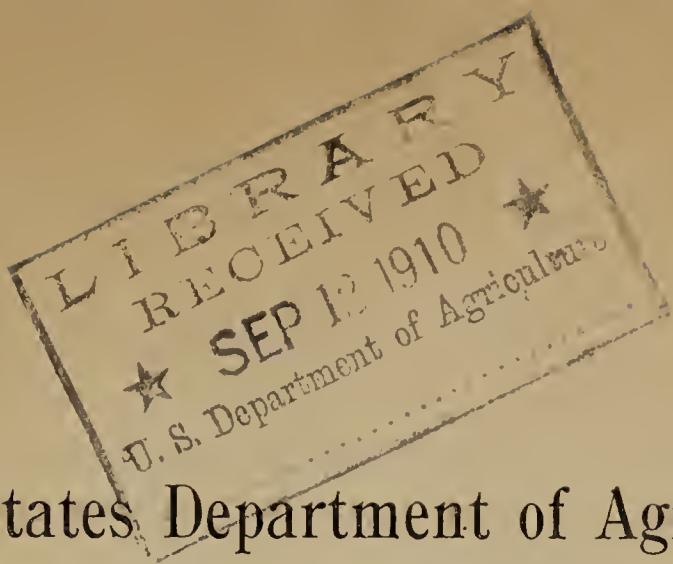


1
PG 91 54



Issued August 3, 1910.

B. P. I.—578.

No. B—526.

United States Department of Agriculture,
BUREAU OF PLANT INDUSTRY,
Farmers' Cooperative Demonstration Work,
WASHINGTON, D. C.

SUGGESTIONS FOR SETTING PERMANENT PASTURES
WITH BERMUDA GRASS AS THE BASIS.

INTRODUCTION.

One of the greatest needs of the South is more and better pastures. More attention must be given to the subject in order that that section may reach the important position it should hold in raising live stock. The permanent pasture has always occupied a prominent place on the most prosperous farms of any country. We trust this circular may be helpful to the farmers and induce them to devote more attention to this subject.

LOCATION OF THE PASTURE.

The pasture should be located as much as possible for general convenience to all parts of the farm. It should also include as great a variety of plants as possible that the season of profitable grazing may be extended practically throughout the year. This can be easily done by the selection of a few of the best and most persistent grasses and mixing with them such clovers and vetches as may be best adapted for pasture purposes in each particular locality.

There is ordinarily much rough, untillable land on the farm that can not be used profitably for anything except grazing. But the idea that only this class of land can be used profitably for pastures is erroneous. Pastures are most profitable when they contain the most nutritious grasses and are convenient to the farm buildings, so that they can be utilized by work stock when idle and at night. The untillable lands of the farm are frequently so poor or ill drained that the best grasses will not thrive on them.

A very important consideration, however, in regard to the use of good lands for pasture is the continued rise in the price of meat and other animal products which makes net returns per acre comparable with such staple crops as cotton, corn, and hay. In view of the facts

that there is a growing scarcity of reliable farm labor in many sections and that the soil conditions show the need for a definite system of crop rotation in which pastures can be made to fill a profitable part, it will be found advantageous in many instances to devote more of the good lands to this purpose. A good pasture furnishes the best of food for animals at a lower cost than can be provided in any other way.

Commence immediately to plan for a good pasture. Possibly some farmers could devote at least a few days' time during the summer making preparations for pastures. Where lands are already available, grasses might be set at odd times. Some of the most valuable pastures are made by planting out grasses a little at a time on rainy days when it is too wet to do regular field work.

BERMUDA GRASS.

Bermuda grass is without question the most useful of the pasture grasses for all Southern States. It is nutritious, a persistent grower, and delights in the hot sunny exposure of an open field. It will stand unlimited grazing by stock, holds up during severe drought, and grows continuously until a killing frost occurs in the fall. It will do well on almost any type of soil, but is especially adapted to sandy loams and the hill lands throughout the South. On fertile lands it makes a rapid growth, attaining a height sufficient for mowing, and may be cut several times during the season. The hay from Bermuda grass has been found fully equal in food value to the best timothy. On washed soils, or on lands that are broken and would soon wash off under cultivation, no other plant has been found so valuable either for checking the erosion already made or for preventing it on sandy hill lands. Its value for preventing washes and holding lands may be illustrated from the fact that all railroads take particular care to get it set thoroughly on new embankments as soon as they are made. The same use is made of it on all new levees and other embankments where washing is likely to occur.

HOW TO SET BERMUDA GRASS.

