Buckwheat—Its Cultivation.

Buckwheat may be considered a fallow wheat. From the late season in which it is sown there is full time to give the land the benefit of a good fallowing, and the excuse of "want of time," cannot be pleaded if weeds be not thoroughly destroyed —killed root and seed. All Canadians know how much buckwheat adds to the pleasures of the well-provided breakfast table; but even if sown, not for use as a breadstuff, but for the improvement of the soil by plowing it as green manure, its value is very great. It is true its fertilizing properties are not equal to those of clover, but it has the advantage that it will produce a heavy crop on land where clover would be a certain failure, and grown, as it often is, merely to clean and fertilize the soil for another crop, it has its peculiar profit.

Buckwheat must not be sown too early, or the heat when it would be in blossom would prevent its perfect fructification, and there would be numerous blasted kernels. On this account it is better that it should be sowed so that the hottest season shall have passed before the buckwheat is fully in bloom. While care is taken to avoid this danger of sowing too early, it is needful at the same time to guard against the risks attendant on sowing crops so late that our Canadian early frost may not come on them before they are matured. This difficulty of seizing just the proper time we have continual experience of in our farming and gardening here. Some seasons, buckwheat sown in July any day before the 16th, may produce an abundant and well ripened crop, but this is only in some seasons. However, taking all things into account, it is worth the risk; even if the frost catch it unripe, why, at the worst, it can be plowed under to enrich the ground; and for this purpose it is well worth the expense of seed and labor.

It is necessary, in order to secure a good crop, that the land be well tilled. The finer the seed-bed the earlier and surer the germination will be, and no little of the productiveness of a crop depends on the early start and vigor of the young plant. Besides, an additional plowing or cultivating will not only serve the growth of the young plant, but it may destroy weeds that might have survived the former plowing, and this is a great object of a fallow. Regular seed time, June 1st to 10th.

The Hessian Fly.

From reports of the Entomological Society we glean some very valuable information concerning this pest, the Hessian Fly. This insect is said to be of European origin, and to have been brought to America in straw used for packing, in the year 1776. In Long Island, N. Y., it was first observed, and having multiplied there, it gradually spread over the southern parts of New York and Connecticut, and continued to spread inland at the rate of fifteen or twenty miles a year. In this manner the tiny pest gradually spread over the country, and has been found in almost every locality where wheat is grown. Canada was not invaded by it till about the year 1816, when it became prevalent in Lower Canada. It was first noticed in Ontario in the year 1846.

The Hessian Fly, as a general rule, passes through two generations annually. The first of these occupies the autumn, winter and fore part of spring, and is reared at the roots of the young plant, slightly under ground. The second occupies the remainder of spring and summer, and is nurtured in the lower joints of the straw. The time when its several changes occur is, however, varied by the climate, the state of the weather, and perhaps other contingencies.

Our crops of winter wheat are liable to two attacks of the Hessian Fly, one generation reared at its roots producing another which occupies the lower joints of the stalks. Thus the larvæ and pupæ are in it continually from the time the tender young blades begin to appear over the ground in autumn till the grain ripens and is harvested the next summer. Spring wheat can rear but one brood of the insects; they consequently resort to it but little, if at all; nor can it sustain itself except in districts where winter wheat is cultivated, in which to nestle during the autumn and winter.

When hatched from the egg, the little wrinkled maggot creeps out of its egg-skin, crawls down the leaf, enters the sheath and proceeds along the stalk usually as far as the next joint below. Here it fastens lengthwise, and its head downwards to the tender stalk, and lives upon the sap. It does not gnaw the stalk, nor enter into its central cavity, but, as it increases in size, it gradually becomes imbedded in the substance of the stalk. Two or three larvæ thus imbedded in a stalk serve to weaken the plant, and cause it to fall down, or to wither and die. In this condition it remains till it finally comes forth as a tiny two-winged fly. Of course the size and value of the grain is immensely lessened by the absorption of the sap, which ought to go to filling out the ear.

Natural Remedies.—The Hessian Fly is preyed upon by a number of parasitic insects, whose combined attacks are computed to destroy nine-tenths of every generation of this pernicious foe. It is owing almost entirely to these allies that our crops have been preserved to so great an extent from the ravages of the Hessian Fly.

Artificial Remedies.—The best precaution to take, where the insect has shown itself in numbers, and where the Wheat Midge is not apprehended, is to sow the next crop of fall wheat as late as can be done with safety in the autumn—about the middle or towards the end of September. This course prevents the parent fly from obtaining any young wheat upon which to lay its eggs, and destroys the prospects of another generation. A fertile, thoroughly cultivated and well drained soil is as effectual a means of escaping loss from the attack of this insect as any that can be mentioned. Benefit may also be derived from sowing early an approved flinty-stemmed variety of wheat, which is thus more capable of resisting the fly's attack upon it. But after all, the chief reliance for immunity is to be placed upon the labors of the parasitic enemies of the fly.

