States indicate a shortage in cattle. We need no other proof for this condition of the supply than the evidence we have in the way American feeders have been scouring our country in quest of stockers. This all indicates that beef will be dear just at the time we have none to sell. Let us be wise and go no further in this back-handed way of conducting our business.

Death of Mr. Thos. Guy.

Very many of our readers will regret to learn of the demise of Mr. Thos. Guy, of Sydenham Farm, Oshawa, Ont. He was born at St. Gorran, Cornwall, England, March 21st, 1819, and at the age of 27 came to Ontario and settled on a farm a few miles north of Sydenham Farm. After remaining there four years he moved to Woodstock, and some twelve months afterwards returned to Ontario County and settled on the present homestead. Mr. Guy was better known to our readers as a breeder and exhibitor of Ayrshire cattle, but he became also famous for the excellence of his Shorthorn cattle, Leicester sheep, and Berkshire pigs.

The prize winnings of the Sydenham Ayrshire herd have been honorable to Canada, as well as the breed and herd they represented. In 1882 the FARMER'S ADVOCATE prize of $100 for best five cows for general purpose and profit at the Provincial Exhibition was won by five Ayrshires owned by Mr. Guy. The same year at the Toronto Industrial the best Ayrshire cow was found in the Sydenham herd, and two years later the milk test premium at the Toronto Industrial came to one of Sydenham's favorites. But perhaps greater than all of these in national honor was the success attained at the World's Columbian Exposition, where Mr. Guy shared liberally in the glory of Canadians who won nearly all the prizes offered for Ayrshire cattle. These are a few instances of winnings we have in mind, but for a great number of years the best Canadian shows were visited, with results in keeping with those mentioned. Commencing in a humble way, and being possessed of a cautious, straightforward character and marked capacity as a breeder, the success attained has been personally earned by the deceased and his sons.

Mr. Guy was the father of a large family who, with the exception of one daughter and son, are doing for themselves in different parts of Canada and the United States. He was a man of sterling integrity and christian character, respected by all who knew him. His health commenced to fail more than a year ago and his life went out on the morning of June 16th. The wife and family have the sympathy of all who know them or Mr. Guy in the loss of an affectionate husband and father.

Corn as a Stock Food.

BY PROF. G. E. DAY, ONTARIO AGRICULTURAL COLLEGE.

The feeding value of corn is at present attracting considerable attention, and it is a question which certainly is deserving of careful consideration. The composition of a fodder, though not an infallible guide, is always of assistance in studying its value, and for this reason the composition of corn, peas, and barley is given below:

	Ash.	Digestible Protein.	Digestible Carbohydrates.	Digestible Fat.
	%	%	%	%
Corn.....	1.5	6.3	64.8	5.0
Peas.....	2.6	18.0	56.0	0.9
Barley.....	2.4	9.5	66.1	1.2

From the above table it will be seen that the most striking feature of corn as compared with barley is its very low percentage of *ash* and high percentage of *fat*. Compared with peas the difference is even more striking, while the percentage of *protein* in peas is very much higher than in either corn or barley.

Now, the *ash* of a fodder goes to form the bone of the animal, the *protein* is mainly concerned in the formation of muscle (lean meat), blood, milk, etc., while the *carbohydrates* and *fat* are used to form fat and produce heat. Judging from the composition, therefore, the natural conclusion would be that corn is a poor bone-former, but that it is especially designed to form fat. Peas and barley, on the other hand, appear to be fairly good bone-formers, while peas seem especially adapted to the production of lean meat.

So much, then, for appearances. How about practical results? It would require altogether too much space to review the whole field of experimental work with these fodders, but the results obtained by a few leading experimenters are worthy of notice, and their results, generally speaking, are verified by the work of others.

Prof. Craig, of Wisconsin, regards corn as the most fattening farm grain that can be fed to sheep, but he found difficulty in maintaining the appetites of the animals and preventing disorders when corn was used exclusively as the grain ration. The results of his work go to show that the safest plan is to commence the fattening with oats or bran and gradually add corn, finishing the fattening with a mixture composed of about three-fifths corn. Peas also combine well with corn, and Prof. Craig obtained a much larger gain with peas and corn than with corn alone. Very little attention seems to have been paid to the quality of the mutton, but a general review of the subject seems to indicate very little difference.

