

first plant the seed by hand; afterward, when much land is seeded, use a drill. Plant at a steady warmth is assured for the season, putting from twelve to twenty seeds in a hill, so soon as possible after the marking furrows are made, as moisture is requisite for early germination. Hoe first, while the plants are small; and when these are well set, thin down to six good plants in a hill, leaving the stalks of each hill as far apart as practicable. Keep the crop clean, and stir the soil as often as practicable during the growing season. As two quarts of good seed are enough for an acre, the expense is not large.—*Michigan Farmer*.

ABOUT HUNGARIAN.

Dr. E. L. Sturtevant, in reply to questions about Hungarian grass, writes the Elmira Farmers' Club: "If we study the plant we find that it has two peculiarities. First, it is a plant of warm regions. Second, it is a drought plant. The inference from this is, what my experience in light soil confirmed, that the ground must be warm at the time of planting, and the soil must be a dry one, that is, free from standing water. A careful examination has shown me that the Hungarian is a very shallow rooting crop—it feeds very near the surface, when the temperature of the soil is the highest. Another peculiarity with me has been that a single cold or cool night checks the growth of leaf, and forces a growth of seed. Bearing these observations in mind, I have not failed in obtaining a very large crop by pursuing the following course: First, planting not earlier than June 20th, in order to secure the warm soil, and the certainty of no cool nights during the ensuing six weeks. Second, manuring or fertilizing close to the surface, and just scratching in. Third, planting at least six pecks of seed per acre. In order to have the crop relished by cattle, I have found it necessary to sow thickly, and to cut just as the heads begin to be discovered. By this course I have a hay the cattle prefer to timothy, and pound per pound it expends better than timothy; and my eye detects no falling away in condition, and the scales detect no change in the milk yield. If over-ripe (and most people cut too late), the cattle do not relish it as they otherwise would, and the eye and scales show inferior feeding value to the best hay."

FLAX.

The crop is profitable only when raised on the right kind of land, in a fine state of cultivation, and free from weeds. The soil must have a dry bottom, and be thoroughly under-drained if necessary, and some cultivators plough three times. It usually follows wheat and potatoes, and as the production of the seed exhausts the ground, it should not occupy the same field oftener than once in five or six years. About a bushel and a half of seed are required for an acre; and for raising the fibre, over two bushels, as a dense, upright, fine growth gives a finer fibre. It is important to sow none but plump, clean seed, from which all the seeds of weeds should be taken by using the best "separators" made for this purpose, or by hand, using a sieve, twelve bars to the inch. The seed crop is cut with a self-raking reaper. Much practice and skill are required in sowing evenly, as the seed easily slips from the hand, and the covering should be done with a very light, fine-tooth harrow, so that the seed may not be covered more than an inch deep, and the work should be finished with a roller. The process of preparing the fibre requires much experience and skill, and we are not able to give its details. If any of our readers have been successful in preparing it for coarse bagging, &c., a statement

would be acceptable. Very little is prepared in the shape of fine fibre in this country, and most of it comes through the cheap manual labour of Europe.—*Country Gentleman*.

HOW TO DRAIN.

On level lands, where the average crop in five years runs low, and the land by nature rich, it is a safe proposition for the tile manufacturer if the farmer honestly performs his part of the contract.

On rich, level lands that need drainage and need it badly, it will pay twenty-five per cent. annually on the investment, and in some instances more.

We desire to impress upon the minds of every one beginning to drain, that it is economy to begin with thorough work. Do nothing in a permanent investment of this character temporarily. Look forward to the time when the whole of the land needing drainage shall be thoroughly drained. Begin right and it will end right, with industry and enterprise. Open drains intended to be used as an outlet for tile drains, should be excavated deeper than it is intended for the tile to enter, and graded to an angle that will not slip down from the sides. In different soils and clays different angles are required. When open drains can be made under-drains, they ought to be avoided, for the reason that they take up land that should be in cultivation, and not unfrequently become plague spots in the field, a harbour for weeds and other pests.—*Drainage Journal*.

PLOUGHING.

The plough will soon be pretty busy, and the man who prides himself on good ploughing may be seen turning the furrows flat as pancakes and making the field as smooth and almost as hard after the operation as before. These flat furrows may take the first premium at the cattle show, but they don't constitute the best ploughing. The object of ploughing is not only to invert the sod, to turn under the grass and weeds so that they will rot, but is to aerate and pulverize the soil. Generally this is best accomplished by turning a lap furrow. The over-lapping of the sod makes the work of the harrow easy and thorough, permits the air to enter freely to perform its share in the work of making available plant-food, while the sod is inverted sufficiently to insure its decomposition.—*New England Homestead*.

