

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of
Nebraska-Lincoln Extension

Extension

6-1946

EC169 Common Red Clover in Nebraska

D. L. Gross

Follow this and additional works at: <https://digitalcommons.unl.edu/extensionhist>

Gross, D. L., "EC169 Common Red Clover in Nebraska" (1946). *Historical Materials from University of Nebraska-Lincoln Extension*. 2152.

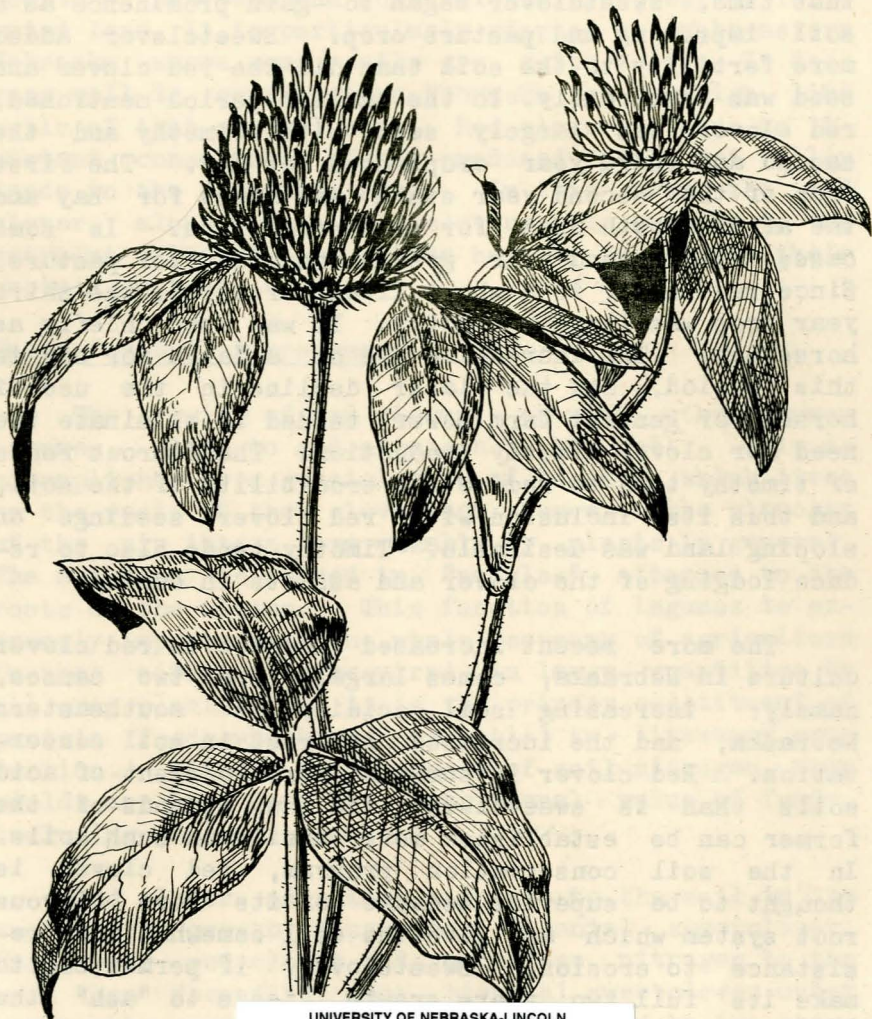
<https://digitalcommons.unl.edu/extensionhist/2152>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

AGRI June
S 1946
85
E7
#169

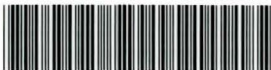
4
E. C.
169

Common Red Clover in Nebraska



Cooperative Extension
University of Nebraska
Department of Agriculture

UNIVERSITY OF NEBRASKA-LINCOLN



R02378 94686

Home Economics
the United States
Director, Lincoln.

COMMON RED CLOVER IN NEBRASKA

D. L. Gross

Although the acreage of red clover has increased in Nebraska in recent years, the total acreage is less at this time than in the period prior to 1920. About that time, sweetclover began to gain prominence as a soil improving and pasture crop. Sweetclover added more fertility to the soil than did the red clover and seed was less costly. In the earlier period mentioned, red clover was largely sown with timothy and the second and third year crops used for hay. The first crop of the second year stand was mowed for hay and the after-growth used for seed production. In some cases, the second year growth was used for pasture. Since red clover is a short lived perennial, the third year crop was largely timothy. It was used chiefly as horse hay. The increasing use of alfalfa for hay in this period, and the later decline in the use of horses for general farm power, tended to eliminate the need for clover-timothy production. The fibrous roots of timothy tend to reduce the erodibility of the soil, and thus its inclusion with red clover seedings on sloping land was desirable. Timothy tends also to reduce lodging of the clover and assists in curing.

