

Growing Ladino Clove in the Northeast

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FOR many years Northeastern agriculture has been handicapped because of the lack of a reasonably permanent hay-type legume. Ladino, a comparatively new grassland crop, now appears destined to place the agriculture of this region on a par with that of alfalfa-growing regions farther west.

Ladino is a triple-purpose crop, excellent for pasture, hay, and silage. It is permanent on well-adapted soils under favorable conditions of fertility and management. It is a promising legume for Northeastern livestock farms.

Ladino is a giant type of white clover in contrast to the smaller types such as common white Dutch, English wild white, and native wild white clovers. It was introduced into this country from northern Italy around 1890. The first official experiments with this crop are recorded in Bulletin 98 (1894) from the North Carolina Agricultural Experiment Station. Seed, from which our first commercial seed supply was developed, were imported in 1903 and used chiefly on irrigated land in southern Idaho. Oregon, Washington, and more recently California have further developed the crop and supply seed which today provide for the rapidly increasing acreage.

Since 1928 when John Ellis of Lee, Massachusetts, made the first field planting of Ladino clover in the Northeast, the acreage of this crop has increased from 4 acres to an estimated 100,000 acres in the 13 Northeastern States. A recent survey of the agronomists in this area indicates that this acreage may be greatly increased and that within a reasonable time it may

even exceed a million acres. In Maryland alone it is estimated that the present acreage of somewhere around 1,000 may be profitably expanded up to 20,000 to 25,000 for straight seeding and possibly 60,000 additional acres to thicken stands of pasture and pasture-legume mixtures.

Like the wild white and white Dutch clovers, Ladino spreads by means of runners which take root at the joints to form new plants. It is distinguished from ordinary white clover by having much larger leaflets and taller stems. Owing to its more erect growth it is able to compete with tall-growing grasses and legumes. It is not so well adapted to closely grazed pasture sods as the smaller types, but with favorable management and liberal fertilization will persist over a period of years. It is a true perennial and should prove a boon to grassland farming in the Northeast.

Leads in Palatability

As a pasture plant Ladino appears to be at the top among the legumes in palatability for both dairy animals and chickens. Successful grazing of this crop requires rotational management, pasturing fairly heavily then removing the stock when there are several inches of the top still remaining. This is to permit a full measure of recovery. It is important to let the plant go into winter with at least five or six inches of top growth. A light application of from five to six tons of well-rotted manure applied in late fall or early winter has been found very helpful in preventing winter-killing.

Ladino makes an excellent hay that is relished by all classes of livestock. In harvesting for hay, care must be exercised in handling to prevent shattering of the leaves. The crop should be mowed when about one-tenth of the flower heads have turned brown. The first cutting, which is ready about June 1, has a moisture content often as high as 80 per cent. For this reason and because of the possibility of unfavorable weather, this early crop might well go into the silo. The experience of most growers is that in ensiling, from 60 to 80 pounds of molasses per ton of silage should be used to best preserve this feed and to increase its palatability.

Ladino clover is a high producer and a heavy feeder. It is a good crop to be grown on good land. It thrives best on the moist, lowland areas of the farm, those normally too wet for corn or alfalfa yet sufficiently well-drained to prevent standing water. While recommendations for fertilization vary in the different states, it is generally agreed that to produce the maximum yields the soil should be limed to around pH 6.0 and liberally supplied with phosphorus and potash.

Preparation of Soil

In the preparation of soils for Ladino the same seeding practices used in the seeding of ordinary clover-grass mixtures are followed. Most agronomists recommend the plowing down of from 8 to 10 tons of manure. If seeded in a grass mixture, a complete fertilizer is usually recommended. Where seeded in pure stands or in a legume mixture, a phosphorus-potash analysis is believed best. Analyses recommended and chiefly used in the New England States are 4-16-20 and 0-20-20. Grades in similar ratios are quite generally recommended in the Middle Atlantic States. In New Jersey, for example, the recommendations call for the use of from 400 to 500 pounds per acre of a 5-10-10 fertilizer for Ladino grass seedings, and where seeded with alfalfa or red clover mixture 800 pounds of an 0-12-12. The University of Maryland

Agricultural Experiment Station suggests from 300 up to 800 pounds per acre of an 0-14-6 or 0-12-12, depending upon the natural fertility of the soil and whether or not manure has been plowed down. The higher potash analysis is to be preferred on the poorer or lighter textured soils where little or no manure is used.

Time of Seeding

The most satisfactory time of seeding Ladino is in the spring with a companion crop of oats, and it should be planted as soon as the ground can be worked. Successful seedings, however, have been made in August and early September without a companion crop and also in March or April on stands of fall-sown grains or timothy. Whatever the method of seeding, the companion crop should be pastured early or made into silage. As Ladino seeds are small in size, best results follow shallow seeding. It is a common practice to broadcast on top of the ground and to press the seed into the soil lightly by use of a roller. Ordinarily, from one to two pounds of seed added to a seeding mixture of grasses and other legumes are recommended. Even for the seeding of pure stands of Ladino very satisfactory results may be expected from the use of from two to four pounds per acre provided a nurse crop is used to control the weeds. Once started, the vigorous spreading habit of Ladino soon completely covers the surface.

A small acreage of Ladino pasturage on every dairy farm to supply most of the grazing is a capital investment. Where there is some supplemental grazing from old pastures, from one-fourth to one-half acre of Ladino pasture may be ample. However, as the carrying capacity of the clover may vary considerably with the season, age of the stand, or fertility conditions, dairy-men might well figure on one acre for each cow for a grazing period of 160 days. Early grazing should begin when the plants are from three to four

inches high. Quite frequently as many as 8 or 10 cows per acre at weekly intervals may be necessary at this season of the year to make the most economical use of the herbage. The use of portable electric fences for dividing the Ladino pasture has been found to be an essential part of the management program. This or some other system of dividing the field will be found to be necessary in order to prevent excessive grazing and to insure maximum utilization of the feed produced.

Young Ladino clover is laxative and animals may lose flesh when grazing on it unless they are gradually accustomed to it. To guard against this,

as well as against a bloat which may result if animals stuff themselves on clover, they should be pretty well filled up on hay before being turned out and for the first few weeks of grazing allowed to graze only about 15 minutes at any one time. The time of grazing may be lengthened gradually and alternated wherever possible between Ladino and permanent grass pasture. Such a grazing program insures a high level of milk production, reduces the need for concentrates, and keeps the cost of production of milk at a minimum. No dairy farmer in the Northeast can afford to ignore the possibilities of Ladino clover.



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