

horizontal wires should be heavier. The object of using hard coiled steel wire is that the tension is always right, and posts are not injured.

3. Yes. The roads are kept free from snow blockades, but the track is apt to get too high and the sleigh then cuts off. To avoid this, occasionally use a snow-plough shaped like the letter A. Fasten this to your front bob, then fasten your hind bob to snow-plough. Very little trouble in this way will give good winter roads.

4. This is undoubtedly the ideal plan but we are not ready for it yet. But just here is a thought which is generally overlooked: We are forced to build fences along the public highway as much for the benefit of the public as for our own. This is a great injustice, especially to these owning corner lots. I maintain that the municipality should bear the half of the expense of building all fences along the public highway because it is a joint benefit, on the same principle as a line fence between neighbors. Were this done the municipality could easily regulate the building of snow fences.

JAMES SMITH.

Inglis Falls, Ont., July 4th, 1899.

Commercial Fertilizers

Grass Manuring and Meat Production

To the Editor of FARMING:

One of the most remarkable manurial effects that I have ever seen was in the famous Rothamstead Park last year. Plot 5 had been treated annually for forty-two years with a dressing of ammonia salts; the effect had been to reduce the species of plants to half a dozen poor grasses. In the autumn of 1897 one half of this plot was treated with a mixture of Thomas-phosphate and sulphate of potash; last summer, on the portion where the Thomas-phosphate and potash had been applied, there were twenty-seven species of plants to be counted, while on the untreated moiety there was but a little poor wiry grass.

At Cockle Park in Northumberland the hay from the original herbage contained only 0.3 per cent. of white clover, but on applying 5 cwt. per acre of Thomas-phosphate the white clover was increased to 15.6 per cent. in the bulk of hay. And what is very singular in this case is that a dressing of 7 cwt. per acre of superphosphate had the effect of reducing the already deficient clover to 0.1 per cent. This special action of the Thomas-phosphate on the clover plant was confirmed in the red clover, as, from 0.1 per cent. originally, the basic or Thomas-phosphate increased it to 2.0 per cent., while again the superphosphate only induced a growth of 0.3 per cent. Many different manures were being tried in this series of experiments, but no other fertilizer exerted any marked influence on the clovers; yet a duplicate plot treated with Thomas phosphate produced 13.8 per cent. of white clover.

Why the clovers should evince such a preference for this slag form of phosphate is difficult of explanation, but they undoubtedly do, and this accounts for the increasing popularity of the Thomas phosphate with the practical farmers; as also it accounts for those remarkable feeding results achieved by Professor Somerville, to which I have referred in a former letter. Dr. Somerville's report said: "The Thomas-phosphate has increased the yield of mutton by 175 per cent., whereas the hay was only increased by 50 per cent.; the inference being clear that the phosphate has had more influence on the quality than on the quantity of the produce, and that the leguminous herbage has been a better measure of the meat-producing power of the pasture than the weight of hay." We all know that a puffed up gross weight of meat is often obtained at the sacrifice of quality, but it is a singular and remarkable thing that in this case quality and quantity went together. Where the Thomas-phosphate was applied not only was there considerably the greatest gross increase in the weight of mutton, but the mutton was also decidedly the best in quality of any in the series. The animals were carefully examined by an expert butcher, both before and after slaughtering,

and he reported: "Plot 3 (the Thomas-phosphate plot)—sheep show good bloom and are in a thriving condition. In my opinion these sheep are the best of the series, both in condition when alive and in quality when slaughtered. They cut up thick in the loins, and would give satisfaction to purchasers."

This reminds me that a year ago I received an account of a Shropshire farmer—Mr. Woolley—having had a yield of seventy-seven bushels of wheat per acre. I visited the gentleman and was surprised to learn that on a 340-acre farm he had for some years been using from 50 to 70 tons of Thomas-phosphate annually. On the following day, while visiting one of the county live-stock markets, I chanced upon some sheep from this farm; two butchers stood by the pen, one of them having purchased the sheep; the other butcher remarked that his friend had given a big price. "Yes," said the purchaser, "but Woolley's sheep always *die well*!"

I was considerably impressed by this remark at the time, but its significance has been greatly intensified by these Northumberland and other results which have since transpired, and I was greatly pleased to see in FARMING of May 30th that, in the article on tuberculosis, Mr. T. C. Wallace very ably sets forward the influence a good phosphatic heart in the soil may ultimately exert on the animal life the land is required to support.

Lincoln, England.

FRANK WALLIS.

Growing Feed for Cows and Hogs

To the Editor of FARMING:

My earliest pasture crop this spring was peas, oats and vetches. This crop was ready for the hogs in six weeks from date of sowing, and it is pleasant to watch the sows and their litters revelling in this pasture. I do not think a winter pasture is at all necessary—such as rye—for early spring feeding where a crop of oats and vetches can be grown ready for the hogs in six weeks. I do not think I shall sow any peas in this mixture next year at all. I think they are quite unnecessary. From my observation this year, as to the requirements of an early swine pasture, I do not think peas are at all seeded. Peas do not make the best plant for pasturing as the trampling of the hogs injures them; not so vetches, the trampling of the hogs does not injure them in the least, and they grow up so quickly again after being eaten. Under these conditions, also, oats make a good partner for the vetch. Next year I will eliminate the peas and supply their place by more vetches. They say rape does not come on so fast as the peas, oats or vetches. Neither does the early flat turnips. For an early crop, and one so well liked by the pigs, peas, oats and vetches are ahead. My brood sows, pasturing on this crop, look for very little extra feed, and it is amusing to see the young sucklings, what a feast they too are having!

\$40 per acre. I mentioned in FARMING, when writing early this spring, exhorting all readers to sow these pasture crops and assuring them, at usual prices of feed, was worth \$40 per acre. Readers who have taken my advice and sowed these crops will, I feel assured, agree with me that I have not overestimated the value of these crops. Therefore, FARMING readers, if they have not sown these crops this spring, have not lived up to the great privilege they enjoy in being readers of Canada's only weekly agricultural paper.

Pasture crops for summer and roots for winter. Dairy-men readily admit that a silo of good corn ensilage is the cheapest and best bulk or roughage food for winter feeding. *Contra*, a cellar of roots, as turnips and mangels, is the best and cheapest "bulk or roughage" food for swine in winter. By the aid of the silo on the one hand, and the root cellar on the other, fully fifty per cent. more stock may be kept, and kept better. These truths are hard to impress on the average farmer, and because they are, the conditions of the Canadian farmer are but average. Feeding