the most successful of breeders have adopted the style of breeding in twice, and then breeding out.

Fhally, the breeder should not attempt it unless he is possessed of great skill and judgment. American Stock Journal.

SHOULD WE SOW THIN OR THICK.

The following article translated from a reent number of the Journal D'Agricalture Pratique, contains much that is deserving the houghtful attention of our readers. It relates to a much vexed question, and we shall be happy to be informed of the views and results of Canadian farmers on the subject. The amount of grain for seeding a given amount of land must doubtless, always in some measure, depend in the composition and state of the soil, the tharacter of the season, time of sowing, varieties ultivated, and other conditions that would ocing to the minds of observing and practical en:-

In general, agriculturists of rich countries ad well-cultivated lands say, "Sow thin, you ill always have sufficient seed;" while, on the ontary, those of poor soils say, "Cover the eld ...th seed, you cannot put on too much." re not these opinions contrary to good sense? attm₂ a large number of plants into land bich ages not contain nutritive principles, and winto soil which contains much nourishment, ist be against all reason.

Let us inquire from whence these notions ing, and begin by establishing in principle a tem which can but be beneficial to agricule namely thin sowing. Here we would rerk, in passing, that sowing in rows with a chine which does not put two grains where re ought to be only one, nor leave only two ers there ought to be four, is a true progress, a great step towards amelioration based m reasonable practice. Under the impresh that by sowing a large quantity of seed the p would choke the weeds, we have sometimes a tempted to try the system; in fact, we e adopted it for some cultures, such as colza example, but the results soon taught us a on.

twe sow very thick upon a poor soil or thin each grain of wheat, harley, or oats only sone stem, which produces a single ear; again thicker, the cereal will be poorer and the ears more miserable; but as all ts by an invariable law give some grain, ald the stems be still thicker and poorer, the stems still form themselves? Without it the stems will be weaker in proportion as are numerous, because we shall have put plants upon a surface which cannot nourish than ten. We shall then have a yield m inverse proportion to the quantity sown, and the more we sow the less we gather in proportion, for this reason : as soon as the roots are developed they get entangled with one another, and in fact dispute the nourishment found in the soil; consequently they will always be poor and weak. Might we not compare the cultivator who sows thick, to him who upon land where there is put poor fodder, keeps three times more cattle than is fed upon good pasture?

In some localities nearly three hectolitres per hectare of cereals are sown, and sometimes even more. I have tried these enormous quantities, then diminished them gradually, and, in proportion as I lessened the quantity, the yield increased. I now sow 125 litres (220 pints) per hectare (or nearly 90 pints per acre), and t is that quantity well planted which gives me the best produce. I say well planted, because I think that every grain ought to be well buried.— Thick sowing is, then, preparatory to a thin crop.

Let us inquire now what takes place upon a soil well prepared, where the bed of vegetable earth contains a large proportion of humus.— The plants having room to extend their roots, strike them deeper and nourish them, obtain a strong vigorous vegetation, and are in better condition. The stalks multiply in as great a number as the earth can nourish, while we shall be sure of having nothing but healthy plants possessing all their faculties, and which will probably give a maximum produce.

Upon a surface of a metre (11-5th of a square yara), if I sow ten thousand grains of wheat, each plant will only have a centimetre (or $\frac{1}{3}$, if a square inch), and it w.ll be impossible that the plants can arrive at perfection. Again, if I sow upon that same surface only ten, each root, having space to extend itself, will tiller until the soil is full; but it will not form one ear more than the earth can nourish.

In order, then, to have plenty of tillers, we must sow thin. We do not pretend to state the exact quantities which will produce a good crop. We have mentioned 125 litres for cereals ; but a very fine harvest may be obtained from less seed. For this reason we do not approve of calculations of produce taking for their base the quantity of grains sown. The quantity gathered per hectare appears to us more correct. In fact, if I sow some grains singly upon a large surface, the plants will develop themselves in an extraordinary manner, and I shall have n enormous produce compared to the quantity of grain sown; but very little compared with the extent of ground. By this means we shall gather thirty or forty to one, being, however; a small return per hectare. It must therefore be left for the cultivator to judge the quantity of seed required, taking care not to diminish it beyond what is necessary for the stems to fill the soil.

Colza, planted or sown very thick, throws up a long stem very accessible to frost; then, early in spring, the flowers become developed, and if