

Farming World

A Paper for Farmers and Stockmen

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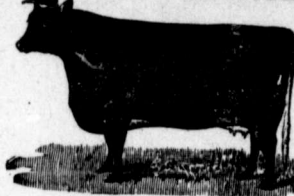
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The Farming World

For Farmers and Stockmen

VOL. XVIII.

OCTOBER 23rd, 1900.

No. 8

Better Prices for Apples

THE FARMING WORLD a few weeks ago strongly advised farmers to save the apple crop, as prices might improve later on. It turns out that this was pretty sound advice. It now seems clear that the Canadian apple crop has been over estimated, and dealers in the country are beginning to realize that farmers' orchards are not so overloaded with fruit as reports of a few weeks back indicated. The big wind storm may have had something to do with it, but it does not account for everything. There is no doubt a good crop, but not so large as to warrant a price of only 40c. or 50c. per barrel for good, sound, winter fruit. In our Market Review last week we quoted 60c. to 75c. as the price being freely paid in the country for apples (picked). It is now said to be difficult to buy choice winter varieties under 70c. to 75c. per barrel on the tree, some holders refusing to sell under 85c., while others are asking \$1 per barrel. In addition to this, some account sales recently received show net returns ranging from \$2 to \$2.75 per barrel, and in one instance \$3 per barrel is reported. These are good prices, and if anything like these figures can be realized by shippers who have secured the apples from the farmer at 40c. to 50c. per barrel, there must be a regular gold mine in the business. The quality is said to be better than last year, and the fruit is maturing well, being sound and firm.

Late Fall Cheese

The end of this month will mark the close of the cheese-making season of 1900. That it has been a very successful season cannot be doubted. Prices have been excellent, the supply of milk large, excepting in a few localities where severe drouths have prevailed during the summer months, and farmers have had the opportunity at least of making a good profit out of their cows.

While a large number of factories will be shut down at the end of the month a great many will continue to operate during most of November so long as prices keep up to their present level. Whether it will be wise to do so is another matter. There are many dairy authorities who claim that taking one season with another it would be better for the trade all round if the cheese-making season were limited to six months. In the early spring and late fall

conditions are not so suitable for making a first-class product as they are later and earlier in the season. However this may be, it is not likely that dairymen will be very willing to respond to an appeal of this kind under prevailing conditions and whatever may be said to the contrary the practice will be followed in which there is the most money.

In making late fall cheese, patrons should be careful in regard to the quality of the milk they supply to the factory. The milk should be taken as much care of as during the summer months in the way of aeration, etc. The greatest difficulty makers have to contend with at this season is bad flavors resulting chiefly from the feeding of turnips or turnip tops. There is hardly any flavor in cheese so objectionable as turnips, and patrons should guard against this by not feeding them when supplying the milk to the factory. With good milk and with a factory properly fitted up for making cheese during the cold weather, makers should be able to turn out a good quality during November. After the cheese season is over many factories change to the making of winter butter. Though the export butter trade this summer has not been as satisfactory as that of cheese, yet there are indications of an improvement in market conditions which may mean higher values later on. It is expected that the reduced exports from Canada and the United States will help matters. In fact the large speculative buying of the past week would seem to indicate better prices ahead. But Australia and New Zealand have to be taken into account. The exports of butter from these colonies show large increases this season, and, should they continue to do so, may help to moderate prices for our winter butter in Great Britain.

However, the experience of the past few years shows that profitable prices are likely to prevail during the coming winter for butter. Market conditions this fall are not such as would warrant us in looking for lower values than the past winter or two have given us. The make of summer creamery butter this season is much lower than a year ago and consequently there is not likely to be as large stocks held for speculative purposes as would be the case were the output large. Farmers would do well to bear these facts in mind and remember that the profits from the winter creamery are extras that they would not have if this milk supply were not forthcoming during the winter months. Taking a broad view of the situation we believe it will pay farmers as well to make butter instead of cheese as soon as the cold stormy weather sets in.

A Remount Station for Ontario

The Ontario Department of Agriculture, through the Hon. Mr. Dryden, has addressed a despatch to the British Colonial Office, drawing the Colonial Secretary's attention to the quality of the horses raised in Ontario, and to the advantages which would result from establishing here a remount station for supplying the British army with horses. It is pointed out that the Imperial service would greatly profit from purchasing horses in this province. Besides, the establishment of a station in our midst would encourage the breeding of a class of horses suitable for this purpose, which would mean better prices for the farmer.

We are pleased to note that some action has been taken by the local Government along the lines shown above. Some months ago Major Dent, who represented the British army in the purchase and selection of remounts for South Africa last summer, stated in these columns that he would recommend to the British War Office the advisability of establishing a permanent army remount depot in Canada. This brought the scheme within the realm of possibility, and opened the way for our Government to take hold of the matter, and impress upon the Home Government the advantages to be derived by the establishment of such a station in this province. This action has been taken, and we believe, if followed up by definite and persistent effort, will result sooner or later in bringing a permanent remount station to Ontario. If one is to be established in Canada, it should be at some point in Ontario, as it would then be nearest the source of supply.

There is no doubt but that Canada is in a position, if the matter is rightly taken hold of, to supply a large number of horses suitable for army purposes. The establishment of such stations in the Dominion would be an incentive to our farmers to breed horses suitable for military purposes and thus greatly increase the supply and improve the quality. Reports from many sources go to show that the horses sent to South Africa from Canada during the past few months have given a very good account of themselves. In an address in Montreal on his arrival from England, Lord Strathcona, in speaking of the conduct of Strathcona's Horse said:

"There is another thing of which I am very proud, and that is the fine stand the Canadian horses took in the hardships of the contest. I have it on excellent authority and from many sources that the horses which were shipped from the Canadian Northwest to South Africa have proved themselves to be the finest class of horses used there by the British army. This will do Canada and Canadian trade an immense amount of good in the future."

If all the facts were known we think the same could be said of all the horses sent from Canada to South Africa the past few months. Like the brave Canadians who went there to fight for the Empire, they have contributed in no small measure to the glory of the Dominion.

Export Cattle Trade

Canadians do not Finish Their Cattle Properly. American and Canadian Methods Contrasted

Mr. A. J. Thompson, a Canadian cattle dealer who has spent the past three years in the Argentine Republic, and has recently returned to this city, made the following statement in an interview with a *Globe* representative last week regarding Canadian cattle:

The farmers of this country are away behind in feeding cattle. They might as well get the Chicago prices of 5½ cents to 6 cents, instead of 4½ for their stock. The Canadian steer is not finished. It is a big rangy animal, badly fattened, which in England dresses about 50 pounds to the hundred-weight, while the smaller compact American bullock dresses 57 per cent., is better fleshed and is worth 3d. to 4d. a stone more in England than the Canadian bullock. The American breeder matures his animal young, and it is small and well-

fleshed. The heavy weight stock for the English market is a thing of the past, and the bullock which they will accept over there now weighs not more than 1,300 or 1,400 pounds. The Canadian stock has fallen off greatly in quality, and the grades are nothing like as good as they were fifteen or twenty years ago. The stock raisers must pay greater attention to breeding if they want to make any headway.

There is something in this statement for our farmers and cattle feeders to think about. Is it true that we are behind in our methods of feeding and finishing cattle for export? A survey of the reports of the cattle market, which have appeared weekly in *THE FARMING WORLD* for the past year or two must convince one that there is good ground for this contention. Time and again has it been reported that too many unfinished cattle are being offered. And not only do many fat cattle find their way to this market in an unfinished condition, but unfinished sheep and hogs are all too numerous at times, showing that there is a tendency on the part of many farmers to market their live stock too soon or before they are properly finished. We have drawn attention to this fact in these columns a number of times and trust that the repeated warnings from various sources will tend to induce better methods. There is positively no use trying to develop an export trade for our cattle unless we can supply that trade with a properly fed and well-finished animal. There are too many competitors in the field to admit of anything but the very best being sent to the British markets. We have the breed, the feed and the skill to do it if they are properly combined and used judiciously and wisely along the lines we have indicated.

But why has not more progress been made along these lines? We believe the drover or the individual who buys the cattle from the farmer has a great deal to do with it. Many of them do not make enough difference in prices, as between a well bred and well-finished animal and one not so good. We know this to be the case in connection with the buying of hogs in many parts of the country. Only a week ago in discussing this question with a western Ontario farmer he stated that it made no real difference in the price he got for his hogs whether they were thick fats, light fats or good bacon hogs. The drover would pay as much for one quality as for the other and the common plan was to bunch them altogether at so much per pound. We believe farmers in many parts of the country could tell the same story, showing that there is very little inducement to produce fine-finished quality in either cattle, sheep or swine. The drover goes through the country giving about the same prices for all kinds and running his chances of making his profit out of the car load when the selections are made at the point of destination.

This is a most foolish proceeding, both from the drover's and farmer's standpoint. A farmer could not make a better investment than in the time and feed required to properly finish his cattle for market. There is no good reason, as Mr. Thompson points out, why cattle on Toronto market should not command as high a figure as in Chicago, providing the quality were the same. There is always a wide margin between the prices for well finished cattle and for light half-finished ones. Take the cattle market report as it appeared in last week's issue. The market was not a brisk one and yet there was a difference of sixty cents (it often runs up to \$1 and over) per cwt. as between the prices for the best and those of light quality, not necessarily very inferior! On an animal weighing 1500 this would mean \$9 and if the extra weight of the finished, as compared with that of the unfinished, animal were taken into account, it would mean a great deal more. Then the drover would fare better if he were a little more discriminating in the prices offered for different qualities of stock. Like the country store-keeper who pays the same price for all kinds of butter, the drover is blocking the wheels of progress in the improvement of our fat cattle when he does not discriminate sufficiently in the prices he pays for well-finished and immature cattle or live stock of any kind to induce the farmer to produce the better quality. His own business would be on a better footing if he adopted another policy.

But then it is claimed that this question of feeding and

finishing cattle is all a question of education. Many farmers either lack knowledge on this point or are too eager to dispose of their stock for whatever they may bring so long as returns are quick. The feeder needs to know how to feed his cattle to the best advantage, and also when they are properly finished. We believe there is more ignorance in regard to the latter point than the former. While the majority of our farmers know how to feed cattle for beef-making purposes, the number who know just the exact point when to stop feeding and to sell is not nearly so large. Just here the good offices of the drover might come in, and he could render material service to the country by giving information on this point.

Then the question of breeding must be given attention. M. Thompson, whose experience in South America has shown him the value of good breeding, states that our stock raisers must pay greater attention to breeding if they want to make any headway. We would like to point out that since Mr. Thompson left Canada, three years ago,

time are similar to those given in last week's issue as coming from Capt. Pearce. That section of South America is certainly making rapid strides in developing its live stock interests. The percentage of export cattle to be found in the stock raised in the country is 60, which is large considering the length of time the business has been carried on. But we will have more to say of this later on.

Agriculture in the Territories

What the Northwest Experimental Farm is Doing for Western Farmers

By Angus MacKay, Superintendent

The Experimental Farm for the Northwest Territories is situated at Indian Head, in Assiniboia, on the main line of the Canadian Pacific Railway, 42 miles from Regina,



General view of Experimental Farm at Indian Head, N.W.T., showing experimental plots and fields of grain.

there has been a regular revolution in the pure-bred stock interests of the country. Hundreds of pure-bred beef animals (principally Shorthorns) have been imported into Canada since 1897, and the end is not yet. Canada today stands second only to South America in the number and quality of her importations of good cattle. This new blood has not had time yet to exert much influence upon the beef cattle of the country. But improvement along these lines is bound to come, and a very few years will witness a very great improvement in the quality of the beef cattle of this country so far as breeding is concerned. Our farmers are waking up to the necessity of good stock, and the inquiry for pure-bred animals of the beef breeds at the present time has never been equalled in the history of the live stock interests in Canada. Good breeding, good feeding, and skill in combining the two will, we think, work as great a revolution in the quality of our fat cattle in the next three years as has been worked in connection with our pure-bred stock trade since 1897.