Prof. Henry, of Wisconsin, found that the feeding of an exclusive corn ration to hogs resulted in weak bone. The addition of bone meal and ashes doubled the strength of the bones, but did not appear to affect the proportion of lean to fat. Maine and Utah experiment stations have done considerable work in comparing corn with mixtures of corn and peas, corn and barley, etc., and the results were very favorable to the mixtures.

With cattle comparisons of corn with peas or barley are few in number, and it is still more difficult to find anything conclusive regarding the effect of fodders on the quality of beef. What work has been done indicates that the effect of a ration poor in *ash* and *protein* is most marked in the case of inmature animals, especially calves.

A review of the whole question shows that there is still room for investigation along these lines, though it is not difficult to draw a few logical conclusions. There is little doubt that corn is not suitable as an exclusive grain ration, especially for young animals. It combines well with peas, since each tends to correct the defects of the other, peas being rather too rich in protein and corn deficient in ash. For growing animals bran and oats combine well with corn. For young pigs, however, oats would not be suitable owing to their hulls, and middlings would supply their place. The addition of skim milk would be a still further improvement. Oil cake is very suitable to feed with corn to any class of stock. Barley tends to improve corn, but resembles it too closely to give the best results. If barley is mixed with corn the mixture would be improved by the addition of peas, bran, shorts, middlings, oil cake or oats, the oats being especially suitable for calves or lambs.

It has been claimed that corn is responsible for the lower prices of American pork as compared with Canadian, and that corn will eventually bring Canadian pork to the level of American. To what extent this is true it is difficult to say, and a question might be raised as to whether the difference in price is not due to a large extent to differences in breeds and methods of selection. If we have not the right kind of animal to begin with we cannot obtain a No. 1 product no matter what we feed. No doubt the exclusive feeding of corn would have an injurious effect, but when fed intelligently to animals intelligently selected there is little to fear, and we may regard corn as a valuable addition to our list of stock foods.

Summering the Foal.

There are those who affirm that if horse breeding is to be successfully carried on the mare should not be worked while suckling her foal, says *Prairie Farmer*, and that healthy, robust animals can be reared only when the dam is free to devote her whole time and strength to the duties of maternity during the five or six months usually set apart for that purpose. There is a good deal of truth in this contention, and there is no doubt that there is a deal less trouble and risk of infantile disorders, and that better-grown foals, ready to wean earlier, are the result when the mare runs with her offspring over a good wide pasture, and enjoys the further advantage of something out of a trough, than when, in addition to suckling a foal, she has to take her share of the work of the farm. Much, however, depends on the amount of care and forethought brought to bear on the matter, and some good foals are reared on farms where it is the common custom to put the mares to work at the expiration of six weeks or two months, or, when it is designed to breed another foal, after they have been served and "tried." It savors rather of the kind of economy that is the reverse of profitable to have a mare working, carrying a foal, and suckling another, but so far as I can see it answers well, and pays, where the system is judiciously worked. It does not, however, answer where the mare is hard worked or underfed, or where the mare and foal are kept apart for long hours at a time. Take the case of mares used for agricultural purposes in some tillage districts. During the turnip sowing, haymaking, and harvest, they are kept hard at work from morning till night, with the exception of a short spell at noon. The mare is heated and dripping with perspiration when she comes in, and the foal, generally shut up during her absence in an ill-ventilated stable, is desperately hungry. The mare's udder is distended and painful, and the foal is nothing loath to appease his appetite on the heated, watery milk resulting from the hard work and long fast; and if it does not suffer from colic and scour as a consequence, the effect of such a system of management is soon visible in the appearance of both mare and foal. It is bad to keep mares in close confinement during gestation, since it results in a bad foaling time and an ill-developed fœtus, but it is worse to keep any young animal in close confinement during the early days of its existence. A foal shut away from its dam during the long hours constituting the summer working-day suffers from the want of freedom, and the fresh air and exercise associated with it, not less than from the want of regular feeding. A foal running with its mother in the field is constantly sucking, scarcely an hour passing without its doing so; and as this is nature's method of rearing, it is an outrage to keep a foal six or eight hours without access to its dam. There is not only an alteration in the secretion consequent on the work and long fast to which the mare is subject, but a foal shut away for a long period is hungry, and is then apt to take a quantity of the vitiated fluid with which his imperfectly developed digestive organs are quite incapable of dealing. Long fasts, followed by hurry and overfeeding, are productive of digestive derangement in much older and more robust creatures than young foals. With such treatment a foal, instead of growing out, remains puny and stunted; in fact, the organs of digestion and assimilation may be impaired by the bad quality and insufficiency of the milk to such an extent that no subsequent treatment, however liberal, can fully restore them. The mare, too, gradually loses flesh and spirit, becomes hidebound and unthrifty, and presents all the signs of overwork, which does not augur well for our next season's foal. This cannot pay, and if any work is exacted from the suckling mare it should be of the lightest possible description, and should not occupy her for long periods together. The light horse breeder who wants his mare to work during the suckling period is in much the same position as the agriculturist who wants to exact the full day's toil, since his mare in taking journeys will be long absent from her foal and return to it heated and tired. For the sake of the foal there can be no doubt that it is best to let the dam give it her undivided attention, and to feed both liberally with a view to early weaning. A mare fed on suitable food, in addition to a plentiful supply of good grass, will yield an abundance of milk on which the foal will grow rapidly, and it is astonishing how soon the latter will, from the force of example, learn to feed with her, and thus not only be ready for weaning at an earlier date, but, by becoming independent of the milk and able to deal with solid food, feel the early separation less acutely.

