

Prize Essay on the Destruction of Quack or Scutch Grass.

SIR,—Having been a regular subscriber to some agricultural journal for the past ten years, I have watched with interest the different communications in the *Advocate*, coming (as we always expect they should) from practical farmers, men who know exactly what they write about.

Among these communications I have noticed some bearing on the eradication of Quack or Scutch Grass, one of the worst, if not the very worst pests the farmers have to contend with; and as it is extending in all directions, would it not be a boon to the farming community to publish a remedy for its destruction.

The plan I have tried and succeeded in is this:

If the piece of land you wish to experiment on be meadow, it is all right; if it be pasture, fence it to keep all cattle off, so that the grass will grow. About the 10th of June put in the team, with a good plow and man who knows how to do his work; plow from five to eight inches deep, the great object being to bring all the roots over with the sod. Let it lie one week; then harrow with a good iron harrow, and repeat the harrowing once a week, always on a dry day. Then, about the 20th of July put in the plow again, and if it does drag and pull, don't give up. Harrow as before on dry days. Plow again about the 26th of August, or ridge up for fall wheat, and you will not have a live root of Quack, if the work has been well done.

The whole mystery is in letting the grass grow undisturbed until the middle of June; then summer fallow well. I have tried to kill Quack on stubble land by summer fallowing, but have never succeeded.

T. DOYLE.

Perth, Lanark Co., April 4th, '75.

Prize Essay.

By J. W. St. John.

ON THE CULTURE OF THE GRAPE.

I will here offer my method. Secure cuttings of the vine from the fall pruning, with a small portion of two-year old wood thereon, and preserve in earth till spring. They may be raised in a nursery bed prepared in a good, light soil; set in the ground 6 inches apart, with rows wide enough to pass a small hoe between; planted 2½ inches deep, with the eye level with the ground, the sun allowed to play upon it until 11 o'clock, a. m., and not afterwards. Transplant in the middle of the next April, or place them where they are to be reared, from 5 to 7 feet apart, three in each place, 6 inches apart; if there are several eyes, plant sloping in the ground. Tie to a small stake to keep firm, and shade at noonday till they shoot out, and when sure of growth remove the weaker ones.

One bud only should be allowed to grow from the cutting the first year; when strong enough to grow shoots, tie them to a stake. The place selected should be on a rise of ground, well shaded on the north, well drained, and should have any amount of broken bricks and bones as manure. Dead animals of any description are of superior service to the grape. The broken bricks and bones should be placed in a trench directly under the vines; keep them free from weeds.

In the beginning of November cut down to two eyes, and in a fortnight, if dry, cover them. Pea straw answers splendidly for a covering, but forest leaves are superior, as they keep the vines well in the winter and make manure in the spring. Uncover them in the middle of April, erecting them on a trellis or frame, and tying them every 10 or 12 inches. On each branch allow a shoot from each eye, and as soon as the strongest one is long enough, tie it and cut off the other. During the summer allow no more than four or five buds on each branch, cutting them in the fall down to two buds (not counting the one between the old and new woods). Lay down the trellis and cover as before.

In the third year allow both eyes to produce shoots, rubbing the one in the crotch out. In November cut the branches as follows: cut the most feeble of the two to two buds for wood branches the succeeding year, the other to three buds for fruit, and cover as before.

In the fourth year raise your grapes. The number and length of your fruit branches will depend on the strength of your vine. Never allow more than five good eyes on a fruit branch; keep the wood branches as low as possible, cutting the

shoots to six or seven eyes high. Allow no more shoots to grow than can be laid on the trellis clear and handsome. The trellis should face the west, slanting, if convenient, or facing the south, according to your fancy.

If you want to hasten their maturity and size, the following course may be pursued: About the 1st of July you will see your fruit just formed; select the highest fruit branches, and perform the following on the two-year old's of the same branches, viz., take a pruning knife and pass it around the bark in a place free from knots, reaching the sap of the wood, and within a quarter of an inch pass another parallel with the first, dividing the section of the bark by a perpendicular cut; then peel off the bark, taking care not to go below the wood branches. I find this to be a great advantage, for the very reason that the sap is not prevented from rising and feeding the fruit, but is prevented from descending. This process will do no harm. Those branches must be cut off to give place to the other branches prepared for the succeeding year.

Do not forget fall pruning. By the above process you will have grapes to supply yourself, friends and applicants from the 1st of September to the last of the season (the ones not girdled will ripen last). If you prefer vines from the nursery, prepare them by the above rules according to age.

Vroomantou P. O., Ontario.

Prize Essay.

SOWN CORN.