Mr. Thompson's views in regard to trade in the Argen-

the capital of the Territories, 312 miles west of Winnipeg, and 1,620 miles west of Ottawa, the capital of the Dominion.

Since its inception in 1887 the farm has served the Territory of Assiniboia, in which it is located 98 miles from the eastern boundary and 108 miles from the southern borders, and the Territories of Alberta and Saskatchewan, an area of 302,727 square miles or 250 millions of acres of land. Letters of inquiry and applications for samples of seeds, trees and fruits are received annually from every settled portion of this vast region, the demand for the latter being very much in excess of the supply available for this purpose.

The farm comprises 683 acres of land and is bounded on the south by the Canadian Pacific Railway line. Two streams or coolies pass through the farm, on which reservoirs have been built, ensuring sufficient water for all purposes.

EXPERIMENTS.

While several uniform tests are conducted on all the

experimental farms of the Dominion, there are a number which, owing to the climatic conditions, are confined to the farms at Brandon, Manitoba, and Indian Head. On account of the high altitude and great distance inland, want of moisture is one of the chief characteristics of the whole territory and to find means of overcoming this drawback has been one of the principal experiments carried on since the commencement of the farm.

The rainfall from April 1 to July 31 of the present year has been only 3.45 inches (Meteorological Station at Experimental Farm, Indian Head) which clearly indicates the great necessity of some special mode of cultivation to ensure even bread to the inhabitants.

Cultivating the soil so as to conserve the moisture has been tested in many ways but all methods are more or less unreliable when the rainfall during the growing season falls very much below the average. Too much moisture is, however, more to be dreaded than too little, for while the latter may to a certain extent be overcome by cultivation, nothing has, so far, been found to counteract the former and in its train come heavy and late growth of the wheat crop and the deadly frost leaving nothing but blighted hopes as a result of the season's work.

SUMMER FALLOW.

Summer fallowing the land intended for crop has been found to be the best mode of stirring up moisture, and though many plans of working the fallow have been tried the following is given as one of the most successful:

Plow deep to ensure a good body of earth and early or before the June rains are over to permit the seed bed being made compact. Follow this by shallow surface cultivation to prevent evaporation of the moisture.

For land cropped for several years one objection to the foregoing method may be taken in that it pulverizes the soil to such an extent as to render the crops liable to injury by winds early in the season drifting the earth and exposing the roots.

Experiments to overcome this drawback with rotation of crops and seeding to grass are now being carried on with every prospect of a successful solution of the difficulty being discovered.

OTHER METHODS OF CULTIVATION.

The ordinary methods of fall and spring plowing so universally carried on in the other provinces of the Dominion are not a success in the Territories no matter how well the work may have been done.

No better object lesson could be furnished than exists this year in every district of Assiniboia and parts of Saskatchewan showing the disastrous results of too much fall and spring plowing. In the best sections of the country, land so worked by good farmers is producing from nothing to five bushels per acre while similar soil summer-fallowed is yielding from 15 to 35 bushels per acre, according to the time at which the fallow had been plowed and cultivated. This year with one or two inches more rain in June the largest and best paying crop ever reaped in Assiniboia would have been the result of good fallow work and as it is, those farmers who have worked their land in accordance with the climatic conditions have the prospects of good returns in one of the driest seasons ever known in Assiniboia.

Obviously in those sections of the country where wheat has been and is the cereal chiefly grown, all the lands cropped cannot very well be fallowed, therefore experiments have been conducted on the Experimental Farm to ascertain what other method of working the soil will produce satisfactory crops in addition to the land summer fallowed.

In this test fall and spring cultivation and seeding without cultivation have been tried in various ways with the following result:

Fall plowing has given only one fair crop in ten years.

With spring plowing the best results have been obtained by burning the stubble in the spring, sowing the seed, plowing 3 inches deep and harrowing thoroughly.

In no year has the wheat crop grown on land so worked

equalled that on fallow, although last year it came within a few bushels of so doing.

With oats and barley the crop is usually from 50 to 65 per cent. less than that grown on fallow.

For sowing without cultivation, the stubble of the first crop after a good fallow should be left as great a length as possible to retain the maximum amount of snow. Burn this stubble in the spring, sow seed 2½ inches deep and harrow well. With the exception of the present year this method has given satisfactory results; satisfactory because in burning the stubble any weed-seeds on the surface are destroyed. No expense was incurred for cultivation. The grain ripens earlier than that sown on fallow which permits harvesting operations to be carried on with less hired help and machinery than if all grain came in at the same time. The sample is usually No. 1, and the yield per acre quite satisfactory. This year, however, the crop grown on the above plan is no better than that on fall or spring plowing.

VARIETIES OF GRAIN.

Another long-tried experiment has been the endeavor to find the best varieties of wheat and other cereals for general production in the Territories.

The milling qualities of Red Fife undoubtedly place it first on the lists of wheats but the length of time it takes to mature makes it a risky variety for general cultivation in some districts where the soil is extremely rich or in a year when the rainfall is excessive.

With only the Territory of Assiniboia to serve, Red Fife wheat would be an ideal variety, for in this territory through proper cultivation, early seeding and with good seeds, a settler can rest assured of good returns.

For Saskatchewan and parts of Alberta, however, with their soils overstacked with vegetable matter and the greater amount of rain in fall during the growing season, the best has not yet been found.

From 40 to 50 varieties of wheat obtained from all parts of the wheat-growing world (produced at the Central Experimental Farm by cross-fertilization) are grown on his farm each year and samples of the more promising sorts sent to applicants in all settled portions of the Territories.

Oats and barley are being tested and distributed in the same manner. The American Banner variety of oats gives the best yield in Assiniboia but for Alberta and Saskatchewan an earlier sort is required to suit the rich, black loam of these two Territories.

Unfortunately for the farmers themselves the cultivation of oats even in the best districts has never been satisfactory, from the fact that the crop is almost invariably sown on land supposedly unfit for wheat, the land used is generally inferior, frequently useless and the oats are sown late on poorly worked land; resulting in yields of 20 to 40 bushels per acre, whereas, on the Experimental Farm through using good seed and sowing at the proper time on fallow-land, yields of from 80 to 100 bushels are obtained in an ordinary season. Individual farmers throughout the country who take these precautions secure equally satisfactory returns.

Tests of grasses have resulted in the discovery of two varieties suitable for general cultivation in the Territories. Many sorts have been tried but Awnless Brome-grass (*Bromus Inermis*) and western Rye-grass (*Agropyrum Tenuum*) alone withstand the most severe winters and in ordinary seasons produce a satisfactory crop of hay or pasture. The former, a native of Russia, is much the better variety for pasture and for dairy purposes is simply invaluable.

In addition to their fodder values these grasses are likely to be of great value in affording old soil the root material necessary for the prevention of drifting by winds.

TREE PLANTING.

One of the great wants of large portions of the Territories is trees and from the first, tree cultivation has been largely carried on at the Experimental Farm. Forest planting, windbreaks, hedges and the growing of individual

specimens for ornamental purposes have been tested in many ways. Forest plantations of different varieties of trees with the rows at various distances apart, also wind breaks from a single row to a belt 100 feet wide, containing many rows, have been set out and for hedges a large number of varieties of trees and shrubs are utilized so that on the farm where thirteen years ago not a tree or shrub of any description could be found, there are at present ten miles of roads and avenues with trees or hedges on each side, besides a great many half-acre, acre and larger plots surrounded by hedges or devoted to forest plantations.

Commencing in the early years of the farm with only half-a-dozen varieties, native to the Territories, repeated tests with innumerable sorts from almost every country in the world have brought the list of trees and shrubs sufficiently hardy to stand the climate up to over 200 species and varieties.

For some years seedlings as well as older trees and shrubs as well as tons of tree and shrub seeds have been sent to the settlers throughout the Territories and though at present little progress in tree-culture is apparent, a good start has been made from which headway may be expected as the country becomes settled and the farmers find more time to devote to this branch of work so indispensable in connection with home-making on the treeless plains.

While grain, grasses and trees have received special attention on the farm, fodder plants, roots and vegetables, as well as fruits and flowers, have not been neglected. On the contrary, a number of experiments are conducted annually to determine the hardiest and best varieties for general cultivation, samples of which are each spring sent to applicants.

Cattle, swine and poultry are raised on the farm, and each winter feeding tests with steers are carried on, in which the products of the farm are used exclusively.

A "rotation of crops," so universally practised in the older provinces, is at present under test, but the results cannot be given in this article, as it has been found inadvisable to rely upon the results of a few years' work.

Range Conditions

The question of winter feed on the ranges is a perplexing one. The dry, hot summer, augmented by numerous forest fires, not only played havoc on the summer ranges, but damaged thousands of acres of winter range and reduced the water supply for irrigation and the growing of alfalfa. The grasses were browned and crisp before the July and September rains came. To the minds of some these rains came too late to rejuvenate the grasses, and that such as did get the benefit would be more than valueless for the winter feed; others are of opinion that, while the crop will not be luxuriant and as nutritious as in former years, yet it will be good and practically the salvation of the ranges this winter. Be this as it may, the rangeman, when confronted with the prospect of a shortness of winter feed, began cutting down and shipping, and thus helped himself out of the dilemma, in a measure, as the receipts of the markets for the past two months show. Fortunately the losses by drouth were light. It can be said that, providing the winter is not severe, there is reasonably good prospect of present holdings of stock pulling through on the present range and hay supply. The latter commodity is going to rule relatively some higher than last year, as the crop is not up to the average.

Feeders of cattle in the corn belt have within the past six weeks given evidence that they will not do much long-time feeding, rather a ninety to a hundred and twenty day feed. Kansas, Nebraska and Missouri will be more especially noted for the short period, while Iowa, Illinois and part of Missouri are taking more feeders for the long time than they have in several years. In the first two States named, the number of cattle in the feed lots will be about 20 per cent. less than last winter.

The sheep growers of the West have been holding out

well for last year's prices on stockers, but within the last month many who found themselves short on winter feed have made concessions, with the result that sheep and lamb feeding this winter will be carried on in all sections as heavy as last. The stock sheep have been bought at a figure that makes the feeder comparatively safe should he strike a market in the spring that is 50 or 75 cents per cwt. lower than last on top stuff. None are looking for last spring's prices.—*Bulletin No. 24, National Live Stock Association.*

Packing Apples for Export

By F. C. Sears, School of Horticulture,
Wolfville, Nova Scotia

So much has been said and written about the importance of packing apples carefully and honestly that it might seem almost like a useless repetition to refer to the subject again. Yet the conditions this year are somewhat unusual, and it is therefore worth while to study them with unusual care. The facts are about as follows: The world's crop of apples is an exceptionally large one, perhaps the largest in the history of the industry, and this in spite of the large quantities that were blown from the trees during the recent high winds. On the other hand, the crop of Nova Scotia is probably not so large as last year and certainly not of as high quality. The black spot has been unusually prevalent the past season and apples are spotted and cracked as they have not been for some years, and everyone who has ever had the least experience in packing such fruit knows that it is well-nigh impossible, even with the best of intentions, to exclude all unsound fruit. As a result of all this our Nova Scotian growers will have more rivals against whom they must compete in the English markets, yet their goods which they offer will not be up to the usual standard in quality.

In view of this fact it behooves every orchardist to sort and pack his apples with unusual care and to send forward only the best. It is quite probable that he will receive as much money for his crop if he ships only those that are sound and unblemished, packing them as No. 1's and 2's (it is a mistake to send unsound fruit or "drops" as No. 2's or any other number), and disposes of the less desirable grades in local markets and at canning establishments. And it is undoubtedly true that by so doing the reputation of Nova Scotia fruit will be kept at its present high standard, and the future prospects of the trade thereby improved. Indeed, some growers, whose opinion is entitled to great respect, have gone so far as to say that it would in the end be better for the apple growers if the present crop could be destroyed altogether. This may be taking a somewhat pessimistic view of the situation, yet it undoubtedly rests with the growers themselves to determine how much ground there is for this opinion.

