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Save Replanting by Treating Seed

Treating cottonseed, corn, and legume seeds before planting frequently makes the difference between a good stand and a stand so poor that replanting becomes necessary.

The cost of treating seed seldom exceeds 10 cents per acre—a small item in comparison with the cost of replanting. Moreover, proper treatment of seed before planting is an essential step in obtaining the maximum production so urgently needed to meet the requirements of the Nation's defense program.

Cotton On many farms it will be impossible this year to replant cotton with quality seed. The amount of desirable cottonseed in many communities is sufficient only for the initial planting of intended acreage. If a stand is not obtained from this planting, acreage may have to be replanted with inferior seed or perhaps reduced.

Low germination is a common cause of poor stands, and growers should insist on seed with a germination test of at least 80 percent.

Sometimes adverse weather causes a loss of stand and necessitates replanting. But in many cases, diseases, such as soreshin, angular leafspot, and seed rot, are the primary cause of a poor stand. If diseases are controlled by proper seed treatment, strong, healthy seedlings usually will be produced from the initial planting, even though adverse weather conditions may prevail.

Tests at the Agricultural Experiment Substation at Temple, Texas, show that cottonseed treated with 2- to 5-percent Ceresan gave

from 25 to 30 percent better stands and 50 more pounds of lint cotton per acre than untreated plantings. At current prices, this represents a return of more than \$20 on an investment of 10 cents.

Treating cottonseed is a simple process and consists mainly of covering each seed thoroughly with an organic mercury disinfectant (Ceresan is the most common). Farmers who are not familiar with the procedure should consult their county agricultural agent or seed dealer for details. Many growers may prefer to have the seed treated by the seed dealer or gin, but they should make sure that the correct material has been used and that the seeds have been covered completely.

Corn Poor stands of corn are frequently the result of low germination of seed, but sand wireworms, seed-corn maggots, and corn rootworms also seriously reduce the number of healthy, vigorous corn plants per acre.

Treating the seed at planting time is generally recommended as the best method of controlling these insects. Louisiana State University specialists recommend the use of chlordane or benzene hexachloride on the seed. The Texas Agricultural Experiment Substation at Denton, Texas, recommends treating the seed corn with Arasan, Spergon, or other seed disinfectant to protect the seed during the germination period and promote a stand of strong, healthy seedlings. Local county agents should be consulted for details of the treating process.

Legumes All legume seed should be inoculated before planting. This simple and inexpensive process insures the presence of nitrogen-fixing bacteria in the soil, without

which the legume cannot take nitrogen from the air and convert it into plant food.

Failure to inoculate has caused the loss of many legume seedings. Moreover, legume crops which are not inoculated do not give maximum soil-building benefits, since they add only small quantities of nitrogen to the soil for successive crops.

Pasture Improvement Pays

Recent experiments show that improved pastures produce as much livestock feed per acre as high-yielding corn or sorghums on comparable land, according to Dr. R. C. Potts, associate professor of agronomy in charge of forage investigations at the Texas Agricultural Experiment Station.

Dr. Potts says that improved pastures will produce total digestible nutrients (a measure of feeding value) equal to 75 or 80 bushels per acre of corn. Furthermore, on irrigated land, pastures compare favorably with cotton with respect to cash income.

Studies show that the cost of producing 100 pounds of digestible nutrients from pastures is \$1.26; from hay, \$1.74; from silage, \$2.07; and from concentrates, \$4.23. Moreover, the return per man-hour of labor is much higher than from cultivated crops—6 times as much as from corn and 9 times as much as from oats.

Dr. Potts states that success in today's improved pasture programs depends upon the use of correct pasture plants. The new deep-rooted grasses and legumes show much promise. Madrid clover, bur-clovers, crimson clover, white clover, perennial lespedeza, and new introductions, such as coastal Bermuda grass, hold special promise for pastures in Texas. Even Johnson grass, traditional scourge of the cotton field, is a good pasture plant when combined with certain legumes and properly fertilized and managed.

