

# Agricultural

## NEWS LETTER

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### *Meeting the Labor Shortage*

Obtaining sufficient labor or finding suitable mechanical equipment to substitute for hand labor is one of the major production problems facing southwestern farmers this year. Cotton farmers are particularly concerned, because the production of cotton still requires considerable hand labor for chopping, hoeing, and harvesting operations.

Four ways of reducing the labor costs of chopping and hoeing cotton are suggested by Fred Elliott, Extension cotton work specialist of Texas A. & M. College:

- ◆ Cross-plowing with five 15-inch sweeps on a 2-row tractor is one of the easiest methods of thinning cotton stands. Some additional hoeing usually is required, but cross-plowing reduces substantially the amount of hand labor required to thin and clean the cotton field.
- ◆ Mechanical choppers are available that do a satisfactory job of thinning on certain soils and topography. It is advisable to check with local implement men to determine the value of these machines in any particular community.
- ◆ A rotary hoe attachment on the cultivator can be used to kill seedling weeds and grasses in the row.
- ◆ Chemical sprays are now available for controlling weeds and grasses. Most effective results are obtained when one application of the weed killer is made at the time of planting and another, when the cotton plants are

well established. The use of these sprays for weed control is a specialized operation, and it is desirable to obtain the advice of someone who has had experience in their use before attempting to apply them. The cost of controlling weeds by chemical sprays has been somewhat less than that by hand hoeing in most of the tests conducted in the Southwest.

### *Cotton Harvesting*

Mechanical harvesting of cotton, either with pickers or strippers, is another method of reducing the amount of hand labor required. Studies in the High Plains of Texas, where more than 50 percent of the crop is harvested mechanically, show that the use of mechanical *strippers* can reduce harvest labor requirements from 17 to 1½ man-hours per acre on dry land and from 33 to 2 man-hours per acre on irrigated land.

Harvesting costs with strippers averaged \$9.10 per bale on dry-land cotton that had not been hand-snapped previously, according to a study of operations on the High Plains covering the years 1947-50. On irrigated land with higher yields per acre, the cost dropped to \$4.50 per bale. The comparable cost of harvesting the cotton by hand was \$40 per bale.

Limited studies of mechanical picker operations in other parts of the Southwest indicate that this machine, which plucks the lint from the boll rather than stripping the stalk

of all bolls and leaves, brings about a similar saving in labor.

Cotton farmers who hope to take advantage of these savings in harvesting costs should make certain that there is a gin in their community that is equipped to handle mechanically harvested cotton. Special cleaning equipment is necessary to do a satisfactory job of ginning cotton harvested mechanically.

### *Harvesting Corn Mechanically*

Many farmers in the Southwest still hand-snap their corn. This job frequently can be done during slack periods, thus making use of family labor. However, mechanical corn pickers are now on the market which do an excellent job. They reduce materially the amount of hand labor required and enable harvest to be completed promptly.

The machines are available in both the 1- and 2-row sizes and can be mounted on most tractors. Some firms also make a machine that is pulled behind the tractor and operated from the power take-off.

### *Hay Harvesting Methods*

Tractor-operated mowers, rakes, and balers have taken most of the drudgery out of hay harvesting. These machines permit the job to be done quickly, efficiently, and with a minimum loss of leaves, thus maintaining a higher quality hay. Farmers whose operations are not large enough to warrant the purchase of this equipment frequently can obtain the service of custom operators.

Most of these labor-saving methods involve the use of additional equipment, thus increasing the investment in farm machinery and the cash cost of operating the farm. For this reason, farmers should consider carefully the relative merits of purchasing a machine and of hiring the work done by custom operators.

It is estimated that cotton farmers on the High Plains should have at least 50 acres of cotton to warrant an investment in a stripper. One machine usually can handle from 200 to 275 acres each season and still complete the harvest operation by Christmas.

Mechanical cotton pickers, which cost a great deal more than strippers, are not likely to be profitable unless they are used on from 100 to 200 acres of cotton each season.

### *Producing Quality Hay*



The protein content and palatability of hay are determined largely by the method used in its harvest. R. E. Burleson, Extension dairy husbandman of Texas A. & M. College, says that high-quality hay should be leafy, green in color, have soft pliable stems, and a sweet odor.

In order to produce hay with these characteristics, grasses and legumes should be cut before they reach maturity. Sudan and Johnson grass should be cut just as the seed heads emerge, and most legumes should be cut when the fields are about one-tenth in bloom.

Mr. Burleson suggests that dairymen store a year's supply of hay during the harvest season, since prices are usually lower at that time of the year. Dairymen should have from one to two tons of high-quality hay stored for each cow in the herd.

### *Heavy Seeding Gives Better Stand*

Planting cottonseed at a relatively high rate per acre improves the chance of getting a satisfactory stand in areas where crusting of the soil frequently retards emergence of the cotton seedlings.

