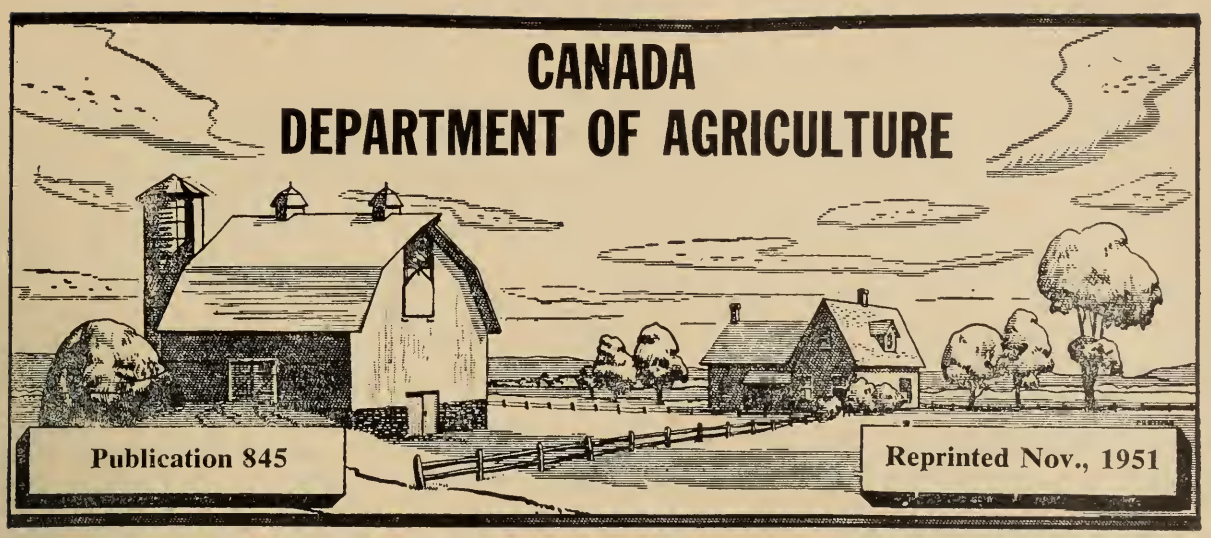

LADINO CLOVER

Ladino clover (*Trifolium repens* L., var. *latum*) is a giant white clover. It is a fast growing perennial legume which spreads by means of creeping stolons and seed. The parent plant has a short tap root and sends out creeping stolons (as in the case of strawberry) which form roots at the nodes and make new plants. A single plant may produce from six to ten creeping stolons and cover from two to three square feet. Grown under favourable conditions, this clover may reach a height of twenty inches. The leaves and the flower heads are borne singly on long stalks, each stalk carrying either a leaf having three leaflets or a flower head. Ladino clover grows from two to four times as large as common white clover. The shape, colour and markings of the leaves, and the shape and colour of the flower heads of the two clovers are similar. Ladino clover seed looks exactly the same as that of common white clover.

FIG. 1.—Close up view of a pasture mixture composed of Ladino Clover and Timothy.

Adaptation.

Ladino clover thrives best on moist soils. Like alsike clover, it grows well on land too moist for alfalfa or red clover. On dry land, it may give good returns provided the soil is fertile and the rains are abundant and well distributed over the growing season. It appears to be less drought-resistant than red clover.

Ladino clover is not a poor-soil crop. For best growth it requires good fertile soils. Liberal applications of manure and of fertilizers, mainly phosphorus and potash, are recommended. Success with this legume will depend largely upon the fertility of the soil.

Its tolerance to acidity is about the same as that of alsike clover. Ladino clover is less exacting than alfalfa in that respect, but on very acid land, liming should be resorted to. The pH of the soil should be raised up to approximately 6.0. A test of the soil will assist in indicating the amount of lime to apply. Liming should be done preferably in the fall or in the spring before seeding.

Ladino clover is fairly hardy and may withstand the winter as well as red clover. Less winter-killing is likely to be experienced through freezing and thawing if the crop is grown in association with grasses and allowed to make a growth of 4 to 6 inches in the fall.

Soil preparation and fertilization.

Although no special precautions are called for in regard to preparing land for seeding Ladino clover, the soil must be well worked, friable but firm as for sowing any other small seeded crop.

The amount and the kind of fertilizer to use will depend upon the type of soil and the previous crops grown. Generally it is recommended to apply about 500 pounds of 2-16-6, 0-16-8 or superphosphate to the acre. Light applications of manure—8 to 10 tons to the acre—will help in establishing a good stand of Ladino, especially on light soils or on those low in organic matter. Fertilizer and manure should be incorporated with the soil before seeding.