Another New Plant—New and Extraordinary.

A new agricultural plant for cattle-feeding and paper-making has been introduced to public notice by Mr. William Gorrie, Rait Lodge. Edinburgh. It is a variety of the tree-mallow *Lavatera arborea*, the natural habitats of which in Scotland are the Bass Rock, with other islets in the Firth of Fourth, and Ailsa Craig. Its ordinary heights vary from six to ten feet, but it can be grown to more than twelve feet. It is a biennial, but the first year it may be planted after the removal of any early crops and matured the following year. Chemical analysis of its seeds show them to be fully equal in feeding properties to oil-cake, which is now worth in Scotland about $50 per ton, and paper-makers offered the same price for the bark that they now pay for esparto grass, which is also about $50 per ton. This shows a return of about $400 per acre for the seed and bark, and it is expected that the excess of fibre in the latter will allow the heart wood being mixed up with it, which will add very considerably to the value of the crop.

Small Farms.

Every one is almost obliged to do some work from choice or necessity. Comparatively few are able to get along without an occupation. There are so many callings some are puzzled to make a suitable choice, as they are so crowded as not to be lucrative. Some require too much means, and only the favored few are able to undertake them.

Farming to some seems to be not so genteel—there is manual labor in it, and attention required to it. That also is necessary to success in everything. In farming, labor and brains are required; your harum-scarum sort of a fellow is not wanted on a farm more than anywhere else. Men of small means cannot carry on a large farm better than an empty sack can stand on an end. Labor on a small farm is part of the stock-in-trade. Two horses to a plow would break up a good deal of ground, and a harrow would level it over, and then it is ready to be planted or seeded with corn or wheat drills. The seed necessary to plant or put in the wheat is not very costly; the balance of implements need not be very expensive. The dwelling and farm offices, as they are called in some places, are not expected to be on a very extravagant scale. A cow or two and some few sheep and hogs would make the concern complete. After a start, with care and industry, the farmer, under ordinary circumstances and luck must succeed. The work varies with the season. The good farmer must look ahead and must have everything provided and ready for the different work as it comes around. Labor and plans must be modified according to the weather and variations as to drouth, &c. We may now expect the farmer to enlarge his business as merchants and others would. There must be a beginning in everything. Here we might say as many succeed who start on a small scale as those who have abundant means. What signifies abundance if there is not industry, economy and management? Property will not take care of itself, and without proper care will gradually disappear.

My aim in this is to awaken thought and encourage young men to enter with zeal as agriculturists. Not every one is able to farm on a large scale at first. Not more will fail in the business than do merchants and speculators. One is more apt to succeed in different operations who has mastered one practically and financially. We have heard of merchants making good farmers and farmers good merchants. It often happens that farmers make good legislators, but it is not advisable for them to become politicians and office-seekers. In course of time there will be more small and moderate-sized farms than now. Where labor is scarce, farmers can assist each other by interchange of labor. It might be necessary to modify farming to suit the wants of the country; grazing might pay better than grazing and farming together.

The small farmer may be independent—his house will shelter him, his farm feed and clothe him. Therefore, "be always sure you are right, then go ahead!"—*Cor. Am. Farmer.*

General Items Interesting to Farmers

Faust's hay loaders are very efficient; they will put the hay on the wagon as fast as any man can load it. We saw it working last summer in Oxford. The man who has it is quite satisfied with it. On many farms it will pay for itself the first season. The draught is scarcely noticed when hitched on behind the wagon. The work is done by means of steel teeth that revolve and gather up the hay; a light carrier delivers it on the wagon. There are none of these implements made in Canada, but a great many are manufactured in the States; more will be introduced into Canada this year.

Exhibition Grounds.

In Toronto a few interested parties have caused a road to be run through the grounds in which the Provincial Exhibition has been held. The interests of traders and speculators have been permanent. It is now estimated that the citizens will be taxed to the tune of nearly $200,000, and not have as convenient a place for the exhibition.

An attempt is being made to destroy the beautiful exhibition grounds in London. Some speculators may be desirous of making a small fortune by the change; they care not for the public good. Exhibitions, when held at a great distance from the centres of population, are never so well attended.

If the citizens of London allow themselves to be deprived of their present exhibition grounds, they will never have any near as good. The consequence would be dissatisfaction to visitors, as no railway or street-car accommodation meets the requirements for short distances and large and sudden crowds.

In this issue you will see the advertisements of the best Horse Rakes manufactured in our Dominion. There have been other manufacturers who commenced making Horse Rakes, but have nearly ceased operations You must read what each advertiser says, and make your selection; they are good, efficient implements, and soon save their cost.

Read Messrs. Harris' advertisement of the Kerby Reaper in this issue.