used in a winter grazing program to provide early pastures, although most of the acreage should be seeded to a high-yielding oat variety to provide winter and early spring grazing.

Stands of legumes usually cannot be maintained in vigorously growing, cool-season perennial grasses under irrigation in south Texas. The high-producing grasses apparently provide too much competition for the legumes.

Hubam sweet clover is the most widely used legume for grazing in south Texas. However, Floranna sweet clover produces about the same yields as Hubam and provides grazing a month earlier. Both varieties do well with oats for temporary pastures in the winter. The biennial sweet clovers produce less grazing and are later than the annuals.

Some stockmen — mainly dairymen — have grazed alfalfa in pure stands and, by

careful management, have avoided excessive bloat in their livestock.

Although alfalfa produces less forage than the best-adapted warm-season perennial grasses, the forage is uniformly high in quality. Alfalfa provides some grazing during the winter, when summer grasses are semidormant. Indian and African alfalfa make the most growth during the winter and recover more quickly after being clipped in hot weather. Hairy Peruvian and Texas Common alfalfa varieties are third and fourth choices, respectively, for the south Texas area.

Irrigated pastures are excellent soil conditioners but may be soil-depleting crops if they are not properly fertilized. The management an irrigated pasture receives after it is established determines its productivity. In addition to following good fertilization practices, other important management points are: (1) proper irrigation and grazing, (2) utilization of excess forage as hay or silage, (3) clipping as needed, and (4) scattering of the animal droppings.

Texas Corn Planting Tips

Texas farmers should plant corn as soon as the weather permits, so that the crop can attain maximum growth before the summer's heat and dry weather set in, advises Ben R. Spears, Extension agronomist with Texas A. & M. College.

In most areas of the State, corn should be planted about the time the last frost usually occurs. If planted earlier, poor germination and slow growth may result. In order to conserve the maximum amount of moisture, the seedbed should be prepared early and should be disturbed as little as possible until planting time. A deep, well-pulverized, weed-free seedbed is necessary for high yields.

Corn plants which are properly spaced provide the most satisfactory yields, according to Mr. Spears. In east Texas and the Blackland area, the plants should be spaced 18 to 24 inches apart; if subsoil moisture conditions are poor, the 24-inch spacing is preferable. In west Texas, 24-inch spacing is also recommended; under irrigation or extremely favorable moisture conditions, a closer spacing of 12 inches would produce maximum yields.

Approximately 150 pounds of nitrogen are needed to produce 100 bushels of corn, and the requirements for phosphoric acid and potash — the other essential nutrients — are equally high. It is recommended that the farmer have the soil tested to determine fertilizer needs.

Only high-quality seeds of proven adaptability should be planted. The hybrid corn varieties (in the order of preference) recommended by Texas A. & M. College for the corn-producing areas of the State are shown in the box below.

HYBRID CORN VARIETIES FOR TEXAS

<u>Area</u>	<u>Yellow corn varieties</u>	<u>White corn varieties</u>
Southern part of east Texas and the Gulf Coast.....	Texas 30, 28, 26	Texas 15W, Asgrow 101W, Texas 17W
Northern part of east Texas.....	Texas 28, 30, 26	Texas 17W, TRF3, Texas 15W
South-central Texas.....	Texas 28, 30, 26, 32	Asgrow 101W, Texas 17W, 15W
North-central Texas.....	Texas 28, 26, 30	Texas 17W, TRF3, Asgrow 101W
Western part of Texas, including extreme south Texas.....	Texas 28, 26, 32	Asgrow 101W, Texas 17W, 15W

After the crop is growing well, it should be cultivated only when necessary to control weeds, Mr. Spears advises. Excessive cultivation prunes the roots and reduces their ability to use available moisture.

High Milk Output Stressed



Dairy farmers in Cooke County, Texas, are stressing high milk and butterfat production per cow as a means

of reducing the squeeze on farm incomes resulting from lower prices and higher costs, according to Claude Jones, Executive Vice President of the First State Bank of Gainesville, Texas.

Most progressive dairy farmers in the area are members of the Cooke County Dairy Herd Improvement Association and have their cows tested regularly for production performance. Supervisors Carl Kemplin and Bob Fuhrman of the Cooke County association recently released data showing that, in November 1955, the cows tested produced 783 pounds of milk and 32 pounds of butterfat per cow.

