

Sec. 1. *The clover family*—*Trifolium L. Diadel. Dunn L. and Leguminosae J.*

The species of clover in cultivation are the red clover (*Trifolium pratense*) a biennial, and sometimes, especially on chalky soils, a perennial plant, known from the other species by its broad leaves, luxuriant growth, and reddish purple flowers.

The white, or creeping, or Dutch clover (*T. repens*) is a perennial plant, known by its creeping stems and white flowers.

The yellow clover, hop-trefoil, or shamrock clover (*T. procumbens*) a biennial, known by its procumbent shoots, yellow flowers and black seeds.

The cow grass, meadow clover or marl grass (*T. medium*) a perennial, resembling the red clover, but of a paler hue, dwarfer habit, with pale red or whitish flowers, and long roots, very sweet to the taste.

*Trifolium incarnatum*, an annual, a native of Italy, but little known either in the United States or Great Britain, and the character of which for usefulness cannot yet be fully decided on. Will not endure our winters, but would probably do in Pennsylvania and south.

In the choice of sorts, the red or broad leaved is most generally cultivated. It yields the heaviest burthen. Yet some prefer the cow grass, distinguished in the northern states as southern clover. It comes in flower, and is fit to cut, ten or fourteen days earlier than the broad variety. It will yield a crop of hay, and afterwards a crop of seed.

The white and yellow clovers are seldom sown to any extent.—They come in spontaneously on many soils, and are a valuable accession for pasture uses.

The soil best adapted for clover is a deep sandy loam, which will freely admit the long tap-roots; but it will grow in any soil, provided it be dry. Calcareous soils are peculiarly congenial to clover; and the application of lime or gypsum, upon most soils, will call into action clover seeds, which would appear to have before lain dormant. Plaster of Paris has a magic influence in accelerating its growth, where this mineral is not neutralized by the influence of marine air; and when this is the case, lime and ashes serve as good substitutes.

The time of sowing is commonly in the spring, with the spring crop, and before the last harrowing; or upon winter grain in March or April, followed by a light harrow, and sometimes without it. Yet clover is often sown in September or October with the seed corn. The objection against the latter practice is, that the tender plants are liable to be destroyed by the winter. Rolling the ground after the seeds have been covered by the harrow is of manifest advantage. It produces a smooth surface, breaks the clods, and compresses the earth about the seeds, and thus facilitates their germination. A light harrow may also be employed in the spring, upon winter grain, with advantage to the grain and seeds.

The quantity of seed sown on an acre depends upon the quality of the soil, the purpose to which the field is to be applied, and the quantity of grass seeds sown with it. As much of the seed sown upon clays does not germinate, allowance should be made for the failure; yet upon these and wet grounds the main dependence, after the first year, is upon timothy or other grasses sown with it. If the object is pasture, the variety of seeds should be as extensive as practicable, as the object is to obtain an abundance of food at all seasons, and to render it perennial. Timothy and herdsgrass (red-top) are suitable accompaniments on moist, and orchard grass and tall meadow oat grass on dry grounds. The usual quantity of seed sown on the acre is about ten pounds, though in Great Britain it is often increased to fourteen pounds, while in Flanders it is but six pounds, though there the land is admirably fitted to receive it.

The after culture of clover consists in freeing the surface of stones and sticks, the soil from docks and thistles, and in applying an annual top-dressing of gypsum, or when this is inoperative, of lime or ashes. The top-dressing is best applied in the spring before the clover begins to grow. Upon lands annually dressed with plaster, a bushel is considered a sufficient dressing for an acre, though greater quantities are often applied with advantage.

The making clover into hay is a process different from that of making hay from natural grasses. All herbage plants abound most in nutriment, and should be cut, before the seeds are formed, and indeed before fully in blossom, that the full juice and nourishment

of the plant may be retained in the hay. A crop of clover, when cut in the early part of the season, may be ten per cent lighter than when it is fully ripe; but the loss is amply counterbalanced by obtaining an earlier, a more valuable, and more nutritious article; while the next crop will proportionably be more heavy. The hay from old herbage will carry on stock, but it is only hay from young herbage that will fatten them. When the stems of clover become hard and sapless, by being allowed to bring their seeds towards maturity, they are of little more value as provender than an equal quantity of the finer sort of straw.—*Cultivator.*

#### IMPORTANCE OF SALT TO CATTLE AND SHEEP.

Salt, as a condiment, is as grateful and as beneficial to domestic animals as it is to man. It serves the same purposes to both. We can readily determine, that it promotes our health and comfort best when taken with our daily food. Then why not equally so to the cattle of our farms? It may be apprehended, that if permitted, the latter will take it in excess. This is not so. If they have constant access to salt, domestic animals will take no more than is required by their natural wants. But if given to them only at long intervals, they will then, if opportunity presents, indulge in it to excess. We have had salt troughs under the sheds in our yards for a dozen years, in which salt has been constantly kept, and to which our cattle have had daily access; and they have not only not taken it in excess, but they have been wholly exempt from disease; and although they have been fed three months in a year with ruta baga, and pastured often in fresh rank clover, they have in no case been hoven, nor has their milk or butter been tainted with the flavor of the turnip.

Some years ago, the duty upon salt in Great Britain was so high as almost to preclude its use for farm stock. Petitions were sent to parliament for a repeal of these duties, so far as they affected agriculture. The committee to whom the subject was referred, called before them many eminent farmers and others, to testify as to matters involved in the inquiry. The evidence was voluminous and conclusive, not only that the duty amounted almost to a prohibition of its use for cattle, and for the poor, but that where this privation had been felt, disease had multiplied, to man and beast, to an alarming extent. We refer to the *London Repertory of Arts*, vols. 34 and 35 for particulars. In the mean time we give an abstract of the evidence of two of the witnesses, so far as regards the benefits of the daily use of salt to animals, well known as men of distinguished evidence, and of extensive practical agricultural knowledge.

J. C. Curwin, M. P. states among other advantages of giving salt to his animals, daily, that it removed the unpleasant flavor from the milk of cows fed with turnips; that it greatly lessened inflammatory diseases—promoted digestion—increased the quantity of milk, and disposed the animal to fatten. That it improved the general health and spirits of horses, rendered the gloss of their coats remarkably fine, and, given at the rate of 8 to 12 ounces per day, rendered fit for service some which had become disabled by a disorder called the grease. That given to sheep, in the quantity of two ounces per day, it preserves their health, renders them sound, and sensibly improves their condition.

Lord Somerville considers salt all important to sheep. Without it, even on dry soils, his flock became sickly, and he lost many. Giving it twice a week, they were healthy. Salt preserves hay, and restores it when damaged. In the humid climate of Great Britain, his lordship feeds a ton of salt to every thousand sheep annually. It is particularly serviceable with green food, clover and turnips, and prevents and cures the hoven which is pent-up wind, occasioned by excess of fermentation in the stomach. In a wet season he did not lose a sheep, although fed with turnips, and he considered salt as a specific against disease. He generally gives it with hay, about twenty-five pounds being sifted on to every ton.

These facts are of high authority, and of deep interest to the cattle and sheep farmer, and of general application. The low price of salt among us will enable every farmer to profit by them.

#### THE CULTURE OF FLAX.

The soil adapted to flax, is that which contains a large portion of vegetable matter, of a loamy quality, and withal rather moist, though not wet. It is a great exhauster of the soil, if suffered to mature its seed, but less so if pulled green.