

able season, it is pretty generally conceded that spring planting is attended with more favorable results. So much is this the case that fall planting is the exception and spring planting the rule.

4. The following gentlemen have extensive studs of Thoroughbred horses: Wm Hendrie, Hamilton, Ont.; Jos. Seagram, Waterloo, Ont.; Robert Davies, Thorncliffe Farm, Todmorden, Ont. Chestnuts and bays predominate in these studs.

DAIRY COW FOODS.

"MILKMAN," Cumberland Co., N. S.:—"1. Please give feed value of the following, compared with wheat bran at \$15 per ton, to keep up milk supply in winter: Timothy hay, broad-leaf hay (or salt marsh hay), oat hay, corn fodder, mangels, turnips, potatoes, carrots, corn meal, barley meal.

"2. Would it not pay better to raise potatoes and sell at 40 cents per bushel and buy grain feed than to raise mangels or turnips?

"3. How much of what kinds of feed would you recommend for soiling ten cows?

"4. Is there any better soiling crop than fall rye for cows in June? I have been told there is no milk in it.

"5. Will rape give milk a bad flavor?

"6. Will lime injure potatoes if a crop of clover is taken off between?

"7. What is salt worth as a fertilizer, and what crops would you use it with?

"At the Nappan Experimental Farm, I was surprised to see how well grain looked where salt was applied and how poor it looked where fertilizers were applied."

[It is impossible to state the feeding value of any food stuff in dollars and cents, for reasons which it would take too long to go into. I presume "Milkman" knows that there are three nutritive substances which are of special value in feeding animals. These are known as protein, carbohydrates, and fat. It is necessary that all animals should receive a certain amount of each of these substances. Leaving the fat out of consideration, a satisfactory ration for a dairy cow should contain about one pound of protein to five pounds, or perhaps a little over five pounds, of carbohydrates. Most of our stock foods are rich in carbohydrates and comparatively low in protein, and consequently, a good deal of care must be exercised in selecting foods in order to get sufficient protein for the best results. This fact results in foods rich in protein usually commanding a higher price per ton than those poor in protein and rich in carbohydrates. Further, if a farmer has foods at his disposal which are very rich in protein, he could afford to pay a higher price for a food rich in carbohydrates than he would be justified in paying if the foods at his disposal were poor in protein. Thus the actual money value of any of these constituents depends almost entirely upon how badly they are needed. Below will be found a table showing the digestible nutrients in one hundred pounds of the different fodders named. I think that a study of this table may be helpful. It will be noticed that bran contains the largest percentage of digestible protein, and, as the other foods mentioned are all comparatively low in protein, we may safely say that bran would be worth more per ton to "Milkman" than any of the other foods. Just how much more, however, it is impossible to state.

DIGESTIBLE NUTRIENTS IN ONE HUNDRED POUNDS.

	Protein.	Carbohydrates.	Fat.
Bran	12.2	39.2	2.7
Corn meal	7.9	66.7	4.3
Barley	8.7	65.6	1.6
Clover hay	6.8	35.8	1.7
Timothy hay	2.8	43.1	1.1
Oat hay	4.3	46.4	1.5
Corn fodder	2.5	34.6	1.2
Marsh hay	2.4	29.9	0.9
Potatoes	0.9	16.3	0.1
Mangels	1.1	5.4	0.1
Turnips	1.0	8.1	0.2
Carrots	0.8	7.8	0.2

I am well aware that there are many difficulties to explain in this answer, but it would take a long article to explain the matter fully. As the material can be found elsewhere, it seems scarcely advisable to go into the matter fully at this time.

2. If a farmer has a good potato soil, 40 cents per bushel is certainly a good paying price for potatoes. Unless, however, he has a silo, it would be a great advantage to him to have mangels or turnips to give succulence to the ration for his cows. Succulent foods are of great value in stimulating the milk flow, and, therefore, I would not advise excluding them from the cow's bill of fare.