Seeding.

Ladino clover usually is seeded with a nurse-crop early in the spring in combination with other forage plants. The recommended mixtures and their rates of seeding per acre are as follows:—

1st Mixture		*2nd Mixture*	
Timothy	8 lb.	Timothy	8 lb.
Ladino clover	2 "	Red clover	4 "
		Ladino clover	2 "

The two mixtures may be used either for hay production or pasture purposes. The nurse-crop of oats is seeded at the rate of 3 bushels per acre when the field is intended for pasture the year it is sown or at the rate of 2½ bushels if the oats are harvested for grain. In the latter case, an early or mid-early variety of oats should be chosen.

Management.

First year.—The oats may be harvested for grain but it is preferable to have the field pastured when the oats are 6 to 10 inches in height. When the field is grazed, the pasture must be given a few rest periods during the summer—approximately ten days each time. In the fall, the cattle are removed from the pasture about September first, but not later than September 10, so that the clover may build up its reserves before winter sets in.

Second year.—The Ladino field is kept in pasture or harvested for hay.

Pasture.—It is preferable to have the field grazed, as Ladino clover will serve primarily and most advantageously as a pasture plant. Grazing in rotation is the best system to follow. The pasture should be divided into four or five small fields which are grazed rather intensively, each in turn, for short periods. Continuous and close grazing is not recommended; it delays the re-establishment of the sward, reduces the yields, weakens the plants and makes them more susceptible to winter-killing. The cattle should be removed from the pasture early in the fall, that is about September first but not later than September 10. Some winter-killing may be expected unless Ladino clover is allowed to make a growth of four to six inches before the end of the growing season.

FIG. 2.—Aftermath of a Ladino-timothy hay field one month after harvesting of first crop at the Experimental Station, Lennoxville, Que. This field has produced an average of 2.9 tons of dry hay per acre for two years, 1947 and 1948.

Hay.—Ladino clover also makes a hay of excellent quality. It is cut as soon as the clover has reached the full bloom stage. Since Ladino clover contains more moisture than other legumes, it is more difficult to cure. To make good hay, good weather must prevail so as to avoid undue manipulations which are always responsible for large losses of leaves.

These difficulties may easily be overcome by ensiling the green hay. The methods and preservatives used in ensiling Ladino clover hay are the same as for any other green hay.

Third year and the years thereafter.—The Ladino field can be managed the same way as outlined for the second year, that is, either kept in pasture or harvested for hay. After a few years, the sward usually contains a higher proportion of grasses and hay making is therefore easier than in former years.

Grown under favourable conditions, Ladino clover yields a surprisingly high quantity of succulent feed, rich in proteins and minerals, and relished by all classes of livestock. High production, however, cannot be maintained from year to year, unless fertilization is resorted to. Because of its rather shallow root system, Ladino clover draws most of its food from the top layer of soil, that is the depth of

ploughing, and since the plant cannot utilize the subsoil nutrients as well as alfalfa, it is very important to provide the top layer of soil with essential nutrients. In addition to the manure and fertilizer applied at seeding time, the Ladino fields should be top-dressed every two or three years at the rate of 500 to 600 pounds of fertilizer to the acre or annually at a reduced rate.

Duration.

The longevity of Ladino clover is variable, being largely influenced by the fertility and the moisture conditions of the soil as well as by the management of the fields. On the average, Ladino clover may remain productive from four to six years. At some places, it disappears more rapidly.

FIG. 3.—Ladino-timothy pasture at the Experimental Station, Lennoxville, Que. This pasture has yielded an average of 31,661 pounds of green herbage or 6,350 pounds of dry matter per acre for three years, 1947 to 1949 inclusive.

As Ladino clover is used primarily for grazing, it is especially recommended for short-term pastures of a duration of four or five years. The total area of land to be devoted to pasture varies with the size of the herd; on the average, from three quarters of an acre to one acre being allowed per cow. This type of pasture requires four or five fields of which the oldest one is worked and reseeded each year—the reseeding as well as the grazing being done in rotation. The existing swards are therefore of different ages and each one is being renewed at frequent and definite intervals. This renovation corresponds fairly well to the average duration of Ladino clover, at least, it has given its utmost production during these four or five years.

Ladino clover is a rather new crop in Quebec and its possibilities have not yet been fully investigated. However, the results obtained to date show that when grown under favourable conditions, this crop can be classed amongst the most interesting and useful forage plants.

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