SIR:—As the time is drawing near when farmers will begin to think what course to pursue in order to secure a supply of food in case we should have another dry season, I will give an account of a crop I raised in 1873, which I consider was a complete success. The previous year the land (a sandy loam) had been plowed from sod and sowed with peas. After the peas came off, it was gang-plowed and harrowed; the same again late in the fall. (The implement is a gang of four plows, and we worked it at an average of four inches deep.) In the spring it was gang-plowed again and harrowed, and the greater part treated with manure at the rate of 12 or 15 loads per acre. It was then gang-plowed again and harrowed. The field of six acres now presented a very fine appearance on the surface. On the first of June, I marked it into rows, 2½ or 3 inches deep, and 40 inches apart (three feet might do as well if the land is free from thistles); sowed the seed by hand, trying to average about one grain to the inch. To cover rapidly, take out the front plow from a horse-hoe, and turn the side wings so as to turn the earh inwardly, then drive the horse on the corn. The seed should be tried a week or two before sowing to see if it is good, as no grain is more easily injured in its vitality than corn. This may be done by putting some in moist earth and keeping it warm for a few days. On the 17th of June I commenced cultivating (it was then four inches high), I turned the hinder wings of the cultivator almost straight back, so as not to turn a furrow, and then gave my whole attention to the row at my right hand, running the tooth of the cultivator very close to the corn, just so as not to root it up; went back between the same rows, giving my attention of course to the other row, and every thistle I could not destroy with the cultivator I pulled with my fingers. By the time the corn was two feet high, it had been gone over this way three times. The last time it was gone through, it was so rank and tall, I had to use a very short whiffletree to keep from breaking it down. This time the earth was thrown to the corn a little, and only one passage made between rows. If any one has a piece of good land, over-run with thistles, one has a piece of good land, over-run with thistles, let them try this plan and it will pay them, supple the crop fail entirely. But be thoughtful, never let their heads be long above ground. The reason they do not like this treatment is because they must have a top as well as a root in order to live.

It is impossible to say what quantity of seed should be sown per acre. If the season is very dry and the crop thick, it will not grow high enough, (that is, if the land is naturally dry), for the simple reason, that there are too many mouths drinking the moisture. If the season is wet, and the plants thin, it will grow too high and strong for good fodder. Two bushels per acre might be too much in a dry season, less than that too little in a wet.

I do not think it of much value for milk until it gets its growth, or the tassel be full out. Still it is a comfortable thing to see cows filling themselves with something when pastures are dried up, and I think there is no doubt value enough in it to pay costs of production. Whatever plan is taken to harvest, it should be cut before frost, and, if the weather is not very favorable, partly dried before shocked. It should be bound and set in pretty large shocks, and then kept on end. A good plan to effect this, is to loose the band after the corn has dried partly, and pull tighter. In this condition I left mine in the field through the winter; taking it as wanted, and from four acres which I had when winter commenced I fed 25 head of cattle with a very liberal supply every day till Spring, and thought it excellent feed. The Ohio dent is no doubt the best for a heavy crop of stalks. But an equally valuable crop may be raised with the Canadian common corn if the land is rich, by having a stalk at every 6 or 8 inches, and let it stand until the grain is glared, cut and shocked before frost. It will be seen by the above that deep plowing was not part of the cultivation. If land is naturally light and porous, I would prefer to make it rich and clean on the surface, leaving it as compact as possible on the bottom.

F. MALCOLM,

Innerkip, Jan'y 18th, 1875.

The Horse.

Carrots for Horses.

Towards the spring, when horses have been many months highly fed on corn, carrots are extremely serviceable, indeed necessary. During winter they should be used sparingly. They used to be given to race horses in far greater quantities than they are now, having formerly had the character of being good for the wind; but perhaps the only merit they can claim in this respect is, that they keep the body properly cool and open, by which they conduce greatly to health and condition, and consequently to cleanliness of wind. About the same thing may be said of their claims to produce a fine coat; but whatever conduces to health does so, and consequently carrots do.

Carrots should be given in pretty long slices. They are sometimes given cut crossways; this is really dangerous, as horses are extremely fond of them, and, if at all greedy, would be pretty apt to bolt pieces of them whole, which would be likely to cause some of them to stick in the throat. When first given they are slightly diuretic and laxative, but as the horse becomes accustomed to them, these effects are not produced. To sick and idle horses they render corn unnecessary. They are beneficial in all chronic diseases of the respiratory organs. In combination with oats, they restore worn-out horses much sooner than oats alone. They should be fed raw, in which state the horse prefers them.

Some persons give carrots with the grain, thinking it tempts the horses to eat their oats, if of delicate appetite; so they might if perfectly minced, otherwise they will pick them out, and the man may eat the oats if he pleases; for, depend on it, the horse would not; but if we were to make minced feed of them, we would still consider it a very bad plan to give them with oats, for, should the horse get accustomed to such a mixture, he would afterwards refuse his oats without it. For this reason carrots should be given as separate food; and, if bought at a proper season of the year, by the ton, in the country, they are by no means an expensive one—though they become extremely so in the city when a hostler can persuade his employer that they are necessary for his horses, buys them by the bunch, consumes two of those himself, and, if he is delicate as to conscience, gives the third to his horse; if not, they of course all go the same way. Carrots, if kept in a dry place in sand, will keep a long time, or they will keep out of doors if covered with straw and then banked up with earth.

Export of Horses from France.

Horses were exported from France in the first nine months of 1874, to the value of \$3,000,000. They included 5,217 mares, 536 stallions, and 11,959 geldings. The exports for the corresponding period in the two previous years were: 1873—Mares, 4,957; stallions, 616; geldings, 12,990. 1872—Mares, 4,265; stallions, 992; geldings, 7,126. They are exported principally to England, Belgium and Germany.—*Ag. Dept. Report.*