CORN IN HILLS OR DRILLS.

As the result of twenty years of experience and observation, I am decidedly in favour of hill planting. Both methods are practised here to some extent, but planting in drills is not done so much now as four or five years ago. In this section the yield of measured bushels of ears per acre will be about the same by either method, but the ears that are grown by planting in hills are longer, the grain better developed, and consequently heavier, giving about ten per cent. more shelled corn by weight than that grown by the other method. * On the other hand, more stalks will be grown by planting in drills; but in our corn fields the grain is the main object, and we think it is better, if we are likely to need more fodder than we get with our crop, to devote a portion of land exclusively to the raising of fodder corn.—*Field and Farm*.

EQUIVALENT OF FOREIGN WHEAT MEASURES.

The following statement of the equivalents of foreign standard measures of wheat will undoubtedly be of interest to many. A quarter of Californian wheat weighs 500 pounds; of other

American, Chilian, or Danubian wheat, 480 pounds, of South Russian wheat, 402 pounds. A sack of flour weighs 280 pounds—nearly equal to a barrel and a half. A Russian chetwert of wheat equals about 854 pounds. An Egyptian ardeb of wheat is 800 pounds. A French kilogramme equals 2½ tons. A German last of wheat equals 8 tons 200 pounds. A Smyrna kilo equals one bushel. A Malta salma equals about 450 pounds. A Spanish fenego equals 99 pounds. A Chilian fenego equals 82 pounds. An Austrian staga equals 187 pounds. A maund of Indian wheat equals 80 pounds. A Portuguese alqueire of wheat equals 24 pounds. A Barcelona cras equals 1,925 bushels. A Norway maller is 10 maas, or 4,126 bushels. A German maller is 12 scheffeln, or 18,145 bushels. A Vienna metzen equals 1 7-10 bushels. A German centner is about 110 pounds. A French quintal is 220½ pounds.

EARLY AND LATE CUT HAY.

Professor Sanborn, of the New Hampshire Agricultural College, gives the results of his experiments on the above subject, as follows: "Three acres, seeded at the same time, were divided into 6 plots, 2 rods wide and 40 long. They were staked and mown under a string stretched over stakes. Hay, timothy, cut when headed; weight when dried, 8,036 pounds per acre; in spring, 2,851 pounds. The second plot was cut 21 days after, when seeds had formed; weight dried, 4,555 pounds; in spring, 8,886 pounds. Each lot was fed to steers, two in lots. Lot 1 fed on early cut, weight of steers 1,452; lot 2 fed on latter cut, weight of steers 1,450 pounds. Lot 1 ate for 85 days 1,844 pounds of hay, and gained 70 pounds. Lot 2 ate 1,898 pounds, and gained 77 pounds. Before the trial, in a fitting period of 57 days, lot 1 gained 152 pounds, and lot 2 162 pounds. They were even growers. I had a third lot, cut two days after bloom, that gave less gain than either. After 85 days, lot 1 had late cut hay, and lot 2 early cut. After the change, as I have before related, those on late hay ate less, but made the best use of hay eaten. I have fed in much longer periods, and have received no more favourable results for early cut hay."

CARE OF SUGAR MAPLES.

An old farmer living near here, who is the owner of a fine "sugar bush," that has been tapped many years in succession, but is yet in a good state of preservation, says that trees will be little injured by tapping if the holes are tightly plugged when the spills are removed; that instead of finding a large decayed spot next year surrounding the hole made by the bit, the wood will be sound and green clear up to the hole, and that the tree can be tapped within one-fourth of an inch of the old hole, and a good flow of sap obtained. He uses pine for plugs, and to have them fit nicely, he makes them from long sticks which have been driven through the right-sized hole made in a piece of iron.—*Cor. Country Gentleman*.

A WAY WITH STUMPS.

A Dakota correspondent writes:—"In the autumn bore a two-inch hole, four or five inches deep, in the centre of the top of the stump, put in from one and a half to two ounces of saltpetre (nitrate of potash), fill the hole with water, and plug tightly. In the ensuing spring remove the plug and pour in from one and a half to two gills of kerosene oil, and ignite. The stump will smoulder away, without blazing, to the very extremity of the roots, leaving nothing but ashes. This amount is suited to a stump of from two and a half to three feet in diameter."