

ESSENTIAL THAT CROPS FIT SOIL

Red Clover and Timothy Should Not Be Depended On Entirely for Maximum Crops.

REDTOP FAVORS MOIST GROUND

No Perennial Hay Plants Will Produce Well on Poor, Sandy Soil—Most Grass Seeds Are Small and Require Good Seedbed.

(Prepared by the United States Department of Agriculture.)

While timothy and red clover undoubtedly are the best hay crops on good soils in the northeastern quarter of the United States, they should by no means be depended on to produce maximum yields of soil. Other hay crops are better suited and are more dependable in some cases and under particular soil conditions. Alsike clover, for example, is better adapted to sour and moist soils than common red clover, and the two mixed together and seeded on some uplands often insures a crop where the latter seeded alone would fail. Redtop is the best wetland grass and on such land a mixture of red-top meadow fescue, and alsike clover usually gives good returns. While no hay grasses can be depended upon to make a commercial crop on poor land, redtop, orchard grass, and tall oats-grass are better than any others. These are facts discussed in detail in Farmers' Bulletin No. 1170, Meadows for the Northern States, just issued and ready for distribution by the United States Department of Agriculture.

Has Bulk of Tame Hay Acreage.
In that section of the United States, north of and including Tennessee, and east of central Nebraska, Kansas and the Dakotas, is found 88 per cent of the tame hay acreage of the nation. Eighty-eight per cent of this acreage is seeded to timothy and clover. While these two plants undoubtedly will continue to hold the popularity they now possess, there are a number of other plants which, though not so well known, are more desirable for particular purposes and for certain conditions of soil and climate. The latter are given special attention in the bulletin.



Field of Bur Clover.

There is little difference of opinion as to the plants to be seeded on rich well-drained land. Timothy is seeded alone if the hay is to be sold on the market, and timothy and clover, often mixed with redtop, where part or all of the hay is utilized on the farm. Some of the advantages of these plants are that they have good seed habits, especially timothy and redtop. Red clover is a deep-rooted legume, and has a beneficial effect on succeeding crops.

Timothy is considered by feeders the best hay for horses, and clover, or clover and timothy mixed produce better yields and are excellent for cattle and sheep. The comparatively long period during which these plants may be left standing without serious deterioration before cutting, together with the fact that the time of their maturity interferes little with the harvesting of the cereals and other farm work, have much to do with their popularity.

The most serious objection to the red clover and timothy mixture is due to the difference in time of their maturity, the former usually being ready to cut two weeks before the latter. For this reason mammoth clover, a variety of the common red, which is somewhat later in maturing, is sometimes substituted for red clover in the seed mixture.

There are many soils along the southern border of the area under discussion which will give a larger hay yield if seeded to orchard grass, tall oats-grass, and alsike clover than if seeded to timothy, redtop and red clover. These soils are usually poor in organic matter and are inclined to be sour. It is important that this mixture be cut when the plants first head out, for if harvesting is delayed they will make a tough, less palatable hay. This is especially true of orchard grass. If cut early, however, this hay will be relished by all classes of live stock. For general use in the localities referred to, the bulletin recommends the following mixture: Orchard grass, 14 pounds; tall oats-grass, 12 pounds; alsike clover, 6 pounds per acre.

Gives Best Results.
Raising hay on poor land is not satisfactory, but when it is necessary this mixture gives best results. In some places in the Middle West sweet sorghum has given good results under unimproving soil conditions. According to the bulletin, no perennial hay plants will produce well on poor, sandy soil. Under such soil conditions, however, some temporary crop, such as rye or oats and peas, and, along the Atlantic coast, early sorghum and cowpeas, are preferable to perennial hay crops.

The best temporary hay plants are the small grains seeded either alone or in mixture with some legume, such as peas, vetch or crimson clover. Mil-

lks are sometimes used for this purpose, as are sudan grass and coarse forage, such as corn and sorghum. In the northern states a combination of oats and Canada field peas makes a very good hay crop. Excellent results have been obtained in eastern Maryland and Virginia with the following mixture: Oats, 1 bushel; hairy vetch, 30 pounds; white-blooming crimson clover, 10 pounds per acre.