Planting "shotgun" mixtures of 15 to 20 grasses and legumes at high seeding rates, hoping to obtain a stand of the suitable plants, is a poor practice, says Dr. Potts. Simple mixtures, usually one grass and one le-

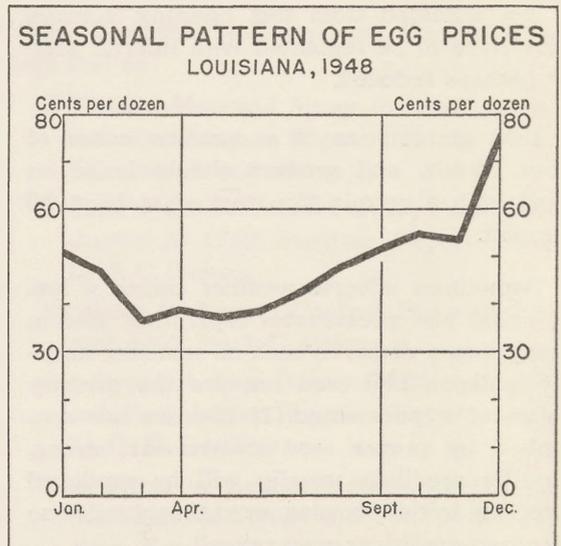
gume, are all that are necessary to do the job. Specific information regarding suitable pasture mixtures is available through the local county agent's office and other farm agencies.

Sources of Range Grass Seed

The names of 92 concerns that buy and sell 23 different range grasses are given in a mimeographed circular that has just been issued by the Southern Great Plains Field Station at Woodward, Oklahoma. Species of grass vary from hardy crested wheatgrass to King Ranch bluestem, and the concerns which handle them are located all the way from Glasgow, Montana, to San Antonio, Texas. For a copy of the circular, write to the Station at Woodward.

Early Chicks Pay Most

Early chicks—ones that will be laying by September—are the most profitable. Egg prices are usually highest during September, October, November, and December, as illustrated in the accompanying chart. Chicks hatched prior to April 15 have the best chance of being in production during those months.



It is advisable to buy only chicks hatched from eggs produced in a disease-free flock. If buying straight-run chicks, order three birds

for every pullet expected to be placed in the laying house next fall. This will permit culling out the weaker and less desirable pullets and starting the fall season with a full flock of strong, vigorous birds. If buying sexed pullet chicks, order at least one and one-half chicks for each laying pullet to be housed.

Early chick losses, which can seriously disrupt the poultry program, can be held to a minimum if preparations for handling the baby chicks are made several days in advance of their delivery. The brooder house, brooder stove, feed hoppers, and water fountains should be checked to make certain that they are in good repair and functioning properly. It is a good idea to operate the brooder stove from 36 to 48 hours before the birds arrive to be sure that the thermostat control is working correctly.

"15 or 300" is a good slogan for poultry growers, according to Louisiana State University. Fifteen laying hens is a good size flock for family needs, and 300 birds is about the smallest economical unit for commercial production.

Mastitis Spread by Unclean Milking Practices

Mastitis, a rather widespread and serious disease of dairy cattle, is frequently spread through the herd by unclean milking practices, according to Herman Farley, Director of the Oklahoma A. & M. College Veterinary Research Institute.

Mastitis, which ranks close to Bang's disease as a livestock menace, is an inflammatory condition of the mammary gland (udder) which is caused either by infection or by mechanical injury to the udder, such as falls and bruises. The disease, also known as mammitis and garget, takes either an acute or chronic form, Farley explained.

Although treatment of infected udders by injections of penicillin has probably proved helpful in combating most cases, the disease is extremely difficult to cure.

Since the disease organisms associated with mastitis are often transferred to non-infected udders by contaminated milking equipment, the use of sanitary milking practices is an important step in checking the spread of the disease.

The teatcups of the milking machines, as well as the milker's hands, should be washed in a disinfectant solution after milking each cow. Also, animals known to be infected should be milked last.