In tests at the Texas Agricultural Experiment Substation at Lubbock during the 1951 season, 52 percent of the seedlings emerged within 20 days after planting when the rate of seeding was 39 pounds per acre. Only 37 percent of the seedlings had emerged 20 days after planting where the rate of seeding was 13 pounds per acre.

The seedlings in these tests were forced to break through a crust 1-inch thick. These tests bear out the opinion of many cotton growers that a heavy rate of seeding makes it easier for the seedlings to "push" through the crust.

The cotton plants in the plot which was seeded at the heavier rate also were more vigorous.

### *Deferred Grazing Pays Off*

Deferred grazing—the practice of not grazing the pasture for several weeks or months—is the cheapest and most effective method of rebuilding range land, according to A. H. Walker, Extension range specialist of Texas A. & M. College.

In west Texas, Mr. Walker recommends deferring part of the pasture area for a complete growing season, in order that the more productive grasses may become better established.

In east Texas, a rest of 2 months during the spring and again in the fall is considered to be most effective. Plant growth in that area is much more vigorous, and a longer period of deferment is not necessary.

On the range land of the Southwest, Mr. Walker points out that native grasses have proved to be the most successful. In the more humid areas, annual grasses and legumes can be substituted for the unproductive perennial grasses now growing on many old fields. A soil test should be made in order to determine fer-

### *COTTON INSECTS THREATEN AGAIN*

*Reports from the Lower Rio Grande Valley state that pink bollworm and boll weevil infestations already are heavy in many fields.*

*This fact emphasizes the importance of maintaining a constant watch for cotton insects every year. No two seasons are alike with respect to the cotton insect problem. However, one thing is certain: there is need for insect control every year. Farmers are urged to contact their county agricultural agents, ginners, or insecticide dealers for copies of cotton insect control recommendations for their communities.*

*It has been proved again and again that the application of insecticides is a profitable operation on cotton grown on land suited to the production of that crop.*

tilizer requirements, and grazing should be delayed until the plants have become well established.

### *Suggestions for Temporary Pastures*

Emphasizing the low cost of feed produced on pastures, R. E. Burleson, Extension dairy husbandman of Texas A. & M. College, points out that dairymen should plan now to plant at least one acre of Sudan grass or other temporary pasture for each cow in their herd.

Mr. Burleson says that the use of temporary pastures, if crossfenced and rotated, can provide a large part of the summer feed for dairy cows. Moreover, these pasture feeds are high in protein and other nutrients if grazed while young and tender.

Seeding rates and fertilizer recommendations for local areas can be obtained from county agricultural agents.

### *Screwworms Cause Heavy Damage*

The mild winter permitted screwworms to survive in areas as far north as central Texas, according to A. C. Gunter, entomologist with the Texas A. & M. Extension Service.

Recent rains over much of the State have produced favorable weather conditions for these pests, and stockmen are warned to be on the alert for their appearance. Infected animals should be treated at once. Animals should be examined carefully before shipment and again when they are unloaded, and all scratches or wounds should be treated promptly.

Many stockmen are familiar with Smear-62, which has been used for years in battling the screwworm. Mr. Gunter points out that a new material called EQ-335 is now available and is superior to Smear-62. One application per week usually is sufficient.

### *Treating Sorghum Seed Pays*



Treating grain sorghum seed to control kernel smut pays off in better stands and higher yields, according to Dr. D. C. Norton, Extension plant pathologist of Texas A. & M. College.

Kernel smut is caused by a fungus that is carried on the seed in the form of tiny black spores. Unless the seed is treated to kill these spores, the fungi may kill many of the seedling plants even before they emerge from the ground.

Several commercial preparations are available for treating sorghum seed. Among the more common are copper carbonate, arasan, spergon, and new improved cerasan.

### *Publications*

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State College:

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*The Value of Milo for Laying Hens*, Press Bulletin 1063, by L. N. Berry.

Oklahoma Agricultural Experiment Station,  
Stillwater:

*Grass Silage in Oklahoma*, Circular No. C-135.

Texas Agricultural Experiment Station, Col-  
lege Station:

*Farm Leases on Irrigated Farms on the High Plains of Texas*, Progress Report 1434, by William G. Adkins and Cecil A. Parker.

*Denton Cotton Variety Tests, 1947-51*, by J. H. Gardenhire and D. I. Dudley.

*Effect of Legumes, Nitrogen and Row Systems on the Yield of Corn on Miller Clay Soil, 1950-51*, Progress Report 1440, by H. E. Rea and others.

*Marketing Eggs at the Producer Level in Nine Southern States*, Southern Cooperative Series Bulletin 17.

*Trends in the Production and Disposition of Milk and the Importance of Dairying in Southern States, 1924-50*, Southern Cooperative Series Bulletin 19, by Warren E. Collins and others.

*Importance of Resistance to Bacterial Blight of Cotton*, Progress Report 1419, by L. S. Bird.

The *Agricultural News Letter* is prepared in the Research Department under the direction of CARL H. MOORE, Agricultural Economist.