3. If alfalfa will grow satisfactorily, it will be found one of the most satisfactory of the early soiling crops, and I would advise growing at least eight or ten acres of it, because what is not needed for soiling purposes will do nicely for hay. The alfalfa grows up quickly again after being cut, and, under favorable conditions, will furnish three crops in one season. Red clover is a little later than the first cutting of alfalfa, and could be fed for a short time, if necessary. Then would come an acre of oats and peas, say two bushels of oats to one bushel of peas, sown as early as possible in the spring. Then about two weeks later another acre may be sown, and ten days later, if there is sufficient moisture in the soil to germinate the seed, another acre. It does not matter whether the cows eat all of this in the green state or not, because whatever is left will make excellent winter feeding. The second crop of alfalfa will come in about the time the oats and peas are done, and then a summer silo would be found very valuable; in fact, where soiling cows is practiced to any great extent, a summer silo is almost indispen-

sable. It could be filled with corn, of course, the preceding fall. Later on comes green corn, and, of course, a considerable quantity of corn would have to be sown in order to fill the silos for both winter and summer feeding, if desired. It would be better to have plenty of acreage of these summer crops, for what is not needed for summer feeding may be used for winter feeding, and so nothing need be wasted.

4. Green rye makes a very early soiling crop, but is not equal to alfalfa either for feeding value or in yield per acre in locations where alfalfa will grow. Both rye and alfalfa are ready to cut about the same time.

5. Yes. Rape is entirely unfit for milking cows, as it gives a very disagreeable flavor to both the milk and butter.

6. I do not think that any injury to potatoes need be apprehended from the use of lime as described.

7. The exact action of salt in the soil is not clearly understood. It can scarcely be called a fertilizer, as it contains in itself very little that is of use to plants. It seems, however, to have an effect upon substances already in the soil, and possibly makes the potash already in the soil more available. Some soils will show marked benefit from an application of salt, while upon others very little effect can be noticed. In matters of this kind, experiment by the farmer himself is about the only way to obtain reliable information.

G. E. DAY, Agriculturist.

Ontario Agricultural College.]

WATER SUPPLY FOR COWS.

THE MISSES M., Wellington Co., Ont.:—"What quantity of water would the roof of a barn, 90x40 feet, in ordinary weather conditions, supply? Would it be judicious to rely on such supply for say thirty head of cattle, mostly cows? If the cisterns be in the basement, would the water keep good enough for dairy cows?"

[A water supply gathered from the roof of a shingle-roofed barn is not to be recommended for a dairy herd. The accumulations that must get into the cistern after the fall threshing will contaminate the water so that it is not fit for dairy cows; in fact, not fit for any class of stock. The supply, too, would be very uncertain, so that in our estimation the most satisfactory way, in case the supply cannot be secured from a running spring at a reasonable distance, would be to sink a well and erect a windmill. See our issue of September 15 re farm water supply.]

HOW MUCH SHORTS WOULD A PIG EAT IN SIX MONTHS?

SUBSCRIBER, Manitoba:—"If pigs born in spring and fed exclusively on shorts from the time that they were weaned, how much shorts on an average would a pig consume in six months?"

"2. Is shorts as good or better than barley chop, or otherwise?"

[To give an answer to the above question in the terms it appears to demand is impossible. No feeder would try feeding pigs on nothing but shorts till six months old. Did he try once, he would not soon try again. An estimate as to the amount of shorts likely to be consumed under such conditions would be of no value. No single feed should be fed continuously to any animal, and more especially is this true in the case of pigs. Where one kind of grain is fed for a long time, the pig appears to lose the desire for food in some measure, and will not eat nearly so much as under better conditions. So, probably 250 pounds of food might be consumed from weaning time till six months old, while the normal consumption of food for that time would be about 450 pounds. Shorts with ground sifted oats form an excellent ration for young pigs. As the pigs gain in size, barley and oat chop may be substituted or added, and a very excellent ration for finishing pork is one composed of equal parts oats, peas, barley, and shorts or bran. Too high a percentage of shorts in the finishing ration appears to have an injurious effect upon the quality of the meat.

J. H. GRISDALE, Agriculturist.

Experimental Farm, Ottawa.]

Fairs of 1900.

CANADA.