Cooke County dairymen are making an enviable record as compared with many other dairy farmers in Texas. Information released by the State Dairy Herd Improvement Association shows that the average production of both milk and butterfat per cow in the Cooke County association in November 1955 was larger than that for any of the other 21 associations reporting in the state association. Cooke County herds averaged 770 pounds of milk and 31 pounds of butterfat per cow during that month. In the state association, an average of 568 pounds of milk and 25 pounds of butterfat was produced.

Get Brooder Houses Ready

Careful attention should be given to cleaning and repairing brooder houses in prepara-

tion for growing chicks, says Ben Wormeli, Extension poultry husbandman of Texas A. & M. College.

The poultryman should —

1. Make sure that all windows, doors, and ventilator sections of the brooder houses are well fitted and work smoothly and that the roofs do not leak.
2. Clean brooder stoves and check thermostat apparatus to assure a dependable source of heat.
3. Provide adequate feeding and watering facilities. The amount of space provided for the chicks should be increased as they grow older to insure uniform growth of the birds.

Making sure that the brooder house and equipment are adequate and in good repair will pay dividends in the production of good-quality, uniform pullets for the following year's laying flock.

Certified Seed Pays

The use of certified planting seed — which usually is the best seed available of a particular variety — assures purity, higher germination, and increased crop yields, according to a report from Texas A. & M. College. Germination and yields depend, to a great extent, upon the availability of moisture, but farmers cannot afford to gamble with seed of questionable quality. Certified seed may cost slightly more, but the added cost is good insurance.

Certified seed comes from fields which are inspected during the growing season, is properly handled at harvesting, and is cleaned and tested for purity and germination. After seed has passed certain rigid standards, the State Department of Agriculture issues a "certified" tag for each bag.

Farmers are advised to buy planting seed now for their 1956 crops. Last-minute shop-

pers may find local stocks depleted and may be forced to plant whatever seed is available.

If planting seed has not been chemically treated for seed-borne and seedling diseases, farmers find that such a practice is profitable and also is added insurance against poor stands and plant losses during early growth.

Information on seed treating and variety recommendations can be obtained from local county agricultural agents.

Assure Steady Hog Supply



hog production.

A steady supply of hogs for market throughout the year is the goal of the National Swine Growers Council in recommending that farmers develop a multiple farrowing program of

The council suggests that many farmers will find it convenient to farrow two groups of sows twice a year, with farrowing dates spaced 90 days apart. The primary advantage of the system would be the more orderly selling of hogs, with less of the seasonal price fluctuation which usually results from extremely heavy marketings. The practice also would stabilize the market for sows, as supplies vary from 5 percent to 50 percent of total hog receipts, according to the season.

Multiple farrowing of hogs will result in production advantages, since smaller groups of sows farrowing at intervals will make more efficient use of farrowing and feeding equipment and the hogs produced for market will be more uniform in size. The time and labor needed to care for the hogs also will be distributed more evenly.

Is Bloat Licked?

An intensive study of cattle bloat has been under way for several years at the Mississippi

Agricultural Experiment Station at State College, Mississippi. Attention was focused upon the study of rumen microorganisms as a possible factor in the cause of bloat, and it was decided to investigate whether any of the antibiotics would be helpful in the prevention of bloat in cattle when grazed upon pure stands of Ladino clover.

The antibiotics tested in the study included aureomycin, terramycin, bacitracin, streptomycin, and penicillin. In 2 years of tests, penicillin in extremely small amounts prevented bloat of yearling steers. A quantity of this drug — about one-fourth the size of an aspirin tablet — provided complete protection up to 3 days for steers grazing on clover. It is estimated that about 15 cents worth of the actual drug should protect an animal through an average spring clover season in Mississippi.

A practical way of administering penicillin to cattle has not yet been perfected. However, discovery that the drug will prevent bloat opens a promising solution to a problem which has distressed cattlemen for several years.

The Mississippi Experiment Station is now working with drug manufacturers on the best method of preparing the penicillin for cattle. Satisfactory methods of administering the drug in mixtures with feed and salt are now being explored.

Undesirable hardwood trees take water and plant food from the soil which could be used in producing forage for livestock. These trees often grow on the most productive land or in fence rows and reduce the yields of cultivated crops and pastures. Winter is an excellent time to apply chemicals for controlling hardwoods.

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