

PREPARATION OF SEED.—The first step in preparing the grain for seed should be to screen, winnow and riddle it till perfectly freed from all improper admixtures. When this is thoroughly accomplished, it should be steeped in strong pickle and limed to prevent smut. The pickle should be sufficiently strong to buoy up an egg or potato, or, indeed, until the water will dissolve no more salt. The grain is steeped in a tub containing enough of the liquid to be a few inches higher, and to allow it to be well stirred, so as to bring the light grains to the surface from whence they are skimmed off, so long as they continue to rise. The water is then poured off and the grain put into a basket and placed over an empty tub to drain off the liquid. The wheat is then spread on the floor of the barn or granary and well sprinkled with sifted quick-lime which has been recently slaked with a small quantity of the liquid. About half a peck of lime is sufficient for a bushel of wheat, and it should be carefully stirred among the wheat that every grain may receive a portion; but many of our farmers find that a quarter of a peck carefully applied is sufficient. It does not seem necessary to wash and lime the seed for any particular length of time before sowing, nor that it should even be dry, though it is sown much easier when it is thoroughly dry. It may in fact be sown at any moment after liming. The chief requisite is so to apply the lime that every grain shall be covered with it. After the wheat is limed it should be occasionally stirred until it is sown, once or twice at least during each day, and it is said that it may be kept in that state when perfectly dry for any length of time without injury. The mode of preventing smut now detailed, besides its cheapness, is so certain and infallible that it would seem quite unnecessary to mention any other. The Messrs. Collins' of England who grew annually from 400 to 600 acres of wheat had only one instance of smut in forty years, and this was when the seed was not steeped, and it has never been known to fail when fairly applied by our farmers. Another recommendation of this mode is that besides the prevention of smut both the salt and the lime have undoubtedly a highly stimulating effect and increase the product of the soil.

QUANTITY OF SEED.—The quantity of seed depends upon whether it be sown broadcast, or dibbled or dribbled, and also in some measure upon the nature and condition of the land. It varies much in different countries. In England from 2½ to 4 bushels per acre are used when broadcast, and the crops there are not often excelled. In the United States the quantity varies from 1 to 2½, and in this Province from 1½ to 2½. As a general rule early sowing requires more seed than late, the grains being more exposed to destruction from the weather, &c. When, too, the berry is unusually plump and full, more is required than when it is lighter. On poor soils also, as a single plant will not throw out as many stalks as where the land is very rich and fertile, it would seem that more seed would be necessary. Rich land requires least of any. It may be remarked, that grain sown thin is less apt to lodge, as the stalks have more room, but it is more exposed to weeds.

MODE OF SOWING.—1. *Broadcast* is the mode almost universally pursued in this Province, and it is astonishing with what precision an expert sower regulates the prescribed quantity of seed to the acre. On the other hand the irregular distribution of the seeds by an inexperienced person occasions much waste and may be distinctly traced, some spots being covered too thick and others lying comparatively bare. It was formerly the practice for sowers to use a sheet hung over the right shoulder for the purpose of carrying the seed, but now they generally employ a basket suspended round the neck and held by the left arm thrust through the handle. This latter mode has certainly the advantage of occasioning the sower to

measure the handfuls more accurately than when the seed is condensed at the bottom of the sheet.

2. *The Drill.* Drilling is described to be a more perfect and economical mode of sowing grain than when broadcast; for the seed is deposited with greater exactness and regularity in regard to depth and proportion of quantity than can be effected by the most expert seedsman. It is thus more equally covered and better secured from the depredation of birds, &c.

3. *The Dibble.* The practice of dibbling or setting the wheat, grain by grain, is pretty general in some parts of England. It is found to be cheaper than drilling (6 or 7 pecks dibbled being the usual quantity per acre, whereas in drilling 9 or 10 pecks would be required,) and it is considered by many, when well done as decidedly superior. The holes are made by men, but the seeds are dropped by women and children whose wages are very low. When correctly executed there can be no doubt that it not only saves at least a bushel of seed per acre but also sets the grains at equal distances as well as depth, which must, it is presumed, give more equal nourishment than can be ensured either by the drill or the broadcast systems. The straw is also said to be stronger and the product larger. Much difference of opinion however has been entertained in England as to the preferable mode of sowing wheat, and it is but fair to state that the broadcast system has still its advocates. The chief thing that seems to be desired is a deeper covering than can in general be given by this mode. All the seeds should be covered if possible 1½ or 2 inches below the surface of the ground. They thus obtain a firmer footing and the stalks are enabled to resist the winds and storms which would be likely to break them down or blow them over if covered more shallow. It is not however at all probable that either drilling or dibbling can often be used when the seed is sown upon the frost. After the grain is sown it is of much importance to run the ploughs in the hollows between the ridges. This opens a free course for the water and keeps the land dry and, as it occupies but very little time, ought never to be omitted when practicable. It also prevents the waste of the seed which falls into these hollows and which is found to produce scarcely any thing there, but which yields well when turned by the plough upon the ridge and covered by the furrow slice.

AFTER CULTURE—The great effort of the farmer during the growth of the crop should be to keep the land perfectly free from weeds, and he should spare no pains or expense in this respect. It is quite lamentable to observe a field of grain, or indeed of any other description of vegetable production, overrun with these gormandizers, which withdraw the necessary nutriment from the crop and render it almost worthless. Few are aware how weeds or grasses growing in a grain crop detract from its value by lessening its product. A vigorous root of Cadlock or Thistle will draw from the earth the nutriment that would have given fullness to half a dozen ears of wheat, and when these or any other foreign substance is permitted to exist, the crop is sure to suffer in proportion to the quantity of the foul material present. Weeds are injurious in two ways: by the room they occupy to the exclusion of the valuable plants, and by the nutriment of which they rob the crop. On the best farms of England and Belgium not a plant or weed of any description can be found in a growing crop. Several experiments are recorded in Sinclair's Code of Agriculture, to show the difference of product between clean and foul fields.

1. Wheat. 7 acres sown broadcast. 1 was measured off and not a weed was pulled out of it, the other 6 acres were carefully weeded. The unweeded acre produced 18 bushels, the 6 weeded