Cobourg	Oct. 2nd to 5th.
New Westminster, B. C.	Oct. 2nd to 5th.
Brampton	Oct. 2nd and 3rd.
Carp	Oct. 2nd and 3rd.
Cookstown	Oct. 2nd and 3rd.
Galt	Oct. 2nd and 3rd.
Stratford	Oct. 2nd and 3rd.
St. Mary's	Oct. 2nd and 3rd.
Tara	Oct. 2nd and 3rd.
Markham	Oct. 3rd to 5th.
Alliston	Oct. 4th and 5th.
Beaumont	Oct. 4th and 5th.
Brussels	Oct. 4th and 5th.
Warkworth	Oct. 4th and 5th.
Chatham	Oct. 9th to 11th.
Rockton	Oct. 9th and 10th.
Stayner	Oct. 9th and 10th.
Fergus	Oct. 11th and 12th.
Sutton	Oct. 11th and 12th.
Caledonia	Oct. 11th and 12th.
Highgate	Oct. 12th and 13th.
Kansas City Shorthorn and Hereford Show ..	Oct. 16 to 26.
Owen Sound	Oct. 16th to 18th.
Simcoe, Norfolk	Oct. 16th to 18th.
Woodbridge	Oct. 17th and 18th.
Readford	Oct. 18th and 19th.
Provincial Winter Fair, Guelph ..	Dec. 11th to 15th.

UNITED STATES.

St. Louis, Mo.	Oct. 1st to 6th.
Chicago International	Dec. 1st to 8th.

MARKETS.

FARM GOSSIP.

P. E. Island.

Harvest is about all in. The crop is a fair average one; not so heavy in the straw as last year, but well filled. Wheat is especially of good quality. Potatoes are the best for years, and are still growing; no frost to kill them yet. The root crop is doing extra well, and will be over the average. There is a good crop of apples and plums, but the great gale of the 12th of September played havoc with these, and will prove a considerable loss to fruit-growers. Pastures are not nearly so good as last year, and the milk supply is falling off considerably at the dairy stations. The cheese make has been large, especially in the earlier part of the season, and the price is considerably ahead of last year. Cheese is selling now as high as 11 cents. August make sold for 10 cents to 11 cents. This year's prices will be the best in the history of our cheese business. Butter is selling for about 20 cents. The dairy business will be a profitable one this year. There is an excellent catch of clover in all lands that have been seeded out with grain. Stock are in good condition, and the price of beef is good. The lamb trade has hardly begun yet. Most of the lambs will go to market in October. Dealers are now offering 33 cents live weight for 90-pound lambs. There is no threshing or shipping of produce yet, and consequently no prices to quote. At the Charlottetown factory five cents is being paid for the best quality of hogs, but there are few ready to market.

Our exhibition is open to the Maritime Provinces this year and will be a big affair. Considerable of stock is coming from Nova Scotia and New Brunswick. P. E. Island exhibitors have carried off their share of prizes at both St. John and Halifax.

September 21st, 1900.

Kent County, Ont.

The weather, which has been excessively hot during this month, turned cold about a week ago; in fact, we almost had frost, but it is gradually getting warmer again. It had the good effect, however, of causing farmers to harvest their corn crop in good time, thus saving it from the frost and adding much to the feeding value of the fodder. Corn harvesters have been widely introduced this year and have evidently come to stay, judging by the satisfaction they are giving. Owing to the scarcity of farm help, a great many are going to have the corn shredded instead of husked, thus saving time and money as well. Bean harvesting is over, and a great many have threshed and sold, realizing from 90c. to \$1.10 per bushel. The market has a downward tendency, and lower prices are expected for some time. The yield is much smaller than expected, about 15 bushels being the average. Scarcely any wheat was sown in this vicinity previous to the 18th inst. The early seeding last year was so badly affected with the fly as to cause farmers to make this move. Wheat is just about the same old price, 63c. per bushel. Pork is somewhat stronger, prices ranging from \$5.50 to \$5.70 per cwt.; demand strong. Orchardists have quite an elephant on their hands in the shape of the apple crop. Buyers are only paying 40c. per barrel, barrels furnished, while the evaporators only pay 10c. per cwt. The latter price does not pay for picking them up, and the evaporators will have to pay more or close up. Our scheme for forwarding fruit to the Northwest through our Association is proving a paying one, and is quite satisfactory to all concerned. Peaches are also a heavy crop and bring from \$1.00 to \$2.00 per bushel, according to quality. Grapes are poor in quality and quantity, and are rather scarce at \$3.00 per cwt. The tail end of the Galveston storm struck us in due time, but beyond blowing down large quantities of apples and peaches, did us no harm.

