

CLOVER, TREFOIL, &c.

Next in importance is the clover family; and here again we find several plants, promising great utility, that are almost, or entirely unknown in American agriculture. Some of these may be of general advantage; but a large number are adapted to particular purposes, or peculiar soils, and to the older parts of the country, where lands are high in price, and worn or poor in quality. Two species of red clover, and one of white, are all that are commonly cultivated in this country. A few other kinds will be briefly mentioned.

Alsike, or Hybrid Clover. (*Trifolium hybridum*).—This is a new species of clover, a few of which were obtained by the writer from Mr. Lawson, at the Agricultural Museum, Edinburgh, in the fall of 1839. Mr. Lawson states, that it was introduced from Sweden, in 1834; and "from what he saw of the *T. hybridum*, it seems to be a valuable perennial clover, and well adapted to growing in this country, [Scotland;] but hitherto seeds have not been obtained in sufficient quantity to give it a fair trial in field culture."

Some of these seeds were given to David Thomas, of Cayuga, and to William Garbutt, of Monroe, at both of which places it has grown freely, although their soils are rather too heavy. In appearance this clover is intermediate between the red and the white. The flowers are white, with a tinge of red: the leaves resemble the white but are somewhat larger; the stem is about as tall as the red, and more inclined to take root and spread like white clover, the roots are more fibrous, and more perennial or durable than the red—hence it will doubtless be found a valuable acquisition for pastures, as soon as the seeds are to be had in sufficient quantity.

Crimson or Scarlet Clover, or Trefoil. [*Trifolium incarnatum*].—This species was recommended, in the agricultural papers of this country, a few years ago, and small quantities of the seed were sold at the Rochester Seed Store, and elsewhere; but it does not appear to have been cultivated to any considerable extent. It is found to grow freely under favorable circumstances, when sown in the spring; but the writer is not aware whether any experiments were made by sowing in the fall, as practiced in Europe. It is annual clover, and is recommended for sowing in the autumn, to produce a crop of hay the succeeding summer, where land is intended for wheat. It is doubtful whether this species will prove of much value in this country, but it is deserving of experiment.

Bokhara, or Giant Clover. [*Melilotus leucanthus*].—In 1841, an ingenious Yorkshureman contrived to produce two or three plants, of the common sweet clover, of the flower gardens 10 or 12 feet high; and on exhibiting them at an agricultural show, he was awarded a premium for a "new and gigantic species of clover," which was soon heralded in the papers both of England and this country, and quite a lucrative trade was shortly commenced in the seeds. The humbug exploded the following year, very little has since been heard of the "Bokhara Clover." In the Cultivator for November, 1842, James Gowan, Esq., of Philadelphia, expresses an opinion that this plant may be found valuable for soiling cattle, and his determination to give it a trial, notwithstanding it is not so new and wonderful a vegetable as was once supposed.

It is a biennial plant, of a tall and rapid growth, (not properly a clover,) and not much relished by cattle, except when young.

LUCERN, or FRENCH CLOVER—
(*Medicago sativa*.)

No plant has been more frequently or more strongly commended to the attention of American farmers, during the past twenty years, than Lucern; yet it has never been fairly tried, except in a very few places, although it is found to be well adapted to the climate and soil of most parts of the United States, and of great productiveness and value.

The best soil for lucern is a deep sandy loam, free from wet, and having an open sub-soil. Inattention to the kind of soil has been the cause

of the failure of numerous experiments with this plant, in Western New York and elsewhere, and these frequent failures have tended to prevent its more general introduction. Another difficulty in the way, and a very serious one with some farmers, is, the land must be very free from weeds, or the crop kept clean by hoeing or weeding, the first year. But, after all, the main reason why this and many other valuable crops are so slowly introduced, is the strong aversion, in the minds of the farmers, to stepping out of the beaten track, or attempting the cultivation of any plant which they have not seen their father cultivate before them.

This is well illustrated by a writer in the Annapolis Republican, in speaking of a patch of Lucern on the farm of Wm. Johnson, Esq., of Somerset Co., Maryland. He says, "It consists of about three quarters of an acre; was sown in 1829, and has been cut—this makes the twelfth year. He keeps two horses and three cows; has a full supply of milk and cream, and more butter than he knows what to do with—much more than can be said of many farmers who have five hundred acres of land, without a lot of lucern. This lot has been cut once over this season; and now before he can get half over again, the horses and cows getting more than they can devour, he will have to make hay of it, to prevent it from getting too old. It comes several weeks before clover—may be cut four or five times—strikes its root very deep, and therefore will stand dry weather and will last, no one knows how long, for this is now a splendid crop, after being cut eleven years; and yet farmers won't sow it—even Mr. Johnson's neighbours, with a few exceptions, and with his success staring them in the face! I told him, they say they cannot get it started—that the weeds and grass will smother it the first year. 'The way to manage it,' said he 'is this:—Take a rich lot of ground, on which the water does not lie winter nor summer; cultivate it previously in potatoes; sow your lucern broadcast, the 1st of May, 20 lbs. of seed to the acre, and in July cut it. You may suppose, from the looks of it the first season, that the weeds and grass would overcome it; but don't be alarmed. They die off, and the second year the lucern will survive, almost in immortal vigor.'