Another feature of the question is worthy of careful thought. The large crop and comparatively low price of apples will mean that they will find their way into parts of England and other European countries which have not heretofore received any Canadian fruit. If these trial shipments shall open in attractive condition there will be a demand for more, and this demand will continue another season, even though prices may be somewhat higher. But if these first shipments of our fruit shall prove poor, dishonestly packed and generally unsatisfactory, the result will be that we shall have no further demand from that quarter, either in this year or future years, at least till this impression has been removed.

What is to be the result of this year's sales? Fair prices for our fruit, an enlarging of our markets, and bright prospects for the future? Or a demoralized market this year and a prejudice against our fruit which it will take years to overcome? It is the fruit growers themselves who must answer this question?

Egg Preservatives

By A. G. Gilbert, Poultry Manager, Central Experimental Farm

A number of experiments were constituted and carried on by Prof. Shutt, Chemist to the Experimental Farms, with a view of finding out the simplest, cheapest and best egg preservative. The liquids used were:

1. A saturated solution of lime water.
2. A ten per cent. solution of water glass. (sodium silicate).

The eggs were kept in the different solutions from October, 1898, to March, 1899. In some cases eggs were kept in solution for 14 months in the liquids named. The result may be summed up in Mr. Shutt's own words when he says: "We found that the addition of a large quantity of salt to the lime acted injuriously as regards the quality or flavor of the egg. When we examined the whites of the eggs so preserved after a few months, we found they contained a large amount of salt, showing there had been an absorption of salt from the preservative fluid by the egg. As regards the appearance of the eggs, those kept in the lime water are equally good, indeed I think better than those in the lime water to which salt had been added. The eggs were kept for fourteen months in this solution (lime water), and I think it would have been impossible for an expert to have distinguished them from newly-laid eggs. Also, when they were broken the appearance was excellent, that is to say, that the yoke retained its rotundity; the difference was apparent when they were cooked. We poached them in order to test them—and in this way all these eggs were tested—in every case there was a slight flavor developed as compared with fresh eggs. So that though they might have an excellent appearance both inside and outside, our experiments showed that we could not keep them without this slight and peculiar flavor developing. They could always be distinguished by the taste from new-laid eggs."

Potting Soil for Plants

A potting soil suitable for most plants is made of four materials—old sods, well-decayed cow manure, rotted leaves or leaf mold and sand.

The sod should be taken from an old pasture, either in the spring or autumn. Strip off the surface from two or three inches thick and make a heap proportionate to your needs, at least six months before you wish to use it. Lay the grass side down. Make the heap long and narrow, and, if convenient, work it over once or twice during the summer or winter.

This soil should be free from stones, but should not be sifted, except when used in small pots, say in those which are less than four inches in diameter. If there are stones, pick them out when the soil is ready for use, and is being broken up with the hands and mixed with the other materials.

Manure is prepared in much the same manner. Choose it as free from litter as possible, unless the cattle are bedded with leaves, which are good. Make a heap in the open air near the heap of sods and of the same shape and size, but more attention must be given to working this one over and over.

It must be turned inside out and outside in at least once a month during the time it is rotting. Unless this is done it becomes lumpy and difficult to use except in large pots or tubs. If treated as prescribed, it need not be sifted, but looks not unlike soil at the end of six months, or even in less time if the weather is warm and the heap is watered occasionally.

Sometimes the soda and manure are put in the same heap in alternate layers of equal bulk in May or June, and, if turned over two or three times during the summer, they make excellent compost by the last of August or in September, or they may be put together in September and

October, and are then ready in the following spring.

Weeds must be carefully removed during the summer from these heaps.

A longer time is required to prepare leaf mold or rotted leaves. The leaves must be raked up when they fall in October, and may be used, if needed, for protecting plants or buildings during the winter. In April or May a hole should be dug two feet deep, wide and long enough to hold a good quantity, at least two or more cartloads:

Into this pack the leaves as tightly as possible. Trample them in and, if dry, wet them. When the trench is filled cover with four or five inches of soil. This may be used as a bed to grow Indian shot, dahlia and castor oil bean.

The next autumn the leaves will be sufficiently rotted to use in the coarser soils for the larger pots, but it is better to let them remain a second season. Then the very best leaf mold is obtained, much better than can be found under forest trees. It is always best to sift rotted leaves; this breaks them up and rids them of branches and twigs which have been raked up with them.

Any sand is suitable which a mason tells you would make good mortar.

The best sand is rather coarse, and is sharp; it scratches when rubbed on the palm of the hand. Sand from the shore of a pond is no better than that which is taken from a pit. Sand from the seashore, if taken above high-water mark, is equally good; the little salt, if any, which it contains, helps rather than injures the plant. Keep it anywhere and anyhow, provided it be kept clean.

These four materials, mixed in equal parts, make a good potting soil for almost all plants. So good a mixture is it that one can be pretty sure that if his plants do not thrive the fault is due to some cause other than the soil.—*New England Farmer*.

An Experience in Growing Cow Peas

Aside from small plots, purely experimental, cow-peas do not appear to have been grown to any considerable extent in Kansas, except by Hon. Edwin Taylor of Wyandotte County, whose experience has been published by Secretary Auburn of the State Board of Agriculture.

A portion of Mr. Taylor's observations is given here with:

"Several of my neighbors are natives of the mountain portion of Tennessee. For years I have listened to their stories of the value of cow-peas and, at last, some five years ago, I was 'agrivated,' by their iteration, into trying the cow-pea myself. I planted five acres of upland with them, in drills three feet apart; cultivated them well, and more than once, when they covered the ground with vines that were loaded with long pods, I felicitated myself with the way I would turn the tables, the coming spring, on the obdurate seedsman who had exacted some three dollars per bushel for the seed I had planted. I had the peas all right, estimated at from fifteen to twenty bushels per acre, and now came the question of gathering them. Upon inquiry I found there was no machinery suitable for threshing them, or none available for me with my small crop, and I also found that the Tennessee plan of gathering them was by the primitive method of hand-picking. I am told that in the South this is done at a cost of forty to fifty cents per bushel, but I couldn't get it done at all, for the reason that all the available pickers in the neighborhood were picking potatoes, on a scale of remuneration that made the pea harvest contemptible, even had the entire crop gone for harvesting. That was the end of my pea-growing for the sake of the seed.

"All the agricultural writers were singing the praises of the cow-pea, and last summer (1899) I surrendered again and gave the peas a second trial. I had 125 acres of potatoes that I expected to dig, in July. If that field had laid undisturbed for a few weeks after digging, it would have been covered with weeds and grasses. The prospect of finding,

via the pea-vine route, a threefold attraction—immunity from weeds, an increase of fertility, and good cow feed for the cutting—grew upon me until I procured seed for the entire tract.

"I planted the first section, about ten acres, the 5th of July, with a two-horse corn-planter, for want of a better implement, straddling the rows in such wise as to make the pea rows just twice as thick as corn rows would be, or, to be exact, twenty-two inches apart. The peas came up quickly, were well harrowed when about four inches high, had no other cultivation, grew rapidly, but kept company with a good many weeds. We pushed the potato digging and neglected the pea-planting, so that when we were done digging two-thirds of the field was yet to sow, the ground hard and dry. About half was broadcasted; the other half planted with the corn-planter. It was August 10 before we finished. On the broadcast sowing fully one and one-third bushels of seed to the acre was used; on the portion put in with the planter, about half a bushel per acre, and on that portion also, was the best yield. The seed in the first instance cost (\$1.50 per bushel) \$2.25 per acre; in the second 75 cents. About five acres of the portion put in with the planter did not have the rows doubled, thus giving an opportunity for cultivation. It was gone over twice with a wheel cultivator, and the resulting crop, so much stronger and ranker than any of the rest, convinced me that, on rich ground, the peas should be sown in rows wide enough apart to admit of thorough cultivation; 'rows about thirty inches' is the memorandum in my note-book. The saving in seed over broadcast sowing will much more than pay for the cultivation, while the yield, judging from one year's operations, will be considerably increased.

"The peas were on both sides of the farm road and I frequently drove down through them, as the summer wore on, to see them grow. One of the Tennessee neighbors referred to was with me one day, and remarked, 'you will be surprised to see how loose the soil will be here next summer.'

"The first week in September I cut a few loads of peas and ran them through the cutter to 'seal' the ensilage which we had just finished putting up. It served the purpose the best of anything I ever used. One bin of the silo was opened the last of October, in which there was no loss. One bin, opened February 23, shows some mould on top, but less than I was prepared for, from previous experience. The cows were now (September 6) getting a full feed of corn ensilage, but they took hold of a trial load of green pea vines so greedily that from this time on until frost—that 'untimely frost,' the 1st of October—they had all they would eat. Their relish for it is evinced by the fact that they preferred it to the ensilage. In a few days the output of milk went up from sixty gallons per day to seventy gallons. We fed the peas green, dried and half-dried. The cows seemed indifferent to the preparation as long as the supply was ample. Not only was there the increase of milk noticed, but the access of thrift in the animals themselves was most apparent.

"After the frost the leaves fell and the stalks withered up. No longer worth bothering with to feed cows, they were turned under to feed potatoes.

"I had two varieties the Whippoorwill and the Clay. The first named is the earlier variety; it makes less vines and more peas than the latter. There were more or less peas on most of the vines we fed. Nothing was weighed, but I guess the yield to have been around three tons of dry vines and peas per acre. A few stalks of the Whippoorwill, planted July 5, not cut, had matured their pods the latter part of September.

"My conclusions are:

"First, the Whippoorwill pea, planted in rows thirty inches apart and well cultivated, will make fine feed in sixty days and ripen a full crop of seed in eighty days, and the Clay will follow on some fifteen days later.

"Second, that so long as they can be hauled from the field they are about the finest cow feed known and I see no reason why, when dried thoroughly, they might not be

treated as other hay and retain their value.

"Third, if, when I have farmed that field another year, I find that my Tennessee friends are vindicated as to the increased friability and productiveness of the soil from this legume as fully as they have been respecting its value for feeding cows, then I shall want to add my mite to a subscription for a monument to the man who invented cow-peas."

CORRESPONDENCE

Would Help the Back Counties

EDITOR THE FARMING WORLD:

I think the plan for establishing annual auction sales of live stock is a good one, and will result in great good to the farmers in general, and those in a small way in particular. I know that men from around here, when they want to get a new bull or any other thoroughbred stock, go out to the front counties and spend days hunting for what they want, and then very often have to come home with some inferior animal, not knowing where to go to get better. Now, if there was an annual auction sale, where these men could go and feel sure that they would be dealt with in a fair way, there would be more thoroughbred stock brought into Muskoka than there is now. ALFRED KAY,

Pres. Central Muskoka Farna. Institute.

Por. Sydney, Ont.

Education in Poultry Keeping

How Poultry Classes Have Succeeded in Rhode Island

EDITOR THE FARMING WORLD:

The exportation of fattened poultry to the British markets, which has received considerable attention from the Dominion Government during the past year or two, and the recent appointment of Mr. J. C. Hare as instructor at the poultry fattening stations, naturally suggests to the observant and more inquiring poultry-keeper something more than the one object for which the appointment was made. There is no doubt that chickens of suitable size and condition, purchased at Canadian market prices, can be fattened and shipped by cold storage to England at a profit, while the very limited number required for the experiment stations should be easily obtainable. But according to a recent statement in the *Weekly Sun* it was found difficult to obtain suitable stock about London for the work, although that city is a centre for many well-known poultrymen.

An extensive acquaintance among farmers has convinced me that, while a goodly number of chickens are reared, (amply sufficient for home consumption, as the extremely low prices prevailing testify), yet if a large and certain crop of chickens, such as would be demanded for an export trade worthy of the name, is to be looked for, something better than the usual luck attending farmers' flocks must be the order in future.

The majority of farmers do not seem to be at all certain as to the success of their efforts to raise a fair number of good early pullets to renew their laying stock, and a proportionate number of cockerels to sell on the market.

Thus the question naturally suggested itself as to the best method of meeting the difficulty which will soon become apparent if the demand for fattening stock increases to any extent.