Forage Crops for Pigs.

The value of pasture for pigs was illustrated by the Arkansas Agricultural Experiment Station. Rye, red clover, sorghum, peanuts, and sweet potatoes were the crops used in the test. These could be all used by most of our readers except the sorghum, peanuts, and sweet potatoes, which places could be supplied by green corn, green peas, and mangels. A grade Poland-China sow and five pigs were turned on the rye March 23rd, when the crop was six inches high. This she did not relish, and in one week was put on clover, which was grazed over twice. A little grain was given in addition. Towards the end of June the pigs were put on sorghum which had been sown in April and was headed out. Late in September two of the pigs were put on sweet potatoes and three on peanuts. They were all turned on peanuts in two weeks, and continued to feed upon them until into December. They were then given soaked corn about three or four weeks. During the test the pigs had grazed over one-fourth acre of clover, one-fourth acre of sorghum, two-fifth acres of peanuts, making in all less than one acre. In addition to the forage crops, the pigs were fed some grain until they were five months old to insure rapid growth. They were also given a mixture of charcoal, salt, ashes and slaked lime. They were in perfect health throughout the entire test.

At the close of the test the pigs weighed 1,215 pounds, the average weight being 243 pounds. The total value of the grain fed pigs and the sow (while she ran with the pigs) was $10.61, and the value of the green crops was $4.50. The rent of the land was assumed to be $3.00, making a total cost of fattening the pigs $18.11. The average cost of producing a pound of pork was 1.5 cents.

The pigs when slaughtered were valued at $3 25 per 100 pounds, making their total value $39.48, and a profit of $21.37. With the above rotation of forage crops only 6.6 bushels of corn was required to produce a pig weighing 243 pounds at ten months old. There is no doubt but in cheese-factory and creamery districts very cheap pork could be produced were due attention given to the use of forage crops in conjunction with the dairy by-products and very little grain.

If any of our readers have had experience with this plan of pork production, we will gladly publish the results, showing its advantages or disadvantages.

The Bath and West Show.

From the beginning of March until the middle of December live stock shows in Great Britain follow with only a few days, at most, of intermission. The Bath and West is classed as one of the great annual summer events among breeders; in fact, it was this year the first of the great annual summer shows. It was held at Southampton from May 24th to 28th. It was not up to the show of last year because of its very southern location, which being close to the homes of the Jersey and Guernsey brought out an unusually fine display of those breeds of cattle. The entries were as follows:—Horses, 123; cattle, 505; sheep, 205; pigs, 109; poultry, 397; farm produce, 397: total, 1,708, compared with 1,850 last year. Implements occupied 21,885 feet, compared with 22,872 last year.

In horses the turnout of Shires was good, especially the female sections. Clydesdales were very sparsely represented, being the only breed shown in the section allotted to draft breeds other than Shires. There was a small display of hunters, and