

Mr. Sangster takes a great interest in his garden, and has done considerable in experimenting with grain. He has taken a number of prizes for his grain at the leading exhibitions, and the government has sent a number of his specimens to the World's Fair.

KINGSTON ROAD STOCK FARM.

About two and a-half miles from the city of Belleville we find the Kingston Road Stock Farm of J. M. Hurley & Son, breeders of imported Large Yorkshire swine and carriage horses. This farm is situated on the beautiful shores of the Bay of Quinte. They have been moving their old barns and building additions to them, with the intention of going more extensively into dairying. Each animal's milk is weighed and the cows were all tested with the Babcock, so in this way they will keep only such animals as are paying for their feed. This firm have been breeding and training horses and raising hogs for years, but it was not until 1887 that they decided to go into the pure stock business, and purchased a pair of pure-bred Yorkshires from Ormsby & Chapman, from the first litter that they raised from their first importation. Mr. Hurley is the second man who registered in the Yorkshire herd book. Beginning in a small way, pigs from his stock have been distributed all over the country. Since last November, pigs have been shipped to nearly every county in Ontario, and to Quebec, Manitoba, Michigan and Kansas. The first lot of ten were shipped to Kansas, and were the means of obtaining a large number of orders from the same section. Out in the yard we saw two especially good sows of their own breeding. The older sow, Madam 2, is deep, wide and well let down; was farrowed in 1889, sire Sir Edwin, dam Madame, by Holywell Wonder. The other, Susan, farrowed 1891, sire Patsey, dam Madame. The herd is headed by the grand young boar Duke of Oxford, bred by J. E. Brethour, Burford; Sir Dauphin 3rd (imp.), dam Duchess 3 (imp. in December), by Magistrate. Another young boar, Young Hamlet, farrowed January, 1893, sired by General Gordon, dam Lady Ethel. They have never had time to exhibit at our large exhibitions, but have been successful wherever they have shown. Last year they sold fifty at the exhibitions they attended, besides sweeping everything at the local exhibitions.

PINE GROVE HERD OF POLAND-CHINAS.

The farm on which this herd has been established is about two miles from Tupperville on the Erie & Huron R. R., and about sixteen miles north from Chatham. For many years the proprietor, Capt. Young, has made a practice of feeding pigs for the block, and as he lives in a part of the country where corn is extensively grown, and where the farmers generally market this crop on foot through their hogs, he found there was much room for improvement in the kind of pigs that they were raising and feeding. It was, therefore, with a view to find a suitable hog to fill the bill in this particular that he undertook the breeding of pure-bred swine, and, while visiting Michigan, secured some Poland-Chinas, which already show their impress on the road to improvement in many of the pigs being fed in this vicinity.

During last year Capt. Young made two selections from two of the leading herds of the United States, and was enabled to secure specimens which are not only likely to do credit to his judgment, but will be of inestimable benefit to those who avail themselves of this opportunity he has offered them for improving their stock. As before intimated, the foundation stock was selected at different periods, and of two selections made in 1892, the first comprised the boar Wise Reubin 28279, and the sow Rebecca 1st 70906, both purchased from Mr. Levi Arnold, Plainville, Michigan, who has the reputation of being a skillful breeder. Again, another lot was brought over later in the year, when the very excellent young boar, Canada Wilkes, was purchased from Mr. J. H. Beebont, Rushville, Ind., and the sow Cora from the before-mentioned herd of Mr. Levi Arnold.

Capt. Young has collected a number of exceedingly good individuals, and, as his selections have been made with a view of supplying pairs not akin, we predict that he will be enabled to transact a large share of the business in breeding stock, and those who have not the pleasure of his acquaintance may be assured of fair dealing at his hands.

World's Fair Butter Contest.

The following table gives a summary of the completed ninety days' butter contest at the World's Fair, twenty-five cows of each of the three breeds competing:

Breeds.	Lbs. milk.	Per cent. solids.	Per cent. fat.	Lbs. fat.	Lbs. butter.
Guernsey	61,781.7	13.78	4.61	2784.56	3399.43
Jersey	73,478.8	13.82	4.86	3315.17	4273.95
Shorthorn	66,212.6	12.21	3.38	2169.98	2890.75

At this writing the cost of food consumed had not been announced, so that the comparative profits do not appear in the above.