If those who try to raise a fair number each year (and generally fail unless "luck" favors their efforts) could easily obtain the requisite practical knowledge that would enable them to generally succeed, would not many young men and women take the steps necessary to acquire it? An experiment along these lines is being conducted at the Rhode Island Agricultural College. A short account of the progress made might be of interest to those of your readers not familiar with papers wherein such poultry news is discussed. I take the liberty of quoting from *Farm*

Poultry as follows: "The first class was a small one, consisting of only ten or twelve members. The offer of instructions was an experiment, because it was not certain whether there was any real demand for it, and in matters of this kind many people don't know what they want until they consider the question of paying for it. A great many people professed to be anxious for an opportunity such as this organization of a poultry class made for them, but as to the number that would leave their regular employment for a month and invest even the small amount required in instruction there was the greatest uncertainty. The first class was a success and showed clearly from what class the students would come. Now and then there came one who hardly knew the rudiments of the subject, but the greater number were young men and women mature in years who had a fair working knowledge of poultry-keeping—people who may be said to have begun poultry-keeping in the middle. The course for this class combined elementary and advanced work in a way which was very satisfactory. It takes the student back to first principles and by teaching principles helps him to think for himself, to better adapt the experience of others to his peculiar circumstances. He is also taught the relationships between poultry-keeping and various sciences and how a knowledge of these sciences may be of practical value to the most practical poultryman.

"The work laid out required close and continued application every week-day of the four weeks they were together. The regular instructors were the college professors and the manager of the experiment station poultry plant. As special instructors there came to talk to these young men and women poultrymen who had made their mark in one or more branches of the industry. The class in a body visited poultry plants and poultry shows. They first met two evenings each week to 'discuss topics interesting to them.'

"The plan was so well considered that no radical changes were necessary for the next year's course, and in this second year the number of students was much increased. In the third year there was a still further increase, and it was found necessary to limit the numbers enrolled. The third term of instruction in poultry culture has just closed (March 15, 1900). It may be regarded as demonstrated that there is a demand for just such instruction as is there provided."

The success that has attended dairy classes throughout the Dominion, and especially our own home dairy at Guelph, would encourage us to believe that similar methods might be profitably pursued in this particular branch of poultry culture. By this means a large number would in a short time be enabled to reap the profits that a few are now doing and thereby give an impetus to a rising industry that cannot but advance slowly unless something be done to put it on a surer foundation than it now occupies.

Would it not be an opportune time for those in authority to take into consideration these facts? The magnitude of the business is a sufficient plea for the smallest outlay required and, as the editor of *Farm Poultry* puts it, let our Canadian poultry keepers impress it on their legislators "that fowls are of as much importance in our country as cows."

Grove Poultry Yards, Cobourg.

R. C. ALLAN.

Humus, the Basis of Fertility

Editor THE FARMING WORLD:

With the greatly increasing sales of commercial manures in Canada, chiefly of the phosphatic class, it becomes very important to know and understand the underlying principle of their application so as to insure the maximum return for the money invested. Of the three million dollars spent for commercial manure in Canada, much may be considered as unwisely spent, or the results prove a failure for the want of practice of applying humus to the soil. A fundamental principle in the highest plant life as also in the highest animal life for the maintenance of its existence and fullest development, is its almost absolute dependence upon some lower form of life, or organic matter that has at

one time existed, and then passes to be assimilated by some succeeding form of life. Man by ignorance or carelessness may waste much in a relative sense, but nature true to itself never wastes anything. Nature allows nothing to rest, it abhors a vacuum, and seeks to have all that is represented in life reach its highest development.

The soil itself is inert as a material substance, but has untold possibilities in its capacity to maintain life and produce in the highest material forms whether as plants or animals. An acre of land can record 75 to 90 bushels of wheat; or as pasture or hay land so affect the quality of the plants growing there as to support double the amount of stock and the stock increase in double the weight. These records cannot be readily credited unless the principle and function of humus is recognized in the soil as of great physical and chemical importance.

The nature of the humus to be considered is very important. Buckwheat, rape and rye have their place as digesters of soil food, to a larger degree, possibly, than any other crops, but they add nothing to the actual ingredients of the soil. When the soil suffers from indigestion, as it were, these crops may be excellent as starters, but when it suffers from starvation, the clovers and peas and vetches are more proper to use.

The legumes may not have the dual capacity of being both soil digesters and soil feeders as other crops, and it would seem too much to expect, since nature has a place for everything, and everything to its place. If the clovers act as feeders only to the soil, their capacity in this respect must be largely measured by the supply of the required mineral matter upon which their existence so much depends. This mineral matter, expressed as potash and phosphate (phosphoric acid and lime), exists to some extent in all soils. Soils that are clay or clay loam, or having a tendency to produce plenty of straw, generally indicates a plentiful supply of potash, but on the other hand, as a rule, indicates an absence of sufficient phosphate to balance the excess of potash. Till this balance is restored, or nearly so, clovers cannot be expected to either grow or remain in the soil. Providing the potash supply is at hand, either naturally in the soil or by judicious care of stock manure, the importance of phosphoric acid and lime may be given first place in discussing soil fertility. The investigations of the most noted European and American chemists and soil physicists such as Wagner, Somerville, Lawes and Gilbert, Héiden, Hellnegel, Atwater and Wood, produce the following practical conclusion as given in a recent publication on fertilizers: "The ability of legumes to gather nitrogen from the air helps to explain the usefulness of clover, alfalfa, peas, beans, vetches, and cow peas as renovating crops, and enforces the importance of these crops to restore fertility to exhausted soils. The judicious use of mineral fertilizers (containing phosphoric acid and lime) will enable the farmer to grow crops of legumes which, after being fed to his stock, will, with proper care to collect and preserve all manure, both liquid and solid, enable him to return a complete fertilizer in the shape of barnyard manure to his land. A further advantage of growing these crops is that the nitrogenous material, protein, which they contain in such great abundance, is especially valuable for fodder.

"From the foregoing it seems that, in the present condition of our knowledge, the conclusion may be drawn that the atmosphere stands ready to furnish the farmer, gratis, with all the organic constituents which his crops require, provided always that he on his part will exercise a sufficient amount of skill and intelligence in appropriating and retaining on his farm the fertilizing materials, and especially the nitrogen. If he does this all that is necessary for him to provide in order to replace the losses which his farm sustains from the sale of stock or produce, are the inorganic or mineral constituents of these, and especially the phosphoric acid and potash. There is much in all this to remind one of Sprengel and Liebig's teaching of fifty years ago, according to which a plant cannot thrive if its soil does not contain all the substances which are to be found in its ash."

Barrie, Ont.

W. J. THOMPSON, B.S.A.

The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders' \$1; Sheep Breeders' \$1; Swine Breeders' \$1.

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The date will be published in the most condensed form.

A. P. WESTERVELT, Secretary,
Parliament Buildings, Toronto, Ont.

A Few More Animals Wanted,

An association car will be despatched to Manitoba and the Northwest Territories as soon as it receives its complement of stock, there being room for a few more animals. Up to date there have been received applications for space for one horse, four head of cattle, ten sheep and five pigs. Those wishing to send live stock to points in the West should forward their applications at once.

Prize Lists of the Provincial Winter Fair are now Ready.

The prize lists of the Provincial Winter Fair and Ontario Poultry Association's show, to be held at Guelph, December 11th, 12th, 13th and 14th, 1900, are now ready for distribution, and are being mailed to intending exhibitors. Any one desiring a copy can obtain it by writing to A. P. Westervelt, Parliament Buildings, Toronto.

SUMMARY OF THE PRIZE LISTS.

The amounts given in the various classes in each department of the Fair are as follows:

Beef Cattle.—Shorthorns, \$596; Herefords and Polled Angus, \$250; Galloways and Devons, \$250; Grades and Crosses, \$290; best dressed carcass, \$50. In each of the pure-bred classes \$100 are offered for dressed carcasses.

Sheep.—Cotswolds, Lincolns, Leicesters, Oxfords, Shropshires, Southdowns, \$165 each; Dorset Horneds, Merinos, Hampshire and Suffolks, \$110 each. Special prizes for Shropshires, Leicesters and Oxfords, \$100, \$25 and \$50 respectively. Grades, \$162. In each of the above classes are included prizes

amounting to \$44 for dressed carcasses.

Swine.—Berkshires, Yorkshires, Chester Whites, Poland Chinas, Essex, Tamworths, Duroc Jerseys, \$129 each; Grades, \$88. Export bacon hogs, same breeds as above, \$270. Dressed carcasses, \$410.

Dairy.—Shorthorns, \$319; Ayrshires, \$140; Holsteins, Jerseys, Guernseys, Grades, \$90 each. Specials: Holsteins, \$25; Guernseys, \$50.

Other specials and sweepstakes in the various departments above amount in value to over \$800.

Dressed Poultry.—Fowls, Turkeys, Geese and Ducks, \$300.

Competition for dressing poultry for the British market, prizes, \$10.

Poultry and Pet Stock.—Prize list of over \$1,500. Same classification as last year.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

Steady, reliable man wanted on a farm where dairying is the principal occupation. 30 to 35 cows kept, and

cream shipped to the city. Comfortable house, firewood, milk, and garden plot provided. Wages, \$200 to \$250 per annum. Farm is 2½ miles from Cornwall. No. 604. a.

Man and wife wanted to run a farm two miles out of Austin, Minn. Farm consists of 160 acres, on which 32 cows are kept, the milk from which is sold in the city. Man must be competent to take charge of this dairy farm, either on a salary, or he can rent it for cash or on shares. Good dwelling house, new barn, water in barn, ice house, machine shed, hen house, etc., on farm. Eighty acres of farm in pasture. No. 603. b

Situations Wanted.

Man who was raised on a farm, and followed farming all his life, wants a place. No. 450. a.

N.B.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to Secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to us he will be put in direct communication with the Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes.

List of November and December Meetings.

To be Published Next Week.

In next week's GAZETTE will be published the list of Institute meetings to be held in November and December of this year. Secretaries will please take note of the dates of their own meetings and commence advertising at once. We have selected the best men and women available for the work, and hope that their efforts will be appreciated by every Institute.

Milk—Its Care and Products.

(Concluded.)

Answers by Prof. Dean to questions asked at an Institute meeting.

Q.—Is there any difference in the richness in solids and fats of the night and morning milk?

A.—Under the same conditions of temperature, feeding, care, length of time between milkings, milkers, etc., there should be little or no difference in the richness of milk night and morning. In some experiments quoted in a British journal it has been found that "the average of eight cows' milk for six days was: solids, not fat, 9.2 per cent. in the morning. The evening's milk tested 9 per cent. solids not fat and 4.88 per cent. fat. The morning's milk was rich in non-fatty solids and poor in fats, while the evening's milk was rather poor in non-fatty solids and very rich in fats." Our experience at the College is that the evening's milk is usually richer in fat. The chief cause of this difference is that there is a slightly shorter time between morning and evening milking than between evening and morning. The shorter the period between milkings the richer will be the milk, as a general rule.

Q.—What per cent. of fat should there be in skimmed milk?

A.—Skim-milk should not contain over one-tenth of one per cent.

Q.—What are "Cream starters" or "Cream ripeners," and how are they used?

A.—A "starter," as its name implies, is something added to the cream to start, hasten and control the ripening process. To make a starter the common way is to allow the skim-milk from a fresh cow or cows to sour naturally. This, if it has a good flavor, is what may be called a natural starter. Buttermilk and sour cream are also natural starters if no culture has been used. A surer method of producing a good flavored starter is to pasteurize some skim-milk, and then, after cooling, introduce what is known as a pure culture, which may be obtained from a laboratory or from firms who manufacture these cultures for sale. The culture once started may be propagated almost indefinitely with proper care. In using a starter add from five to fifteen per cent. of the starter to the cream, according to the time in which it is needed for churning and the temperature at which the cream is held. For quick churning use from ten to fifteen per cent. and keep at a temperature of about 70° until it thickens. In winter for slower churning (48 hours after setting to ripen) use five per cent. and hold at 60° to 65° until the cream thickens. Then cool the churn's temperature in both cases.

