

ly to continue good. There is a growing demand from year to year for the right class of horses in that extensive country lying to the west of us all the way through to Vancouver.

It is not for me to advocate any special breed, but in my opinion the heavy draught horse is the most suitable horse to breed on the average Ontario farm. There are three or four reasons why the heavy horse is the horse to raise. The heavy mare is more suitable for farm work and can do much more of this same farm work than the mare of the lighter type. The heavy colt is more suitable to get work out of, it can be broken at an early date and will prove more satisfactory in every way on the farm than will colts of the lighter breeds. The work that the heavy colt is required to do upon the farm, after he reaches that age at which he can be worked, all tends to fit him for future usefulness. With the light colt, it would be quite different.

The average farmer has not the time to get the most out of the lighter breeds. He has to sell the light colt for less money than he is really worth.

One cannot make a success of any stock business unless he aims at the top and breeds the good ones. If we would make horse breeding the most profitable, we must have the blood, the feed, and give the animal care. We must aim to get the best; we must know that the animal is bred right and then give it the feed and care. The average Ontario farmer on 100 acres should raise three colts in two years and should expect to do the greater part of his farm work with his mares and with the colts as they are being gotten ready for the market. The best success is to be had from mares when they are worked steadily on the farm. Some say that mares should not be worked. I would rather have them worked right up to the time they foal. Both the mare and the foal are the better for the mare having done such work.

Fanning Mill Seed Selection

T. G. Raynor, B.S.A., Seed Branch, Ottawa

The average farmer does not use the fanning mill enough in his selection of seed grain. The best crops always come from the use of large, plump seed. This has been demonstrated at our various Experimental stations. Prof. C. A. Zavitz, of the Guelph station, who has done much along the line, says that over 15 bushels per acre has been gained in sowing large, plump seed as compared with small, plump seed of the same varieties of oats.

No one should sow grain as it comes from the cleaner. At least 25 per cent. should be fanned and screened out of seed grain, i.e., four bushels from the bin should be reduced to at least three per seeding; in many cases more could with propriety be taken out.

A power mill, which at one dressing would remove 25 per cent., might be bought by a farmers' club or a number of farmers could co-operate and buy one. Such a mill if operated by a skilled man would dress up a large amount of seed in a very short time. Five or ten cents a bushel for cleaning would be a mere bagatelle compared with the benefits which are bound to follow such a dressing.

THE O.S.G.A. METHOD

There is, however, a better way still for getting good seed. It is the plan adopted by the Canadian Seed Growers Association where the plant is made the foundation of selection. Mr. L. H. Newman, the secretary, will be glad to furnish anyone literature outlining the methods of this Association if they will apply for it at the Canadian Building, Ottawa. There are a few farmers in Eastern Ontario who are following up this kind of work, but there is room for many more, and they can do it with remuneration for themselves both from a monetary standpoint and an

increased yield in the crops so handled. However, let us not forget to use at least the fanning mill well this year.

Some Things Concerning Seeds

One of the speakers at the recent Dairy-men's convention at Cowansville, Que., was Dr. H. T. Gussow, Botanist of the Experimental Farm, a German who has only been in this country for six months, but who is intensely interesting. He is a new speaker with a new message. Probably he made the best impression of any speaker that had been heard in Cowansville for years.

He started out by asking if the farmers could tell why they had a good crop some years, a bad crop some others. If not, they were running a haphazard concern on the principle of luck instead of business and a business more like a lottery than like a farm. There were three things to look into regarding seeds: "Will they grow?" "Are they free from weed seed?" and "Are they free from disease germs?"