The more recent increased interest in red clover culture in Nebraska, comes largely from two causes, namely: increasing soil acidity in southeastern Nebraska, and the increased interest in soil conservation. Red clover is somewhat more tolerant of acid soils than is sweetclover and thus stands of the former can be established more easily on such soils. In the soil conservation program, red clover is thought to be superior because of its more fibrous root system which may give the soil somewhat more resistance to erosion. Sweetclover, if permitted to make its full two years growth, tends to "ash" the

soil, making it more subject to erosion especially on sloping land. This "ashing" tendency does not seem to be a serious factor, however, where the sweetclover is plowed at the beginning of its second year's growth.

Adaptation of Red Clover.

Red clover is well adapted to the eastern one-fourth of Nebraska and does well farther west on irrigated land. It is particularly adapted to southeastern Nebraska where some soils are quite acid. It does very well in northeastern Nebraska on the high lime soils of that general area. Red clover is also an important constituent of hay produced in the wet valley lands in the sandhill area. In this area the red clover, along with Alsike clover, adds greatly to the nutrient value of the native hays by increasing their protein content.

Value for Soil Improvement.

The growing of red clover, as with other common legumes, tends to add nitrogen to the soil. This is accomplished by a special type of bacteria which lives on the roots of the clover and converts the nitrogen of the air into a form usable by plants in general. The nitrogen is stored in "nodules" attached to the roots of the clover. This function of legumes is extremely important in the whole economy of agriculture in that nitrogen is required in large quantities by all crop plants, and it is the primary constituent of protein feeds which are essential to livestock production. Without an abundance of soil nitrogen, crop yields are low, and the nutritional value of feeds, including grass, is low.

Red clover adds less nitrogen to the soil in its two year's growth than does biennial sweetclover. First year red clover adds much less nitrogen to the soil than does first year biennial sweetclover under comparable conditions. The amount added by two years

of red clover under favorable growing conditions however, is sufficient to permit satisfactory yields of following grain crops with a limited carry-over to the succeeding crop. Where a greater quantity of nitrogen is desirable, and where conservation practices are used to control erosion, sweetclover is superior as a soil improving crop.

Choice of Varieties or Strains.

Not all red clover strains are adapted to Nebraska conditions. Some strains lack winter hardiness or are susceptible to diseases. European strains in general, are not sufficiently winter hardy for safe planting in the cornbelt area. This is true also of most South American strains, and strains produced in the southern or west coast states. Canadian strains, although winter hardy, are not adapted to Nebraska because of their low yields. The Canadian strains were developed under the long days of that region. Thus, they make a less vigorous growth in shorter day regions represented by the cornbelt and other more southernly states.

Federal legislation requires that red clover seed imported into the United States must be stained 10 per cent red except that Canadian seed must be stained 10 per cent violet. This requirement tends to protect the seed purchaser against the danger of using unadapted seed.

Midland, a composite strain made up of several superior adapted cornbelt strains, is now being produced under certification in Nebraska. This strain can be expected to give excellent performance under Nebraska conditions. Other locally adapted strains may be available. When non-certified seed must be used, the purchaser should be certain that the seed is of an established strain, and one that has given a good performance over a period of years in a territory similar to that in which the seed is to be planted.

Seeding Practices.

Red clover may be seeded anytime during the spring, summer or early fall months. It is usually seeded as early in the spring as weather and soil conditions permit. A nurse crop of wheat, barley or oats for early spring seeding is commonly used. In southeastern Nebraska, red clover is commonly seeded in the spring on winter wheat established the previous fall. In this area oat stubble is usually plowed and planted to wheat. Red clover is usually seeded at the rate of 10 to 12 pounds per acre, and the nurse crop at the rate of one to two bushels per acre. The most uniform rate of seeding of the clover is obtained if a regular grass seeder is used. If the red clover is to be seeded on land that has not recently supported a healthy growth of red clover, it is advisable to inoculate the seed prior to planting. Proper inoculation material, together with instructions for its use, can be obtained from most hardware or feed and seed stores.