Q.—What shall we do at the factories with Saturday night's milk?

A.—Where patrons have proper facilities for cooling the milk, cool Saturday night's milk to a temperature

below 60° and send it to the factory on Monday morning. Where patrons cannot or will not attend to the milk on Saturday night it may be made into butter either on the farm or at the factory where there is a butter plant. We do not favor making cheese on Saturday nights and Sunday forenoons. Cheese makers need the Sabbath rest as much as any other class. Sunday work is a growing evil in some cheese sections and it is time to "either fill the pit or sell the asses that persist in tumbling into it."

Q.—What is the best way to ventilate a dairy?

A.—For ordinary dairies sufficient ventilation may be obtained by means of doors and windows where proper screens are placed to prevent the entrance of flies, etc. A more complete and expensive system is to have the fresh air brought to the dairy through underground pipes, placed at least six feet in the ground, and coming through a distance of 100 to 200 feet. This method insures a constant stream of cool air to the rooms of the dairy during the hottest weather. The warm and foul air may be removed through an ordinary ventilator placed in the roof. Both the inlet and the outlet should have proper means for regulating the inflow and outflow of air. This is easily done by means of registers or slides.

Q.—Can fat be fed into milk?

A.—If by this question is meant can the percentage of fat in milk be increased by food fed to the cow, we answer, no. All the constituents of milk come from the food and drink of the cow. The fat of the milk comes from the food indirectly and is thus "fed into the milk," but the ordinary meaning of this question requires us to say that results of the numerous experiments indicate that ordinary foods have little or no influence on the percentage of fat in the milk. Experiments quoted in Ex. Station Record, Vol. XI, p. 485, say: "In regard to the fat, the results furnish no indication that the fat of the food affects the production of fat in the milk." The author concludes that neither the percentage nor the absolute amount of milk fat is dependent upon the fat digested from the food. He believes that some feeding stuffs contain certain materials, which stimulate the lacteal glands to greater activity in some cases, and in other cases so modify the cell activity of the glands that a milk richer in fat is produced.

Q.—Can anything be added to milk or cream to prevent souring during warm weather?

A.—Yes. Substances may be added to milk and cream to prevent souring, but their use is not advisable, for the reason that nearly all substances which have the property of preventing the milk from souring have an injurious effect upon the human system. Heating milk or cream to a temperature of 140° to 160°, and afterwards cooling it to 50° or below, will prevent souring

for 24 to 48 hours. Where it is necessary to keep dairy products for a longer time, pasteurization is recommended.

Q.—Should milk supplied to cheese factories be paid for according to percentage of butter fat?

A.—There are three methods of dividing proceeds among patrons of cheese factories now in use in Ontario, viz., dividing according to weight of milk delivered regardless of quality, dividing according to the percentage of fat in the milk, and according to the fat and casein of the milk, the casein being represented by the adding of 2 to the fat. Paying according to the percentage or weight of butter fat is a great improvement over paying by bulk or weight, but we consider that adding 2 to the percentage of fat is more just, as it recognizes the curdy or caseous water of the milk, does not place so great a premium on the fat, and comes nearer to the actual cheese-producing value of the milk than any simple system yet devised. After five years' work in careful experimenting on this question, we can confidently recommend the "per cent. fat 2 system" to patrons and owners of cheese factories as a simple and just plan for ascertaining the relative value of different kinds of milk for cheese-making.

A Cheap and Useful Telephone System.

A cheap telephone system for the use of farmers along the line traversed by it is employed between the towns of Anderson, Pendleton and Ingalls, in Indiana. It is not an experiment, but is in active daily operation, and gives a service which is reported as comparing favorably with the lines of the regular companies. The line employs as a conductor such a common, everyday commodity as the top wire of a barb-wire fence, the continuity of the line being assured by special devices at highways and railway crossings. The line is fourteen miles in length, with five stations, two at Anderson, two in Pendleton, and one at Ingalls. The success of this inexpensive telephone line is stated to be due largely to perfect insulation. The builder has used the top stand of the fence-wire, which is treated to a generous coating of rubber paint. At the breaks in the fence common galvanized wire is used to continue the circuit to a connection with the next fence, the same arrangement being carried out at the railway crossings. In order to carry the line across the road or highway the circuit is either placed beneath an inverted trough, covered by the material of the road, or it is carried overhead by means of two poles, one on each side of the crossing. The cost of this telephone outfit is extremely low, as there is no expense for copper wires, and poles are only needed at the crossings. Where the number of customers is not too large the service is said to be all that could be desired. Local farmers

state that they have used the "fence-line" to converse with friends eight miles distant, and this at a time when the fence posts were still saturated with the morning dew, a condition under which the line is supposed to work with least satisfaction. It is stated that the line has been such a practical success that the farmers of the neighborhood are organizing companies for the purpose of placing themselves in telephonic communication throughout the whole district. A further evidence of the practicability of the barb-wire telephone is found in the case of the Wagner Glass Company, with offices at Anderson, who are able to communicate daily with their works at Ingalls, thirteen miles distant.

Make the Fair an Educational Institution.

Something over \$70,000 is being drawn from the Ontario treasury this year for the purpose of assisting the various local agricultural societies in getting up the shows which are now being held throughout the province. Are these shows performing a service of sufficient importance to justify a continuance of the expenditure that is being incurred? A direct answer can hardly be given to this question. That the exhibitions are rendering some service is undoubtedly true; that they are not doing all the good they might be made to do is equally true.

Take the fair held at Whitby last week as an illustration. There were at that fair some excellent exhibits. The hogs, although few in number, were of a very good quality; there was scarcely one that would not come up to the bacon type, and the owners had not made the same mistake as that made by some exhibitors at the Toronto; they had not piled a mountain of fat on a bacon frame. The cattle were few in number, but there were a couple of good Shorthorns, and there were also two very fine Jerseys, one of the latter with a record of 54 lbs. of butter in three weeks. The exhibit in poultry was good, too, and the display of fruit was extra fine. Perhaps the best show of all was in horses.

All this was of some use in its way. But how much more profitable all this might have been if the articles exhibited had been used as an object lesson by competent lecturers. One day could have been profitably applied in this way. The owner of the Jerseys could have told in a few words by what system of breeding and feeding he had produced over 18 pounds of butter from a single cow in a week. There are at least a score of producers of Shorthorn cattle in Ontario County, any one of whom could have given an instructive talk on the breeding and feeding of fat cattle for export. There are, within twenty miles of Whitby, at least a dozen men from whom two could have been selected to give a practical

demonstration, showing exactly the two types of horses now most in demand for the export trade—the heavy draft and the military horse. Lectures delivered under such circumstances would have fixed firmly in the minds of scores of breeders precisely the sort of horses that the present demand calls for. Then in regard to fruit. Within the corporate limits of Whitby is found one of the experiment stations conducted under the direction of the Ontario Government. R. L. Huggard, the superintendent of the station, has spent a quarter of a century in fruit culture and could have given a fund of information, not only in regard to fruit culture and pruning, but as to the varieties best suited to the particular locality—a talk that might easily have proved the means of preventing the waste of years of effort.

And what is said in regard to one particular fair applies in a measure, to every fair which has been or will be held in the province this fall. To show a finished article is not sufficient. The showing should be accompanied by talks on the means by which certain results are attained and the results which should be attained. That is what, as elsewhere stated, is being done in the United States. This is what has already been done in Canada at the annual Provincial Winter Fat Stock and Dairy Show. And the experience of the latter Show at Brantford, Guelph and London proves that with a combination of exhibition and Farmers' Institute, such as here proposed, it is not necessary to resort to doubtful side shows as a means of attracting the crowd.—*The Weekly Sun*.

Is There an Egg-Type of Fowl?

Many thinking hen-men who have kept records of their fowls agree that there is no distinctive "egg-type" or shape. After a careful study of the subject, and after examining many prolific laying hens with actual egg records, and receiving the photographs of many other heavy laying birds, we are unable to fix upon any definite shape as egg-type, writes Dr. Woods in *Farm, Field and Fireside*.

Breeders of Leghorns for the most part agree that their heavy layers conform to the standard requirements for Leghorns. They fix on an egg type for Leghorns as a fowl with medium body, medium comb, medium length of leg, and a "wedge shape" when viewed from front or side, with the butt of the wedge to the rear. This "type" is rather elastic, and allows considerable variety of shape, at the discretion of the one who applies it.

It is this Leghorn shape that nearly all writers on egg-type have tried to see in all varieties as typifying prolific layers. Many of the writers are at variance as to the disposition of the "wedge shape." Some place the butt of the wedge in the posterior of the

fowl and tapering off toward the front. One writer says: "A triangular body, apex at the rear, well tucked up behind, provides no attachment for fat where hens naturally lay it on." Another places "the butt of the wedge in the broad shoulders, and narrowing off toward the stern." Still another says that "the layer is heavy behind, wedge-shaped, with a butt of the wedge at the stern, and narrowing toward the front portion of the keel."

Nearly all agree that the prolific layer is a medium-sized bird for the variety to which it belongs, and is possessed of a medium-sized head and comb, medium legs, and medium-boned for the variety. Some fix on a "weedy" fowl of "spare build," and still others tell us that the layer is "rather short on legs, and plump in body." In fact, almost every conceivable shape of fowl has been suggested as the shape typical of the heavy layer. It has also been said that the good layer is of a lively, active, restless disposition, always busy and ready for a fight or frolic.

Very few of these observers have taken the trouble to get actual individual egg records of their fowls. They have been content to pick out the most conspicuous specimens in a pen of good layers, and give them the credit of laying well, without actual knowledge that birds selected deserve the credit.

Those who have made a practice of keeping individual records tell us that the active hen with bright comb and plumage, aggressive habit, bright eye, noisy cackle, and a disposition to be first at the food dish, is seldom an extra good layer, and that more often she is a trifle too fat, an indifferent layer, and inclined to be "hoggish." On the other hand, her more unassuming, quiet, and silently industrious sister, with a "modest" eye, is often the best layer in the pen.

In the Mediterranean and Asiatic classes the middle-sized fowl for the variety seems to be most often the best layer. With the American classes the bird of about standard weight, with a frame in proportion to her weight, is frequently the best layer. There are plenty of exceptions in all classes.

Long backs and bodies, short, broad backs and bodies, legs near together, and legs wide apart, appear to be quite equally disposed among the good layers. So far as "wedge shape" goes, nearly all fowls appear wedge-shaped from some point of view. In many fowls the disposition of the feathers hides the real shape of the body. Two hens which appear totally unlike in shape often are only to be told apart with difficulty when dressed.

It is not fair to say that because we have a fairly sure "milk type" in cows that we must have an "egg type" for fowls. The functions and the conditions are somewhat different if one takes time to stop and think.

On a recent visit to several farms

where individual hen records are carefully kept, we had a number of hens of the same variety, all of which were layers that had touched the two hundred egg mark, placed side by side for purpose of comparison. While all of the hens examined would conform sufficiently to the standard to score well, they were as distinctly different from each other in matter of shape as it is possible for hens of the same variety to be. Viewed separately, with the others out of sight, the result was the same. They were decidedly distinct individual types, with very little but feather in common. This also was our experience with nearly all specimens, photos, and descriptions of prolific layers which have come under our observation during the past year.

All the evidence based on actual egg records seems to tend the same way, and bears out the statement that there is no certain type or shape of hen that is indicative of superior egg-production. With the possible exception of the Leghorns, which are all supposed to be excellent layers, no variety can be said to possess a distinct egg-type.

It may be asked if there is no shape or type which may be taken for a guide in selecting layers, how are we to pick from our flocks those which will give us the best results in eggs? Undoubtedly the best way to select good layers is by means of individual egg records. Often, when buying fowls, this is impossible.

