

The Field.

Pure Seed.

The importance of using only the choicest seed, the best of its kind and free from admixture, is universally acknowledged, though unfortunately not always so carefully carried into practice as it should be, and a stricter attention to a matter of so much consequence should be urged upon farmers generally.

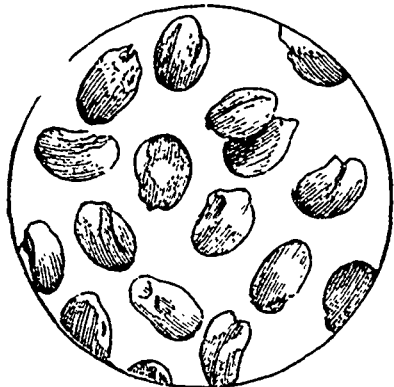


FIG. 1.

few persons now would employ small tubers to secure the best return from a potato crop. Yet the analogy between these tubers and ordinary seed is not exact; for it is in the eyes or buds that we should look for a closer resemblance, and here it must be acknowledged that the most vigorous buds will produce the most promising and thriving plants. Accordingly, it is that end of the tuber in which the

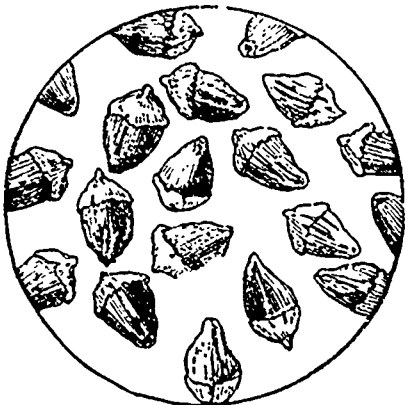


FIG. 2.

larger and more fully developed buds are congregated that all judicious planters use, and in dividing the root, take care so to perform the operation as to secure one or more of these buds in each set. This necessary care in the selection of seed is more easily

and more frequently attended to in the case of the larger cereals. In planting Indian corn, the practical farmer early makes choice of the largest and finest ears, if he does not even set apart a piece of ground for the express purpose of raising seed, and bestows on this particular care in cultivation. Then, having secured the best ears, he even rejects from these all but the completely developed kernels, throwing aside those at the base and top of the cob. In wheat, again, the staple of Canadian agriculture, the greatest pains are taken to clean the grain and remove all small seeds of imperfect wheat or weeds, or foreign grain. But there is another class of seeds, in which, though the same care is called for, it is not quite so readily applied. In the case of the smaller seeds of turnips, clover, and the grasses, the minuteness of the grain renders their examination and the detection of imperfection or impurities not quite so easy. Yet the matter is not, after all, attended with any very great difficulty. In regard to turnips, it may be alleged that when so large a proportion of the plants that come up have to be destroyed in the process of singling, it is of no great consequence if a little adulteration is practised. Without admitting such a plea for careless husbandry, it may be granted that in fact there is less adulteration in the case of turnips than many other small seeds. It is the practice of seedsmen, and farmers would do well to follow the example, to test their seeds by counting out a definite number, say a hundred, and planting them; then noticing, after a sufficient interval, how many have sprouted. This will show at least the vitality of the seeds. But to detect adulteration in the case of the smaller seeds of grass and clover, some artificial aid to the sight is employed with advantage, and a good magnifying glass, or even a microscope, will be found of especial service.

In reference to this subject, an interesting article appeared recently in the *Farmer* (Scottish), from which we copy the following extract and the accompanying illustrations.

Premising that farmers are apt enough in judging of the minute differences in the appearance of the cereal grains, the writer of the article alluded to says: "It may be safely concluded, that in order to acquire an equally discriminating acquaintance with the smaller seeds, they have only to accustom themselves to the use of the microscope, with which to magnify the smallest seeds to at least the sizes of wheat, oats, barley, beans, or others which they are accustomed to handle. Many look upon the use of the microscope as a mysterious and difficult operation, requiring far too much time, application and bother, for their having anything to do with it; but they have only to give it a fair trial in order to discover their mistake, disabuse themselves of all such absurd notions, and find, on the contrary, that it is in the highest degree interesting, instructive, and useful, and even as an occasional treat to the young,

its wonders will, in their estimation, vie with, if not surpass, those of the magic lantern, the kaleidoscope, and the wheel of life, while they will have a more potent influence in providing an after taste for intellectual and useful research. Many of the smaller seeds which, to the unaided eye, seem very much alike, yet present remarkably diversified, and often very beautiful appearances when viewed through a microscope of only ordinary power, and when one is accustomed so to look at them, the transition is easy to the investigation of the wide fields for micros-

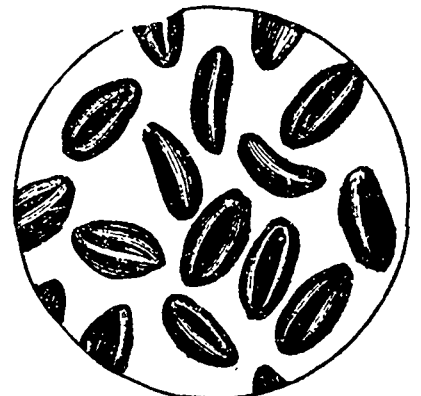


FIG. 3.

copic observation which are embraced within the animal, vegetable, and mineral kingdoms.

Mixing, colouring, and killing, are all skillfully perpetrated in adulterating seeds; and all these arts, however artistically they may have been applied, are more or less capable of being detected by the microscope. Thus, with clovers and grass seeds, none are so exactly alike but that a difference can be

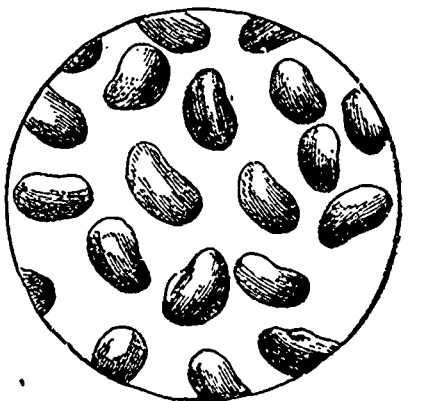


FIG. 4.

observed by a skilful microscopist, and most of the injurious or worthless kinds employed in mixing are so dissimilar that their detection is comparatively easy. This is not the case, however, with seeds of the varieties of turnips and other brassica, although