FARM.

Broaden the Wagon Tires.

It seems inadvisable to attempt by legislative force a reform that cannot be accomplished easily, and that ought to depend upon personal intelligence and self-interest. At the same time it is useless to hope for permanent road improvements as long as the ordinary wagon tire is used. How this came to be generally adopted is a mystery, for the saving in weight of metal is easily offset by the depth to which the wheel so encircled will sink into the mire and the greater force required to drag them through it.

In all European countries where smooth, hard roads have been constructed, people would no more think of permitting them to be cut to pieces by narrow tires than they would of allowing a man to set at work digging them up with a pick-axe. There is an indirect way of getting at a change in the common custom of farmers that would be very effective. To prohibit and punish the use of the narrow tires is hardly practicable, but a tax levied on all farm wagons having tires not exceeding a certain width would soon banish them from the public highways, and such an imposition would be perfectly justified, as the receipts from it would not suffice to repair the damage which such tires cause. An accompaniment of road reform, the adoption—enforced, if necessary—of standard wagon tires is a necessity.

A recent enactment of the New York legislature provides that to every person using a two-horse or larger wagon with wheels, the tires of which are not less than three inches wide, on the public highways, a rebate of half his highway taxes shall be granted. This law was made in the interest of good roads. Dealers in wagons who have been interviewed in Albany say that since the law went into effect, on June 1st last, the demand for wagons with wide tires has shown a marked increase.

The professor of agriculture of the Missouri Experiment Station, who has conducted experiments for the purpose of ascertaining the difference in the draught of a given load on the same road, but on wagons with tires of different widths, gives his results as follows:—

"The wheel tires were respectively one and a-half inches and three inches wide, and the trial was on a partially dried mud road. The load was in each case 3,005 pounds. The draught for the broad tires was 371 pounds, and for the narrow 441 pounds, and the broad tires cut the roads less deeply than the narrow ones."

Mr. Jas. A. Bell, in his bulletin on the making of roads, has the following:—

"The width of tires on vehicles has a great deal to do with the destruction of our roads. The great defect is, that for heavy loads the tires are too narrow. It has been proved by repeated and careful experiments that wheels with tires 2½ inches wide cause double the wear of wheels which have tires 4½ inches wide. The surface of the roadway is not able to bear the heavy load put upon it by narrow tires, the tire therefore cuts through the surface and forms deep ruts."

The width of tires on wheels should be properly proportioned to the weights they are designed to carry. Wide tires have a tendency to roll the road and keep it smooth at the same time; usually it does not require the same amount of force to haul a vehicle with wide tires, as it does to haul one with narrow ones. Municipalities should consider the regulating of traffic in this regard.

Most of the European countries have laws regulating the width of tires on vehicles. In France the market wagons have tires from 3 to 10 inches in width, usually from 4 to 6 inches. Not only have they wide tires, but in most of their four-wheeled freight wagons the rear axle is 14 inches longer than the fore axle, so that the rear wheels run on a line about an inch outside of the line of the fore wheels; instead of being a road destroyer they are a veritable road maker.

In order to encourage the use of wide tires in the State of Michigan, they have a law granting a certain reduction in taxes to those who use wide tires.

Vehicles on springs are much easier on roads than vehicles without springs.

Wheels of large diameter do less damage to roads than smaller ones, and cause less draught."

Mr. John Brodie, of the Mapleton, Ont., cheese factory, who uses a Babcock to test the milk, furnished by his patrons, (though he does not pay on the basis of fat percentage), reports that he has never received such good milk and in such good condition as this year. The richness of the milk, he finds, varies greatly with the food supply. When cows are tormented with flies, and forced to roam long distances for food and drink, he found the percentage of fat much lower.

Clover Ensilage.

BY WM. BUTLER, DEREHAM CENTRE, ONT.