By careful selection according to egg records, you can build up a flock of heavy layers without giving shape a thought. This being true, shape is not a very important consideration in the matter of egg-getting. In selecting fowls for egg-production, where we are unable to obtain the egg records, we should choose the most promising specimens from a health standpoint. We would sacrifice everything else to health, even the egg record, if there is one. The bird should be well and firmly built, of good average frame for the variety, with no evidence of over-fatness or over-leanness—as nearly a perfect specimen of physical health as we can find.

By building on the foundation of health we risk nothing, and are sure that we have something to build on. Then, if eggs are our aim, we can easily (by keeping individual egg records, and selection of the best layers, always putting health first) build up a flock of prolific layers that are worth something.

Select for actual known worth, and place little confidence in the value of appearance. "Appearances are often deceitful."

Agriculture in China.

A long report on agriculture in North China from the United States Consul at Tien-tsin has recently been published by the Department of State at Washington. It deals mainly with

the provinces of Chi-li and Shan-tung, but the writer says that there is a general similarity between these and the whole of North China. The soil is alluvial or loamy, and is usually capable of producing good crops when there is an adequate rainfall; when rain fails there is a risk of a famine such as that of 1877-78.

The most important cereal is wheat, which is grown everywhere, with but slight difference in the mode of cultivation. Spring wheat is grown in only a few districts; as a rule the ground is plowed for wheat in the autumn after the other crops have been housed and as soon as there is a good fall of rain. The wheat, like almost all the other crops, is put in with a drill, mixed with pulverized manure. Much of the land yields two full crops a year, and after the wheat is gathered in June the ground may be planted with beans, sweet potatoes, maize, or some other late crop; but it is regarded as better to let the ground lie fallow until after the autumn harvest, when wheat may be put in again, the increased yield compensating for the loss of the extra crop.

The Chinese understand the rotation of crops and usually cultivate in accordance with it; but, as a rule, they are indifferent as to the quality of the seed planted, and they often think it economy to sell the good seed and keep imperfect and withered grains for planting. The wheat is threshed by the passage of stone rollers over it on a hard, smooth floor, and winnowed by throwing grain and chaff in the air, leaving the wind to carry off the latter. Millet is the next most important cereal to wheat, and it is grown in enormous quantities everywhere. White rice does not grow to any extent. The plow, hoe and harrow are of the most primitive kind, and deep ploughing is unknown. The winter frosts do most of the pulverizing of the lumpy soil. So-called tall millet, which is very similar to the sorghum, or sugar cane, is planted under much the same conditions as millet, but it grows to a height of ten to fifteen feet, and becomes a refuge for thieves and outlaws, who are able to defy pursuit in its endless recesses. It is one of the greatest gifts of nature to the forestless plains of North China. The blades are stripped from the stalks while green and used for fodder. When ripe, the tops are threshed for the grain; the stalk is full of silica and is invaluable for hedges and the roofs and sides of buildings, being covered with layers of mud which resist the heaviest rains for a long time. After the stalks are cut the roots are pulled up and used for fuel, so that every vestige of the plant is made to serve some useful purpose. These stalks and weeds form the sole fuel of vast numbers of the people.

Indian corn is one of the standard crops, though the yield per acre is small; barley, oats, buckwheat, sesame (used to flavor wheat in cakes), and

tobacco are also grown. Sweet potatoes are found everywhere and form the cheapest food of the people. Beans are grown in great quantities, chiefly the coarse black beans, used for feeding animals and for making a crude oil which is much in demand. The bean cake left after the oil is extracted is an important article of commerce, being used as manure for the sugar cane and other crops. Peanuts and their oil are also largely produced, as is opium.

Cotton is of great importance in certain districts. Compared with Carolina cotton the Chinese plant is a very poor one, the boll being not much larger than a walnut. But the clothing of hundreds of millions of Chinese comes from it, while the cheaper, though less durable, yarns from India and Japan, as well as more recently from China itself, are ousting those made by hand by the peasantry of North China. Market gardening of all kinds exists, and the Chinese excel at it. "Chinese agriculture," concludes the Consul, "like everything Chinese, illustrates the talent of the race for doing almost everything by means of almost nothing. They fatally lack initiative, but if new methods are forced upon their attention, they may be persuaded to adopt them, and, once having done so, they will not again give them up."

Don't Drink Water in Gulps.

Much Benefit is to be Derived from Nature's Best Beverage by Sipping it Slowly.

As a rule it is much better to sip water than to swallow a glassful at one draught. The exception to this rule is in the morning, when one should drink a glassful or two of moderately cold water in order to flush the stomach while it is tubular. At other times, however, sipping the water is much more stimulating in its effect on the circulation. During the action of sipping, the nerve action, which slows the beating of the heart, is temporarily abolished, and in consequence the heart contracts much more quickly and the circulation in various parts of the body is increased. Another advantage in sipping is the fact that the pressure under which the bile is secreted is considerably raised. It has been stated on good authority that a glass of cold water slowly sipped will produce a greater acceleration of the pulse for a time than will a glass of wine or spirits taken at a draught. Sipping cold water will, in fact, often allay the craving for alcoholic drinks—a point worth remembering by those who are endeavoring to reform.—*Ladies' Home Journal*.

First Tramp—Is there any difference between indolent and lazy?

Second Tramp—Well, I s'pose when a man's lazy what kin afford it, dey call him indolent.—*Puck*.

The Farm Home

Father's Voice.

Years an' years ago when I
Was just a little lad,
An' after school hours used to work
Around the farm with dad,
I used to be so wearied out
When evendite was come,
That I got kinder anxious-like
About the journey home;
But dad, he used to lead the way,
An' once in a while turn round an' say—
So cheerin'-like, so tender—"Come!
Come on, my son, you're nearly home!"
That allers used to help me some,
An' so I followed father home;

I'm old an' grey an' feeble now,
An' trimbly at the knee,
But life seems just the same to-day
As then it seemed to me,
For I am still so wearied out
When evendite is come,
An' still get kinder anxious-like
About the journey home;
But still my father leads the way,
An' once an' a while I hear him say—
So cheerin'-like, so tender—"Come!
Come on, my son, you're nearly home!"
An' same as then, that helps me some;
An' so I'm following Father home.

Cooking Utensils, from a Scientific Point of View.

With apologies to our friends, the advocates of Densmoran diet of uncooked fruit and nuts, man must be regarded as a cooking animal, for relics of cooking utensils have been found wherever his earliest steps have trod. From these we may learn some lessons appropriate to the present day and this occasion.

To take some typical instances, we find the familiar fork which we get from the Romans, as its name indicates, (divided) was originally made to take the place of finger and thumb, "then of three fingers, and finally of the whole hand to the saving," as rare Ben Johnson puts it, "of napkins by the cleanly use of silvren forks from Italy." Fingers were, in fact, made before forks, but forks were originally closely copied from fingers, and were never more aimlessly shaped than at the present day.

Our Saxon ancestors may claim the use of knives as early as the first dawnings of their civilization, without the aid of Roman conqueror. First comes the flint knife, of which specimens are many, then (carved by flints) the knife of wood, of which specimens by reason of decay are impossible. Then as manufactures improved, the knives of iron, silver and gold were invented, and by the same curious revolution noted above in the return of modern man, to the uncooked food of precivilization, the most valued knives came to be made of agate and other stone, and wooden knives, forks and spoons used as of course, in many culinary operations, and some not strictly culinary, as for salads.

The spoon deserves a passing word, for it is more closely allied to the boiling pot than many would suppose. The word is a Saxon one, meaning chip or section, and when the "pulpy gourd had been scooped with its own rhind," it formed a pot to be placed in position, full of water and savory viands, ready to receive the red hot pebbles which raised its contents to boiling point. The top of it cut off served to divide into "spoons," or spoons, which were trimmed into shape and dipped into the pottage.

You will note in the British Museum, or elsewhere, that the shape of the gourd is almost perfectly imitated in the Greek and Roman pottery, and that the narrow bottom, which is almost pointed, is particularly well shaped to prevent burning, and to facilitate the stirring of the stew. The tendency of modern fashions is a flat bottom, which has only one advantage, viz., that of safely standing on the level range. The only cooking vessels which should be flat-bottomed are those used for boiling simply, without stirring, as lard kettle, fish kettle, and the tea kettle to day.

The pans we have are scarcely altered from the olden shape; as a pot is a stew or water holder, so is a pan a holder for solids, particularly cakes and bread. The stewpans of modern times, especially the Bain Marie pans (used too rarely in this country) are anachronisms, just as is the "tumbler" which no longer tumbles, and holds more frequently water than wine.—*Food and Cookery.*

Hints by May Manton.

Ladies' Fancy Shirt Waist, No. 3629.

The simple waist that can be worn beneath the jacket and suffer no harm is a necessity to every woman. The mart model illustrated has all the advantages of the shirt waist, yet varies from the regulation model sufficiently to provide variety. As shown, the material is embroidered cashmere in hydrangea blue, with the collar and chemisette of stitched white cashmere; but French flannel in all colors, Henrietta and taffeta are equally suitable, while the chemisette can be made of mousseline, Liberty and the like, when a more dainty effect is desired.

The model is finished with cut steel slides where the right front is drawn up at the blouse sections; but enamelled buckles or any sort of ornament preferred can be substituted.

The foundation for the waist is a fitted lining cut in three pieces, and with single darts. On it are arranged the waist proper and the chemisette. The right side of the waist is cut in

three points, which are drawn up through buckles or slides. The chemisette is attached to the right side, and hooks over onto the left. The lining with the left front closes at the centre, the right front hooking over into place. Both back and fronts are gathered and



3629 Ladies' Fancy Shirtwaist
32 to 40 in. bust.

drawn down at the waist line, where the fronts pouch slightly over the belt. The sleeves are cut in one piece, the inner seam extending to the elbow only, and are finished with roll-over cuffs.

To cut this waist for a woman of medium size 4 yards of material 21 inches wide, 3 yards 32 inches wide, or 2½ yards 44 inches wide, with ¾ yard for chemisette and collar, will be required.

The pattern No. 3629 is cut in sizes for a 32, 34, 36, 38 and 40-inch bust measure.

The price of above pattern post-paid is only 10 cents. Send orders to "The Farming World," Confederation Life Building, Toronto, giving size wanted.

Stuffed Fowls.

This was one of the dishes which Mrs. Kedzie prepared, which greatly interested me, although personally I might not care for it, but for a large family of hungry children, or where it is desirable to make a fowl go as far as possible, it would be admirable. She made a large panful of bread stuffing, highly seasoned with sage, onions, salt and pepper and moistened with milk and butter. After filling

the body and crop, she made an incision in the skin between the thigh and body,—loosened the skin from the flesh round the breast and down the leg, and put in as much stuffing as could be crowded in, pressing it down close to the breast and legs—then another extra portion was put in the inside of the wings before tying them to the body. This would keep the meat moist during the baking and afford a generous supply of the part which is by many considered the best portion of the chicken. It was baked in a covered pan and basted frequently and I have no doubt it was tender and delicious but as I had to leave early I did not see it completed.

It was also a great pleasure to hear Miss Barrows at Chautauqua. She gave several of her practical and suggestive demonstrations; one which particularly interested me was on the oil stove, showing how a variety of dishes may be quickly and easily prepared by a little planning of utensils and space. She showed by illustration how all the difficulties of too great draft, of keeping cooked food warm, and of regulating the oven heat, could be obviated. Her fried soufflé omelet she manipulated with great skill, and by a few dextrous turns and tilts exposed the upper surface to the heat of the oil stove, a feat which is often considered necessary to accomplish in the oven, so that it was sufficiently firm to keep in place as she folded the delicately browned crust together, and as it was turned out on the platter an emphatic expression of approval was heard around the room. In her private classes she evolved many tempting dishes from the merest remnants, and gave many a useful lesson in the best combination of material. A small portion of egg and milk in which crackers had been soaked for fried cracker toast, was left over and with this as a basis, a delightful lesson in bread pudding was given. A few raisins were boiled in the blazer until the water was about evaporated, then this soaked cracker with a bit of salt, sugar and spice was stirred into the raisins, the blazer put over the hot water pan, the mixture stirred occasionally until the egg was cooked then the whole packed in a small mould and kept hot. When turned out there was a simple but delicious bread pudding.