Kent Co., Ont.

W. A. McG.

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Two weeks ago.	1899.	1898.
Beef cattle.				
1500 lbs. up	\$5.35 to 5.75	\$6.00	\$6.90	\$5.80
1350 to 1500 lbs.	5.10 to 5.85	6.15	6.75	5.70
1200 to 1350 lbs.	4.60 to 5.80	6.00	6.60	5.70
1050 to 1200 lbs.	4.50 to 5.75	5.75	6.25	5.75
900 to 1050 lbs.	4.35 to 5.55	5.65	6.00	5.45
Fed Westerns	4.75 to 5.70	5.85	6.40	5.60
Stellers	5.10 to 5.30	5.60	5.60	5.00
Stockers and feeders ..	2.75 to 4.75	4.90	4.95	4.50
Hogs.				
Mixed	5.10 to 5.70	5.60	4.80	4.07
Heavy	4.95 to 5.62 1/2	5.55	4.75	4.75
Light	5.20 to 5.70	5.65	4.85	4.77
Pigs	3.50 to 5.25	5.25	1.85	4.60
Sheep.				
Natives	2.50 to 4.25	4.00	4.40	4.75
Western	3.25 to 4.25	4.00	4.30	5.00
Yearlings	3.90 to 4.25	4.10	4.50	4.60
Native lambs	3.25 to 5.75	6.00	5.90	6.25
Western lambs	4.00 to 5.25	5.85	5.30	5.10
Feeding lambs	2.60 to 4.00	3.85	3.80	4.10
Feeding lambs	1.00 to 4.70	4.75		

The heavy corn-feeders in Iowa, and some other parts of the country, are confronted for the first time in four years with only a new crop of corn, the surplus from former crops having been quite exhausted. A man who feeds a thousand cattle a year bought 40,000 bushels of corn in 1896 at 9 cents per bushel. His cribs have never been empty since until this fall, and now he will be glad to buy corn at 25 to 28 cents, and is afraid he will have to pay more or curtail feeding operations. The prospect is that cattle, hogs, and corn will continue at high prices for some time to come. The demand for all three and their products was never greater.

Some 1,319 to 1,392 lb. western range cattle sold to feeders here at \$4.70. The weights seem heavy, and the prices indicate that the cattle are already in very decent killing fix. That is just the point. The men who bought those cattle, that are already far better than the average of the range cattle and equal in killing quality to a good share of the native beef cattle, expect to fit them for market in about ninety days. The cattle can be started on green corn and will very soon get so they will take full rations and make proper use of them. In this year of empty corn cribs until the new crop is put in, such feeding will be popular with those who are fixed for it. It enables feeders to turn out ripe, fat cattle at comparatively small cost in finishing.

Prices for hogs keep up considerably higher than a year ago. The demand is very strong, and the supply of available hogs is light for this season of the year. It is claimed that the September and October hogs were marketed in July and August. However, there seems no early prospect for low hog prices.

The supply of thin western feeding sheep now being marketed is very light. It is not for lack of demand nor for lack of supply in the West. The number of sheep that must be disposed of by Western ranchmen is really very large. In former years, corn-feeders have gone out to the ranges and made purchases; but now they are waiting for the stock to be brought to market centers. The owners are waiting to see whether buyers won't give in and go to them, and in the meantime they are holding the sheep and getting some gain in weight, and hoping they may make some gain in prices. It is predicted that the October run of Western sheep will be very large, though many of the Western owners say they will, if necessary, ship their sheep into Nebraska and other corn-growing regions and feed them, rather than accept the prices now being offered.

The number of lambs going on feed in the West is very large, and this fact is interfering somewhat with the demand for feeding lambs in the middle West. The lamb feeders made great money last year, and that is why so many are being fed in Colorado, Nebraska, and elsewhere.