The Department of Agriculture is testing seeds every day for merchants and for farmers. If seeds are germinating at the rate of 92 or 95 out of a 100, they are all right. If less than 90



One of the larger trees in Mr. Wellington Sager's bush
Maple syrup, the first harvest of the season, is an important factor on Mr. Sager's farm. Read the article on page 3, which gives his experience with modern means of boiling sap.

per cent. of them are germinating, they are poor seeds. The question is not how many pounds of seed is put on a piece of land, but it is how many living plants will be found on that land after germination takes place? Dr. Gussow referred to some of the exhibits made at the seed fair here and said that they demonstrated to him that we should imitate the example of the farmers in England, Germany and France and combine our forces to secure legislation to the end that we could say to seed merchants: "You must furnish us with clean seed, and that which is free from weeds, or we will call in the Government Inspector, who will have the power to put you out of business if our seeds are inferior or found so after purchase from you." Merchants selling poor seed in those countries are convicted on the report of the Inspectors.

Dr. Gussow advised the testing of all seed by sending it to Ottawa in samples, where the report would be cheerfully given after only a few days' time. In case these few days were lacking, he advised farmers to simply take a few hundred seeds, such as clover and lay it on a piece of white paper. It is easy to detect what is not clover, with the naked eye. Dr. Gussow asked all farmers to ask their merchants to tell where the clover seed was grown. Canadian clover grows best in

Canada, while English clover grows best in England.

As a test concerning powers of germination of seeds, Dr. Gussow advised taking two soup plates, and in one lay two damp sheets of blotting paper with a couple of hundred seeds spread between the damp sheets. Turn the other plate over it and set them in a warm place for 18 or 24 hours, at the expiration of which time all good seeds will have sprouted.

Clean farming, as the Hon. Sydney Fisher had said, was the vital point needing attention. The speaker had been in Canada only six months, but in 14 other countries with which he was familiar, he had found that that was a weak point in agriculture. Mr. Foster assured the speaker that the same trouble was in evidence here. Dr. Gussow strongly advised insurance of crops and protection of crops from disease.—P. C. D.

A Good Rotation in Actual Practice

J. R. Philp, Grey Co., Ont.

In Farm and Dairy, Jan. 20, I noticed your editorial advising farmers to practice a crop rotation. I heartily endorse what you say in this connection. Our land is just like a machine—if we wear out one part it is impossible for the others to do their work.

The three principal constituents in the soil are nitrogen, potash and phosphoric acid. If we crop so as to exhaust one of these, then the soil is like a binder without a knoter.

We often make the mistake of growing grain crops so long as grain will grow. Then seed the land to clover and grasses, meanwhile expecting a good stand, which is quite impossible under such conditions. The following is a rotation which gives satisfactory results with us:

1909	1st Field.	Roots and Rape
1910	.....	Hay
1911	.....	Grain seeded with clover
1912	.....	Pasture
1913	.....	Grain on sod plowed in fall of 1912
1909	2nd Field.	Grain seeded with clover
1910	.....	Hay
1911	.....	Pasture
1912	.....	Grain on sod plowed fall of 1911
1913	.....	Roots and Rape
1909	3rd Field	.....
1910	.....	Hay
1911	.....	Pasture
1912	.....	Grain on sod plowed fall of 1910
1913	.....	Grain seeded with clover
1909	4th Field.	.....
1910	.....	Pasture
1911	.....	Grain on sod plowed in fall of 1909
1912	.....	Roots and Rape
1913	.....	Grain seeded with clover
1909	5th Field.	.....
1910	.....	Grain on sod plowed fall of 1908
1911	.....	Roots and Rape
1912	.....	Grain seeded with clover
1913	.....	Pasture

Besides the area devoted to alfalfa and permanent pasture, we have about 100 acres that we keep as near as possible under the rotation as described. To date we have had very little trouble in keeping weeds in check. It has been stated by good authority that a short rotation would destroy perennial sow thistle, which has got such a strong foothold practically all over Ontario and in sections of the west. We have had little or no experience with this unwelcome visitor; has yet; whether our rotation is the reason or not we will not venture to say.

The accompanying schedule represents five 20-acre fields and gives an idea of how it works out (our fields are not 20 acres each, but mostly 10 acres). By following this practice our grain crop is always on sod and root and rape land.

CORN AND RAPE IN GREY.

As a rule there is not much corn grown in South Grey, there being practically no silos. Preparations are being made, however, to erect some this coming summer. There is considerable rape grown for fall feed. This crop is a good land cleaner if