Red clover in Nebraska is often planted with oats or barley in the spring on disced corn stalk land. It is well to have the stalks well out and the soil well leveled with the disc or harrow. This will facilitate the use of equipment when harvesting the hay crop the following year, and will reduce the amount of foreign material in the hay.

When red clover is seeded with oats, some farmers use the combination seeding for pasture. This seems to enhance the chances for getting a good stand of clover if close grazing is avoided. Red clover has somewhat less seedling vigor than sweetclover. For this reason, stands of red clover are more difficult to establish in dry seasons.

Red Clover Dodder.

In purchasing red clover seed, the buyer should make certain that it contains no noxious weed seed.

Dodder is the most common noxious weed seed found in red clover. This is a parasitic weed with bright yellow twining leafless stems that encircle the clover stems, attach themselves tightly and draw on the sap of the clover plants. Dodder seeds resemble clover seed except that when examined very closely the dodder seed coats are found to be quite rough as compared to the smooth coat of the clover seed. Special dodder removing machines are required to separate the dodder seed from clover seed. When only a few dodder plants are found in a field, they should be burned or removed from the field before seed is formed. Red clover dodder does not live on other common plants and thus does not become a noxious weed except in clover fields.

Handling the First Year's Growth.

Usually no great amount of hay, pasture or seed can be expected from the first year's growth of red clover. Where the clover seedlings seem likely to be smothered by the nurse crop, it may be advisable to harvest the latter before fully ripe, leaving a high stubble, thus affording some protection to the clover seedlings from the sun and drying winds.

Occasionally red clover will produce a fair seed crop the same year it is sown. This will be worth harvesting if examination indicates as many as 25 to 30 seeds per head.

Handling the Second Year Crop.

Second year red clover starts early in the spring and blossoms in June. Highest yields of hay are obtained when the clover is cut at the full bloom stage. A better quality of hay is obtained if the clover is harvested considerably in advance of maturity. Seriously reduced yields are obtained, however, if the clover is cut at a very immature stage. On the other hand, late cutting results in a hay of poor quality, deficient in protein and low in palatability. A high

percentage of such hay is wasted when offered to livestock. Good quality red clover hay has a feeding value nearly equal to alfalfa. Early cut clover hay may contain as much as 10 to 12 per cent protein, whereas late cut hay may be as low as 6 per cent in protein.

Late cutting of red clover also results in a reduced seed yield from the following crop. Considering tonnage, quality of hay, and yield of seed, cutting the hay crop at the one-third to one-half bloom stage, is considered best. This permits better development of the second growth and thus, usually, a better seed yield. In territories where injurious insects are prevalent, early cutting of the hay crop tends to control such insects as the chalsid fly and the clover midge.

Bees are Needed for Good Seed Yield.

Since the red clover flower is nearly self-sterile, seed production depends greatly upon insects for pollination. Honey bees and bumble bees are both of great importance in this respect. The presence of these and other types of bees is essential to a good seed set. Hives of honey bees placed near the red clover fields may aid in the set of seed.

Conditions suitable for a Good Set of Seed.

Weather and soil conditions which favor a luxuriant second growth, are usually not suitable for the best set of seed. On the other hand, extreme drouthy conditions are also conducive to poor seed yields. A good recovery of the second growth, and an abundance of sunshine without too much heat at the time seed is setting, are favorable to a good set of seed.

Harvesting and Processing the Seed Crop.

Clover is said to be ready to harvest for seed

when the heads have turned brown, and the seed is beginning to turn purple. The use of the mower with a windrow attachment is a very common way of harvesting red clover seed. Where the crop is short, a buncher attached to the mower may be more practical. Whichever method is used there should be as little handling of the crop as possible in order to avoid shattering of the seed.

The use of the small pick-up combine for threshing the seed after thorough curing in the windrow, has become popular. This avoids moving the clover with forks and hay racks as was formerly done when the clover was threshed with hullers or grain threshers.

A good fanning mill is necessary if a thorough job of cleaning the seed is accomplished. Where such mills are not available on the farm, the job may be done by a custom cleaner. Very accurate and careful cleaning is necessary where noxious weed seeds are mixed with the clover seed.

Dodder cannot be removed by ordinary cleaning equipment. Where any appreciable amount of dodder is present it may be advisable to dispose of the clover seed to an individual or firm that has the special equipment necessary for the separation of these seeds.