Lands may be set with Bermuda grass either by seeding or by transplanting old sod. Where the sod is available the root setting is preferable in all cases. Lands can be set with little preparation, but like any other crop a good preparation of the soil before planting has been found much more satisfactory and in the end the cheaper plan. The time best suited for setting the grass by roots is early spring, in order to get a full season's growth, and of course this plan is the one recommended where practicable. Experience has shown, however, that the roots may be planted any time during the year, even in winter if the roots are well covered with soil. This quality gives it another decided advantage for the average busy farmer, as

he can gather the sod any idle time during the spring, summer, or winter and set an acre or so and in this way increase his pasture as opportunity affords. The splendid Bermuda sod now on several hundred acres of the Agricultural and Mechanical College farm at Starkville, Miss., was obtained in this manner. Some of the best pastures on the small farms were established by the owner planting out small patches at times during the year when the labor could be spared from regular farm crops. When the busy crop season is over, those who have not already sufficient pasture would do well to utilize a few days during the summer in preparing a few acres of good land and planting it to Bermuda roots.

As stated elsewhere, it is best to plow the land thoroughly and harrow well to get it in fine condition. Check off with a shovel plow 3 feet apart each way, drop small pieces of root in each check, and cover with a plow or harrow. If the land has sufficient moisture the grass will begin to grow at once and make considerable growth before a frost occurs. Of course if the plants are put closer than 3 feet the sod will cover quicker, but on fair soil the grass will cover the entire surface the first season if put out in early spring, or if planted later will cover the surface the next year.

The following has been found the most satisfactory way of preparing the sod for planting: Select the thickest and most vigorous patch of sod; then, with a good 2-horse turn plow set to run just beneath the roots, turn up the sod. This turned-up furrow, if the sod is thick, will be a continuous strip, as the roots prevent it from falling apart. Men should follow with spades, cane knives, or other suitable tools to chop the sod into blocks of a convenient size, ordinarily not over 2 inches square. Let a man follow with a wagon, throwing the blocks into the wagon with a pitchfork as they are chopped. When the wagon is loaded, carry the sod to the field or pasture where it is to be set, drop one block in a hill, carrying as many rows as convenient. The person dropping the sod can cover it with the foot, or another can come along with a hoe or rake, or, if preferred, the sod can be dropped and the plow or harrow run to cover in the furrow.

Lands can be sodded by merely running the shovel furrow and dropping the grass and covering it well. This method is frequently used when planting in the late spring or summer where it is not desirable to plow up the grasses already growing or on very rough lands where it is not practicable to make good preparation.

Still another method, and one that can be followed out with ease, is to seed land planted to fall oats or wheat by chopping up the sod and sowing it broadcast and covering it with a disk harrow while preparing the seed bed for the small grain.

Bermuda grass lives through the winter, gets a start in the spring, and will grow and cover the land after the grain crop is taken off.

Some degree of success has been attained by setting it out in cotton middles during the summer. It can also be planted between corn rows where there are no cowpeas growing.

These methods are only mentioned to suggest a means of starting Bermuda grass. After it gets its roots set there is no difficulty in getting it to spread over the entire surface, though any of the last-mentioned methods will require considerable more time, and in the end the grass will not be so satisfactory as if put out in good shape to begin with.

Where it is desired to mix other plants with Bermuda pasture, and for the best pasturage a mixture is recommended, the seed may be sown on top of the Bermuda sod and the surface thoroughly harrowed to furnish loose soil to bring up the seeds. Either white clover, bur clover, or vetch, or a mixture of them, can be used. These will come up in the fall, make growth enough ordinarily to furnish some winter pasturage, and give good spring grazing until they die down in May, when the Bermuda grass will be large enough to graze and furnish pasturage until late in the season when the clovers come again. Redtop may be sown in pastures also, especially if there happen to be some low swampy places. It is specially suited to this class of land. In nearly every pasture in the lower South, Lespedeza (known also as Japan clover) will be found growing, and it is a most valuable acquisition. Lespedeza and Bermuda grass make a more perfect summer pasture than any other two known plants for sections where they can be grown. On good level lands few crops can be grown that will return to the owner more profit per acre, expenses considered, than Bermuda grass and Lespedeza grown together for hay. Certainly no farm should be run without a sufficient area of pasture supplied with all these plants to furnish abundant food for all stock on the farm for most of the year.

S. A. KNAPP,
Special Agent in Charge.

Approved:

WM. A. TAYLOR,
Acting Chief of Bureau.

JULY 8, 1910.

○