Some stale bread left from a previous lecture was cut into croutons browned in butter, then minced onion fried in the remaining butter, milk was added and the browned onions allowed to cook in the milk, seasoning added, and the simple onion soup served and thickened with the croutons proved very appetizing.

Equal parts of bread crumbs, milk and cheese, about half a cup of each, with one beaten egg, were cooked over the hot water pan until the cheese was melted and the egg firm, and gave us a savory fondue. All these were made

from material left over from a demonstration and which would ordinarily have been thrown away.—*Mrs. Lincoln in American Kitchen Magazine.*

eyes bright while they were permitted, within reason, to choose their own diet.—*S.M.H.G., in American Kitchen Magazine.*

Little Folks and Their Fancies.

It is rather amusing, in this day of parental indulgence, to recall the severity with which children were treated at table a half-century ago. My mother had many tales to tell of her horror of visiting, lest she infringe some particular rule of the house. She once took me to see an aged friend, requiring that I should eat every morsel upon my plate, for fear I should be rebuked if I did not.

It so happened that I was more plentifully served than I desired to be, and the awful effort I made to dispose of it fixed my resolve to be very careful when I had children of my own. But the tide had turned ere that day arrived, and I found it more important to serve the little folk with simple delicacies than to insist on their eating "whether or no."

I have made it a practice not to prolong the milk period, but to make a very gradual ascent toward heartier food. The tastes of children differ. One of mine never liked bread; another particularly disliked milk in any shape, while a third—a strong, large boy, was ravenous for meat before he had reached three years.

The child who refused bread was given mushes of various kinds, and occasionally Graham crackers.

The second, instead of drinking milk, took a cup of hot water with a spoonful of cream, or "shells" carefully made, varying this with broths. But the meat eater appalled me. I denied him largely until I was convinced that he required exactly that form of nourishment, and after a year or two of beef-eating his appetite became normal.

Two little nephews coming to live with a childless aunt near us had a sorry experience. They were frail children, and the careful woman, not realizing their need of strong food, or the value of consulting their peculiar fancies, nearly ruined their health through mistaken care. The pale faces appealed to me, and by asking them to our own table, I discovered their peculiarities, and tried to point them out to the aunt. She was horrified! "Surely," she said, "you cannot deny that bread and milk is a proper supper for small boys, and they eat very little of this."

"Try them with hot suppers, stewed oysters, baked apples, cream toast."

"Would you pamper these children? That is not a good preparation for their manhood."

So the bread and milk went on until the doctor was called in and stouter regimen enforced, and it was a pleasure to see the cheeks grow red and the

Tea Making.

A veteran student of tea, a resident of Ceylon for many years, gives the following points as essential in making tea: The water should be fresh, pure, soft, and boiled in a perfectly clean kettle. Have the teapot hot, pour into it the freshly-boiled water, then strew the tea on top of the water and infuse for five minutes. In this way the tea leaves will not be scalded and the fragrance will be kept at its best. The infusion should be decanted into another teapot made hot for its reception.

Table Cloths.

Khaki table cloths have been used at some big social functions in England recently, scarlet centres or strips of red silk being the decoration. Another recent fashion is the autograph table cloth. Pencils are furnished the guests that they may write their names on the damask, and this outline is afterward embroidered. A London dining club is said to have a remarkable tablecloth of this description. It is nearly covered with autographs, coats-of-arms, monograms, etc.

OUR COOK BOOK PREMIUM.

Simply send us one new subscription to **THE FARMING WORLD** at \$1.00 and we will send you a copy of the **Ideal Cook Book**, 300 pages, substantially bound in oilcloth for the kitchen. Any subscriber not in arrears can have a copy of this dollar book for 50c. Remainder of this year free to any new subscribers to the **FARMING WORLD** for 1901.

Marriage a Success.

"Is marriage a failure? I should say *not!*" remarked an Oregon farmer. "Why, there's Lucindy gets up in the mornin', milks six cows, gits breakfast, starts four children to skewl, looks arter the other three, feeds the hens, likewise the hogs, likewise some motherless sheep, skims twenty pans of milk, washes the clothes, gits dinner, et cetera, et cetera. Think I could hire anybody to do it for what she gits? Not much! Marriage, sir, is a success; a gret success!"

Remainder of this Year Free to All New Subscribers for 1901.

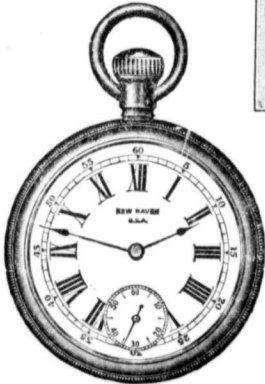
A Page Worth Reading!

Farming World = 1900 Premiums = 1901

We tell the story here of some of our valuable premiums. You ought to have before you the eight-page supplement of the issue of September 1, in which was told the whole story—an interesting and profitable story it is proving to many workers. Every article that we offer as a premium has our guarantee of being just what it is represented to be. Nobody will be disappointed. Particulars of some of the special premiums:

LADY'S BREAST WATCH

A handsome lady's gun metal breast watch to any subscriber sending us eight new yearly subscriptions to THE FARMING WORLD, and 20c. extra to cover cost of packing and postage. Or any subscriber, not in arrears, may have one for \$2.50.



BOY'S WATCH

A good time-keeper, nickel-finished case, stem wind and set, to any subscriber sending five new subscriptions to THE FARMING WORLD and 10c. extra to cover postage. Any subscriber not in arrears may have one of these for \$1.50.

BAROMETER FREE

You know about this barometer worth a dollar! Will be sent free to anyone sending one new subscription to THE FARMING WORLD; or anyone renewing his or her subscription may have one for 25c.

GOLD-FILLED WATCH

This is a lovely article for any lady. Any subscriber sending twenty new subscriptions to THE FARMING WORLD, and 25c. extra to cover cost of packing and postage will have this watch sent to his or her address free; or send five new subscriptions at \$2 a year, together with \$2.50 extra, and the watch is yours. A subscriber not in arrears may have one of these watches sent post-paid to his or her own address for \$5.50.

IDEAL COOK BOOK

Any subscriber sending one new subscription to THE FARMING WORLD will have this popular cook book, of 300 pages, sent free. Or any subscriber not in arrears can have one for 50c.

LIFE OF CHRIST

This is a Life of Christ for the Young—a beautiful book. Any subscriber sending one new subscription to THE FARMING WORLD will receive this book free; or any present subscriber, not in arrears, can have one for 50c.

PILGRIM'S PROGRESS

A handsomely-bound copy of Bunyan's Pilgrim's Progress will be sent free to any subscriber sending one new subscription to THE FARMING WORLD, or any present subscriber, not in arrears, post-paid, on receipt of 50c.

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Managing Director, . . . D. T. McAINSH
Editor, . . . J. W. WHEATON

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A Successful Stock Sale.

The seventeen head of pure-bred dairy cattle, secured by Live Stock Commissioner Hodson in Ontario early in September, and consigned to the Dairymen's Association of British Columbia, to be sold by public auction in that province, have given a very good account of themselves. In a letter received by Mr. A. P. Westervelt, secretary of the Live Stock Associations, from Mr. G. H. Hadwin, secretary of the Coast Association, the latter states that the cattle sold for \$220 more than had been expected for them.

Effect of the War on Horse Markets.

In consequence of the very heavy purchases made by the War Office, all kinds of horses are in greater demand than usual. The remarkable part of it is that although Government has not drawn on our cart horses, yet all up to dray work are in strong request at, say, £10 per head more money than a year and a half ago. No pains should be spared in making up into blooming condition the animals for sale in this back end, as all extra food and trouble will be amply repaid. The sale of horses, even where only several are disposed of, will help the farmer nicely towards paying his half year's rent. And, after all, grazing good colts appears to pay better than grazing cattle, take one year with another.—*English Rural World.*

Beet Root Sugar in P. E. I.

An effort is being made to establish the sugar beet industry in Prince Edward Island. At a largely-attended meeting of farmers held recently at

Tignish the question was fully discussed. It was pointed out that a wealthy company in New York State engaged in this industry was willing to invest the sum of \$500,000 in erecting a factory and suitable plant in Prince County provided the farmers would assist by growing a certain acreage of beets to start the enterprise. About eighty farmers agreed to cultivate from one to three acres each of beets next season.

Maine Jersey Breeders.

The twenty-eighth annual meeting of the Maine State Jersey Cattle Association convened at G.A.R. Hall, Winthrop, Oct. 9, G. A. Pike in the chair. Reports of officers and committees were made, showing the transactions of the year and financial condition of the association to be highly satisfactory. Officers elected for the ensuing year were: President, A. P. Russell, Leeds; vice-presidents, W. C. Whitman, So. Turner; M. F. Norcross, Winthrop; directors, W. H. Keith, Winthrop; W. B. Frost, Wayne; J. Pike, Livermore Falls; secretary and treasurer, N. R. Pike, Winthrop; pedigree committee, N. R. Pike, Willis Cobb, H. V. Dudley. The IX. Vol. of Herd Book will be published the ensuing year, and a copy presented free of charge to each member having stock registered therein.

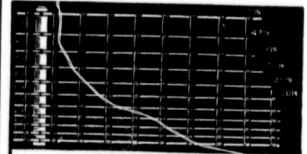
A "Model Dairy" at the Pan-American Exposition.

Aside and distinct from the regular cattle exhibit at the Pan-American Exposition, it has been decided to conduct a model dairy throughout the entire six months of the Exposition.

This dairy is to be composed of four or five representatives of the breeds of milch cows laying any claim to merit along dairy lines. Plans are being made to have eight or nine breeds represented in this dairy, and nearly all of the Live Stock Associations have given assurance of their fullest co-operation in this matter, and have generously offered to place at the disposal of the Exposition, the animals which shall form this model dairy.

The stable in which the animals will be kept will be one that is equipped with the most up-to-date appliances, particularly with regard to hygienic and sanitary conditions.

It is not the plan to force these cows unduly to see how much can be produced during this time, but to see what they will do under absolutely uniform conditions, as nearly normal as it may be possible to make them on the Exposition grounds. The work will be conducted by men of much experience in feeding and handling dairy animals, under rules which will be formulated for the government of this dairy. Only such changes shall be made during the six months as shall be especially calculated to prove the superiority of some particular



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breed, and when the changes are made with a view to establishing some characteristic of some breed, all the other animals in the dairy will be placed under exactly the same conditions, and careful record kept as to their performance under these conditions. Accurate data will be kept as to the amount of food consumed, its cost, its nutritive value, and also the milk product as to the amount and quality.

Never in this country has such a long test of so many animals of different breeds been conducted, and it would seem that much valuable data could be obtained from an experiment of this kind.

Those particularly interested in this matter can obtain the details of the management of the dairy by addressing F. A. Converse, Superintendent of Live Stock, Pan-American Exposition, Buffalo N. Y.

British Apple Market Higher.

Toronto, Oct. 8, 1900.

The Manchester Fruit Brokers, Limited, Manchester, have this day cabled our head office the following market report: "Apples scarce and high prices paid. We recommend immediate shipments." Market quotations average per barrel:

- Baldwins.....17s.
- Kings.....21s.
- Greenings.....16s.
- Gravensteins. . . .17s. 6d.

Yours truly,

THE EUROPEAN EXPORTERS' ASSOCIATION OF TORONTO, Limited.

Steeping Oats for Horses.

A German agriculturist advocates the steeping and fermenting of oats for horses as a means of giving the greatest nutritive power to them. His method is to have three troughs, each holding enough for a day's ration. The oats being put in the first one hot water is poured over them, and the whole is well stirred. After standing about six hours the water is drawn off and the oats left to swell and ferment. Another troughful is fixed in the same way the next day and another on the third day, when first troughful having stood for 48 hours is ready to be fed out and the trough refilled. He claims that this gives the maximum of nutritive power.

Corn Harvest Twine.