In reply to your request for a report from any one who had filled a small silo with clover, I will relate my experience. Making ensilage of clover has been long practised in Europe. We would naturally wonder why it has not become more common in America, but after giving it a moment's thought, we would conclude that: 1st. The shortness of our season has something to do with it. 2nd. Not enough clover grown. 3rd. The silos are too large. 4th. Hands and machinery are too scarce. The size of the silo has a great deal to do with it, because after it is once opened it should be fed immediately, as it so soon rots and dries out on the top after the air gets to it. The size of the silo which I filled was 10x12 and 20 high, which will hold about 54 tons of corn or 36 tons of clover ensilage. The silo is built of wood, which I do not recommend; for this purpose I think stone or brick would be preferable. A silo this size will answer the purpose very well for about thirty-five head of stock. Care should be taken not to have too much outside surface in proportion to the amount it holds. A round or square silo would be the best shape. The more there is exposed to the air the more will waste.

The hands and machinery required will not be large. The nearer the field to the barn the less will be needed. Six men are all that will be required. One mower, two waggons and racks, an engine, horse or tread-power to run a cutter with carrier, are sufficient.

The time required to fill a silo of the size mentioned with the number of hands stated will be about two days. The silo may be filled without interfering with securing the other hay; indeed, the time spent in filling this year was never missed. After a shower, or in the morning when the other hay is drying, is a good time, although, after once commencing to fill, the sooner it is done the better.

YIELD OF CROP.

A heavy crop of clover will yield as much per acre as from ½ to ¾ of an acre of corn. Four acres filled a silo of 2,400 square feet, this being a little above an average crop. The kind used was the common red clover, *Trifolium Pratense*, but if clover was grown especially for the silo I would recommend Lucerne, being better for producing milk and muscle. Alsike is good, but will only produce one crop and no aftermath. Lucerne is a more sure crop, and will produce more in bulk and two or three cuttings in one season. Dry weather will not affect Lucerne as much as it does other clover, on account of it being a deeper feeder. The principal objection raised against Lucerne by the farmers is the amount of care which has to be exercised in harvesting it, on account of it getting woody so quickly. This would be obviated in utilizing it for the silo. I have no doubt if rye or other green fodder was mixed and cut at the same time it would give good satisfaction. This would be better done if the clover had got a little old.

FILLING.

Filling should commence when the clover is green, especially if the silo is made of wood. The greener the clover the better it will pack, and the less waste there will be from air-rotting. Drying or wilting does not improve the quality of the ensilage; the fresher it is when fed the more it will be relished by the stock. Tramping in the silo should be thorough—better still if done with a horse, which should be used most around the outside. About three feet in the silo that we filled this year didn't get tramped. When we came to feed it out the ensilage was good almost to the wall where it was tramped, but where it wasn't tramped it had decayed in about nine inches to one foot. A good covering can be made of the rakings. We commenced filling this year on the third of July and finished on the eleventh.

FEEDING.

Feeding may commence in a couple of weeks after being filled. It is better to let it settle down perfectly before opening, to prevent the air working in it so quickly after opening. If pastures remain good, it would be better to delay opening a little longer. Commencing feeding on the 30th of July, we have fed about one-third of the amount up to August 24th. The amount of stock fed on this was 5 horses, fed all they would eat, and 30 cows twice a day. The horses don't care for dry hay now, and I think it preferable to hay; at least they are doing better on the clover than when fed hay. Clover ensilage is principally used for feeding horses in England. I cannot say how pigs will thrive on ensilage, but I think wheat at 55 cts. per bushel would be cheaper and give better returns. I would recommend bran or wheat chop rather than pea chop to be fed with the clover.

COST.

The cost of filling was about \$20. Being hard to figure on the profits, I will leave that with the reader to judge for himself. Had it not been for the fly pest coming on about the same time as the pastures failed, I think my cows would have held their own in milk.

The advantages of making ensilage of clover are as follows:

- 1st. It saves a great amount of labor in curing clover, especially so if the season is wet and the crop is heavy.
- 2nd. There is less loss in feeding.
- 3rd. No loss of leaves.