Lucern possesses the remarkable characteristic of being exempt from that quality in clover, and other green meat, (as the English writers call it,) which makes them dangerous to give to horses when in active exercise. In other words you may feed them as Mr. Johnson does his carriage horse, on lucern instead of dry fodder, or hay, and travel them on it fast or slow, without danger of touching their wind. Every one knows, that this can't be done with clover. But what signify a thousand arguments and illustrations? This, like others, will be read and thrown aside, as a thing that 'tells very well on paper,' but too troublesome to be put in practice."

Experiments with lucern were commenced in this state, as long ago as 1793 and 1794, by Chancellor Livingston, and one or two others, who published the results of their experiments, and advises its cultivation. Judge Duell, in the Cultivator of 1837, says, "We have had considerable experience in raising lucern during the last 16 years. Until recently, we have found it an invaluable crop, having been enabled to feed six or seven cattle upon an acre of it during the winter months; but for two or three of the last years our efforts to cultivate it have been less successful, on account of the severity of the winters, which has destroyed many of the plants; and the intrusion of other grasses, particularly of spear grass." The late John Lowell, of Roxbury, Mass., cultivated lucern for more than 20 years, and warmly advocated its general cultivation. In a letter to the Editor of the New England Farmer, in 1839, he says, "The lucern will give, in this State, two good crops the same season in which it is sown. Is there any other grass that will do this? It will endure the severest droughts, when all other grasses fail. It is the favorite grass of the horse and the cow. It will do as much for a horse as an ample supply of grass and four quarts of grain a day, in keeping him in flesh and strength. But many persons have failed in at-

tempts to raise it. And what then? Does it follow that it is not worthy of culture. By no means. If one man uniformly succeeds for fifteen years, there must be some good reason why others do not succeed. Let us try to seek out the causes of their ill success. It is not the climate, because it stands our severest winter unharmed, when clover fails. It stands our severest droughts, when clover dies.

It is with me the richest treasure. My farm is small, it is true; but it is a grazing farm, and my produce is 20 tons of hay. Surely the experience of such a farmer, for 15 years, is worth something. I have already cut two crops this season from lucern, sown in April last; and two crops from lucern two years old, and two crops of hay from lucern three years old, at the rate of 3 tons to the acre. I expected two crops more from each. These are facts no odious to them who pass by my ground."

Mr. Joshua Leader, in the Farmers' Cabinet for 1842, observes on this subject, "No crop can at all compare with lucern, for quantity or quality, whether as green food for soiling, or as hay, of the most nutritious and fattening qualities. It is a grand mistake to suppose that a very rich soil is necessary for its growth or well-being: it is rather otherwise, the only *sine qua non* being a very dry subsoil and light surface: upon such a soil the necessary means of support can be given by top dressings of well composted manure, the chief regard being, that it contain no weeds. It is to be remarked, that hogs pastured on this grass require no other food, being often slaughtered, in fine condition, while feeding on that alone. The culture by drilling is not to be recommended; sow the seed thickly on a clean and well pulverized soil, either in the spring, the summer, or the autumn, without any other crop: the plants will appear in a few days, and, if they are not choked with weeds, will soon overspread the land. An early and frequent cutting, giving them a fresh start over the weeds, and a slight harrowing, after every cutting, will enable them to keep it. Truly, it is strange that such an invaluable crop is still confined to patches 'the third of an acre.'"

SAIN-FOIN, or SAINT FOIN.

(*Onobrychis sativa*.)

This is another British herbage plant, that has frequently been recommended, and occasionally tried, in this country, but without seeming to gain much favor, or promise much advantage. In England it is extensively cultivated on dry, chalky soils, for which it seems peculiarly adapted. Sir John Sinclair observes, "that the improvement made by sain-foin is very great. Poor soils, not worth more than 2s. 6d. to 5s. for any other purpose, will under this crop, yield from 1½ to 2½ tons of valuable hay, worth a guinea per ton more than meadow hay equally well cured, besides a considerable quantity of after-grass. It also lasts in the ground equally productive for a number of years."

The Editor of the American Farmer (April, 1842) recommends sain-foin for cultivation on poor and worn-out lands at the South, with the application of lime and calcareous marl for dressing. It is not at all improbable that for such purposes it may be found valuable. Also on some of the high limestone soils of this State and Pennsylvania, where clover will not succeed. Fessenden says, "The cultivation of sain-foin is out of the question in New England, so large a portion of the plants being winter-killed, that it is not worth cultivating. This is affirmed on the strength of repeated trials."

Smoot in Wheat.—The following remedy for smut in wheat is communicated by Mr. Thedam of Little Braxton, Essex:—

Dissolve 5 lbs. of blue vitrol (sulphate of copper)—it is worth about 50c. per lb.) in five gallons of boiling water; then add the solution to 30 gallons of soft water: place the whole in a tub; dip the seed wheat, in a basket, into the solution for one minute; drain; turn the seed upon the floor. It will be ready for immediate use except for the drill, for which it will be dry enough in twelve hours. This has been found an unfailing remedy after nine years' trial. No lime is needed. Neither the bags nor the drill are injured.