"Our cotton goal next year is 16,000,000 bales. We can reach it easier...and at less cost if we aim for...more bolls per plant... more bales per acre...through dynamic community action."—The Cotton Gin and Oil Mill Press.

Small Spray Nozzles Effective

Spray nozzles delivering 1.8 gallons of spray per acre were as effective in obtaining cotton insect control as nozzles delivering as much as 13.5 gallons per acre, according to tests of the Texas Agricultural Experiment Station.

In these tests one nozzle per row was used in the first two applications, two nozzles per row in the third application, and three nozzles on all later applications. The sprayer was operated at 60 pounds of pressure and the tractor driven at about 4 miles per hour. Spray mixtures were varied so that the same quantity of insecticide was applied regardless of the amount of spray delivered. Thus, the spray mixture used with the smaller nozzle was more concentrated.

The significance of these tests lies in the fact that use of small spray nozzles permits the use of the more concentrated spray mixtures and, thus, reduces the amount of water that must be hauled to the field when using sprays for the control of cotton insects.

Specialists who conducted the tests emphasized the importance of using more than one nozzle per row as the cotton plants increase

in size. It is worthwhile to note that all of the cotton receiving this treatment with insecticides, regardless of the type of nozzle used, yielded from 558 to 612 pounds of seed cotton per acre more than that which received no treatment for cotton insects.

Warfarin—New Slow-Death Rat Poison

Warfarin, a new rat killer, appears to be one of the most effective poisons available for the control of rats and mice.

The active ingredient of the new poison is coumarin, a compound found in sweetclover, which affects the clotting of blood, says J. E. Poore, assistant district leader for the Rodent Control Service, San Antonio, Texas. Rats that have eaten warfarin baits for several days become less active, develop internal hemorrhages, and slowly bleed to death.

One advantage of warfarin over many of the other rat poisons is that it is odorless and tasteless. Thus, rats will continue to eat the bait until they die without detecting the presence of the poison.

Another advantage lies in the safety with which it can be used on the farm. While warfarin is poisonous to all warm-blooded animals, the amount recommended for controlling rats and mice is so small that there is little danger of farm animals or people being poisoned accidentally. However, the usual precautions should be taken to prevent accidental poisonings.

Warfarin is now on the market under the trade names of various chemical companies.

Price Support for Long-Staple Cotton

The United States Department of Agriculture has announced that it will support the price of 1951-crop Amsak and Pima 32, varieties of American-Egyptian extra long-staple cotton, at \$1.04 per pound for Grade No. 2, 1½-inch staple. Appropriate differentials will be made for other grades and staple lengths.

The support price is well above parity and compares with an average price of about 75

cents per pound for the 1950 crop. However, the Department of Agriculture believes that the high support price is necessary in order to encourage needed production to meet domestic needs.

Announcements

February 16-25—San Antonio Livestock Exposition, San Antonio, Texas.

February 26-March 2—Amarillo Fat Stock Show, Amarillo, Texas.

March 12-14—Texas and Southwestern Cattle Raisers Association Annual Convention, Dallas, Texas.

Publications

Oklahoma Agricultural Experiment Station, Stillwater:

Performance Tests of Corn Varieties and Hybrids, 1950, Miscellaneous Publication MP-18, by James S. Brooks and Hartwill Pass.

Texas Agricultural Experiment Station, College Station:

Rice Drying, Progress Report 1294, by Fred L. Aldred and Harold A. Kramer.

Crimson Clover Variety Test on Lufkin Fine Sandy Loam at College Station, 1949-50, Progress Report 1295, by Clark Harvey and R. C. Potts.

The Effect of Fertilizer and Spacing of Plants on the Yield of Corn at Kirbyville, 1950, Progress Report 1307, by E. D. Cook and others.

Performance of Legumes at the Angleton Station, 1949-50, Progress Report 1309, by Marvin E. Riewe and W. F. Turner.

Cool Season Grasses at College Station, Denton and Iowa Park, 1948-50, Progress Report 1310, by E. C. Holt and others.

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