In order to avoid losing the use of land for an entire season, and to permit late-summer and early-fall seeding, grass crops usually follow small grains. The seedbed should be prepared as soon as possible after the grain is harvested. As a three-inch mellow seeded with firm soil beneath will give better results for summer seeding than one that is deeper, the disk harrow is usually used in place of the plow for preparing land for grass. Most grass seeds are very small and must have a fine, mellow, well pulverized surface soil in order that the seedling may become established. A good seedbed may mean the difference between the success and failure of the hay crop.

Use Too Little Seed.
Most farmers use too little grass seed for best results, according to the bulletin. Rich land with a well-prepared seedbed does not require as much seed as thin land or land poorly fitted. From 20 to 30 pounds of seed per acre are generally sufficient, and this rate is usually more profitable than lighter seedings of mixtures. Small-seeded grasses, such as red-top and timothy, do not require so heavy a seeding as orchard grass or rye grass. Usually 10 pounds of timothy or 6 pounds of redtop are sufficient when these are seeded alone.

In order that the seed may get a good start, it is frequently advisable to apply some readily available fertilizer. Formerly the grain crop received the fertilizer, but experiments have demonstrated that when it is applied to the grass it will not only increase the yield of this crop but frequently show beneficial effects on succeeding crops for two or three years. Top dressings of suitable manure will increase the yield of hay, and there is probably no better crop than grass on which to apply it. A great deal of grass and clover seed is wasted every year from seeding on sour or acid soils. Applications of lime correct this condition, and should be made particularly where legumes are to be grown.

LITTLE TIME NEEDED TO KEEP LABOR DATA

Records Often Are Means of Saving Working Costs.

Farmer Enabled to Determine Number of Days of Man and Horse Power Necessary to Produce an Acre of Any Crop.

A record kept of farm labor does not require much time, yet it is often the means of saving labor costs. The labor records show just how much labor and team work is required on each crop and the time in the season when it is used. They should show what proportion of the labor is devoted to work that produces an income and the amount that is consumed on odd jobs of unproductive tasks. This will enable the farmer to determine the number of days of man and horse labor necessary to produce an acre of any crop, or the care of any class of animals for a year says the United States Department of Agriculture. Thus he may be able to arrange his system of management so that he can get along with less labor and at the same time maintain production.

A year's labor records show also just how much man power and horse power is necessary to run the entire farm at different seasons, and point out accurately just when the rush seasons occur. With such records before him, the farmer knows approximately what his labor requirements will be in advance of the rush season. He is able to increase or decrease the different farm enterprises and fit them together until he has outlined a complete year's work with an even load of labor for the entire season.

GIVE GAS ENGINE ATTENTION

Vibration Tends to Loosen Bolts, Nuts and Various Connections Which Need Tightening.

All screws and nuts on gas engine should be kept tight. The engine should be gone over every day or so when it is used, and all connections tightened and all oil and dirt wiped off. Such practice will go far toward preventing operating troubles, since all gas engines vibrate to some extent and this vibration tends to loosen bolts, nuts and other parts.

New Silverplating Process.
More than 100 per cent increase in the output of electroplating vats is gained by the recent discovery of an English metallurgist. The method of applying the new process, as used at Sheffield in silverplating, is merely to add potassium carbonate to the plating bath, instead of neutralizing that already present by introducing barium cyanide, as is ordinarily the practice. The silver deposit obtained the new way is declared to equal if not surpass, in quality any accomplished by the old method.—Popular Mechanics Magazine.

No Conception of Money.
Myrtle—Isn't it too bad! She has absolutely no conception of what money is for.
Jane—Yes; they say she even has a savings account.—Kansas City Star.

Talk It Up.
Budd—Who originated the phrase "Say it with flowers?"
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Some Startling Facts

85 per cent of the people over 65 years of age have failed miserably and are dependent on the bounty of others.

98 per cent of all Americans are living from day to day on their wages—a loss of their jobs means what?

35 per cent of the widows of the country are in want.

90 per cent of the children in the United States must leave school and go to work before reaching the eighth grade.

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