Additional evidence of a large increase in the demand for twine for corn binding is found in the sales of many jobbers, who report more orders than ever before at this season. The estimate of 5,000 tons used for corn binding this season is considered a conservative one by some of the leading factors in the trade. The bulk of the trade has fallen to the lot of the harvester companies, all of whom had ample stocks at their various distributing houses. The season is now drawing to a close.—*The Farm Implement News.*

Electricity on the Farm.

Is this an example worth following in this country? An association of farmers in Bavaria are building large electrical works to supply power for agricultural uses. The current is generated near the village of Schafterstein, a distance of seven miles from the district of consumption; and is supplied partly by steam and partly by water power. From there it is to be sent at a pressure of 5,000 volts to the surrounding villages, where it will be employed for driving threshing machines, chaff-cutters, bruising mills, etc. The motors used are very simple and compact, so that they can easily be handled by farm hands. If this experiment should prove successful, it is almost certain to be imitated.—*Agricultural Engineer.*

Housekeeping Wisdom.

The following advice, given to a young married woman who was visited by another older and more experienced one, may be helpful to some of our readers:

When the visitor arose to go the hostess came with her to the door, and out upon the pleasant piazza, which, however, looked a little dusty in the corner.

"Oh, dear!" said the young wife, "how provoking the servants are! I told Mary to sweep the piazza thoroughly, and now look how dusty it is."

"Grace," said the older woman, looking into the disturbed young face with kindly, humorous eyes, "I am an old housekeeper. Let me give you a bit of advice: Never direct people's attention to defects. Unless you do they will rarely see them."

"Now, if I had been in your place and noticed the dirt, I should have said, 'How blue the sky is!' or, 'How beautiful the clouds are!' or, 'How bracing the air is!' Then I should have looked up at that as I spoke, and should have got you safely down the steps and out of sight without your seeing the dust."

An illustrious person is one who keeps on working when he feels lazy enough to drop dead.



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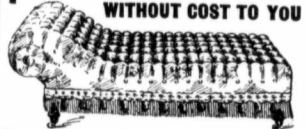
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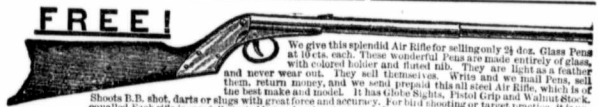


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We give this splendid Air Rifle for selling only 24 doz. Glass Pens at 10c. each. These wonderful Pens are made entirely of glass, with colored holder and fitted nib. They are light and weather proof, return money, and we send postpaid this splendid Air Rifle, which is the best make and model. It has triple sights, pistol grip and built-in magazine. For full shooting or target practice. It is unequalled. Each rifle is carefully tested before leaving the factory. Write the money. JOHNSTON & CO., Box F Toronto.



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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement, will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Horses.

The Chicago Horse Show, Oct. 29-Nov. 3, in the new Coliseum, will be a great society show; \$15,000 in premiums and special prizes. Tichenor & Co. offer \$500 Challenge Cup for best horse suitable for gig. Only one class for Coach stallions, any breed, \$150, \$50 and \$25. Coach mare, all breeds competing, \$100, \$50, \$25. Liberal prizes in harness horses—single pairs, tandems, four-in-hands, ponies, saddle horses, hunters. Delivery wagon horses, \$50, \$25, \$15, and same to heavy truck team, two or three horses; also to four or more horses heavy truck teaming, police and fire horses. Mortimer Levering, Secretary, Leland Hotel. Entries close Oct. 15.

The draft horse is 40 per cent. of the Chicago Horse Market, is double that of any other class for city and export trade.

High-class horses in England bring sensational prices. Mr. J. B. Joel recently purchased from Mr. Musker the two-year-old bay filly Princess Melton, by Melton, dam Schoolbook, by Wisdom, out of Satchel, by Galopin, for £15,000 (\$75,000). She has won six races out of eight starts and is a prominent candidate for the Oaks and One Thousand Guineas next season.

Hon. W. C. Whitney, after the Boulevard Handicap at the Brooklyn track on Friday, September 28, purchased the winner, Elizabeth M., chestnut filly, 2, by imp. Watercress, dam Hans, from F. M. Miiden, Jr., for \$20,000.

Mr. Charles Mason, Brucefield, Ontario, recently paid a visit to this country in quest of a big-sized, pure-bred, good breeding Clydesdale stallion, and he purchased three, which were shipped on Saturday last. Mr. Mason, during the early boom of exporting horses, did a very large business, and his presence again in this country is hailed with much satisfaction by owners and breeders of Clydesdales. He states that he would have purchased three times the number he has got had he been able to find them big enough for his country's requirements. Mr. Mason's opinion is that the breeders and judges of horses in this country are making too much of quality and action, and losing sight of size, and consequent strength and durability, for heavy work. From Mr. Scott, Beryards, Greenock, Mr. Mason purchased the three-year-old horse Silverwood, 10910. This was the Killinann premium stallion last season, sire Lord Colum Edmund, 9280, dam Darling of Carlue, 10369, by Prince of Wales, 673. Silverwood has won numerous prizes locally, including first prize at Greenock and first and championship at East Kilbride last year. He is a stylish horse of excellent quality and first-class breeding, with grand feet and fine clean bones. Mr. Mason also purchased Leading Article, 10139, from Mr. Gardiner, Henhill, Forteviot. Leading Article was bred by Mr. Hunter, Garthland Mains, and was got by the Prince of Wales' horse, Prince Robert, 7135, out of the Darnley mare, Earnock Queen, 7944. Leading Article is full brother to Robert Darnley, 10115, a very famous prize-winning and breeding horse, half-brother to the Cawdor Cup winner Hia-watha. He is of great size and substance, with good feet and legs, and has proved himself a first-class breeding horse in Strathearn. His get at local shows were always to the front, and when exposed for sale, invariably brought highly remunerative prices. Mr. Mason also purchased Rosevale, 10623, from Mr. W. S. Park, Bishopston. Rosevale was bred by Mr. Torrance, Netherwood, sire Rosevale, 8194, dam Nannie of Nether Kypside, 6233, by St. Lawrence, 3220. Rose-

vale is a well-proportioned, beautiful dark brown horse, seven years old, with grand feet, fine clean bone, and beautiful feather. He has travelled the Cumberland district the last three seasons. From these notes it will be seen that Mr. Mason has bought a trio of horses which will be a credit to his enterprise and judgment.—*North British Agriculturist*.

The stud of shire horses belonging to Mr. Geo. Wainwright, Monks Heath Hall, Chel-ford, Cheshire, was sold on Wednesday. Some good prices were realized. The highest was 210 gs., which was twice paid by Mr. Bryars for the eight-year-old mare Rocks Silverina and the yearling filly Monks Polly, both greys. Mr. I. Hill gave 145 gs. for the nine-year-old Ashbourne Lady, and Mr. Joseph Wainwright 115gs. for the six-year-old Rocks Queen. Other prices were 105gs., 90gs., 82gs. and 70 gs., the average for thirty-one lots being £67 6s.—*North British Agriculturist*.

Cattle.

A small sale of Shorthorn bulls, bred in the north of Scotland, imported by Mr. Philo L. Mills, was held at Buenos Ayres on 28th August. The three-year-old Lord May 2nd, bred by Mr. John Cran, Ceith, by Steady Lad and out of Gay Lady, was sold at £168 12s. The three-year-old Jubilee, bred by Mr. M'William, Stonetown, by Clarendon and out of Jilt 22nd, was withdrawn at £59. North Star, calved December 1897, bred by Mr. George Stevenson, Mains of Durn, brought £105 8s.—*North British Agriculturist*.

At a sale of Aberdeen-Angus cattle held recently in the South of England forty-three Aberdeen-Angus cattle averaged £27 19s. 8d. each.

Mr. W. Schroeter, of Tedfold, Billingshurst, Sussex, has dispersed some of his well-known pure-bred Aberdeen-Angus cattle. The herd has produced some prize winners of considerable distinction and has won over £1,200 in prizes. The highest price on this occasion was 40gs., paid by Mr. R. S. Hudson for the cow calf, Pride of Sussex. Mr. Hudson was also twice a purchaser at 30gs. and once at 20gs. Mr. Wilson at 36gs., 32gs., 28gs. and 10gs., while Mr. Crisp was also a purchaser at 35gs. and 23gs.—*Rural World*.

The great combination sale at Kansas City which began on Oct. 18, and will continue to Oct. 26, is the leading event of the week in live stock circles. 250 Herefords and 150 Shorthorns are being offered. \$25,000 in cash prizes are offered and some tall prices may be looked for.

Sheep.

English sheep breeders are somewhat agitated owing to the closing of the Argentine ports against English stud stock. For a number of years the exports of English stud rams to the Argentine has been of very great importance and now without any warning the whole trade has been suddenly stopped. The cause is due to the fact that some sheep recently sent from England on their arrival at Buenos Ayres were found to be infected with foot and mouth disease.

For the past two weeks some very large ram and ewe sales have taken place in Dublin. Prices for breeding ewes have been very satisfactory, the best figures having perhaps been obtained by the Messrs. Jameson, who got as much as 67s. each for Shropshires. Roscommon ewes sold up to 48s. and 50s. Last Wednesday Messrs. Ganly, Sons & Co., had a very large auction in Dublin, at which considerably over 5,000 sheep were sold. Several other important sales of sheep will be held during this month.—*Rural World*.



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DR. SLOCUM the famous scientist, whose lectures and demonstrations in New York and London this season have astounded medical circles, has at last perfected his new system of treatment for the absolute cure of tuberculosis and all pulmonary diseases. This triumphant victory over the deadly bacilli is far-reaching in its effects, for their is no longer room for doubt that the gifted specialist has given to the world a boon that will save millions of precious lives. Dr. Slocum's system of treatment is both scientific and progressive, going as it does to the very source of the disease and performing the cure step by step.

First Step.—Killing the life-destroying germs which invest the body.

Second Step.—Toning the entire system and strengthening the nerves—filling the veins with tingling new life.

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The Slocum system cures grip and its painful after effects, dangerous coughs, bronchitis and every known form of pulmonary disease.

It makes weak lungs sound, strengthens them against any ordeal, and gives endurance to those who have inherited hollow chests, with their long train of attending dangers. To enable despairing sufferers everywhere to obtain speedy help before too late, Dr. Slocum offers

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Simply write to **THE T. A. SLOCUM CHEMICAL CO., 179 King St. West, Toronto, Ont.**, giving post office and express office address and the free medicine (The Slocum Cure) will be promptly sent. Sufferers should take instant advantage of this generous proposition, and when writing for them always mention this paper. Persons in Canada seeking Slocum's free offer in American papers will please send for samples to the Toronto laboratories. Let no previous discouragements prevent your taking advantage of this splendid free offer before it is too late.

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, Oct. 22, 1900.

The mild weather of the past couple of weeks has made trade in wholesale lines a little quiet. But with the cooler weather which now prevails a little more activity is looked for. Money keeps steady at 5 per cent. on call and discounts on mercantile paper range from 6 to 7 per cent.

Wheat.

Late estimates seem to show that the world's supply of wheat will equal all needs during the current year. Stocks on this side the Atlantic and in the United Kingdom are said to be larger than at this time last year. Still the situation is not without authorities who look forward to better values. The world's 1900 crop is reckoned by all to be less than that of 1899, but there was more wheat held over which tends to increase visible supplies. Very little is known about the Russian crop and any estimates regarding it are merely guess work. Reports from threshings in the Canadian West indicate a much better yield than was expected. In some localities the wheat is yielding 30 to 40 bushels per acre.

No. 1 Manitoba hard has ruled 2 to 3c. lower with 86½c. quoted afloat at Fort William. Ontario red winter is quoted at 73½c. to 74c. afloat Montreal and No. 2 hard Kansas at 75 to 76c. afloat. The Toronto market has ruled rather dull with red and white quoted at 65c. north and west, goose at 64c. west and spring file at 67c. east. On Toronto farmers' market red and white bring 68½ to 69c., goose 67½c. and spring file 69c. per bushel.

Oats and Barley.

There is not improvement in oats. There seems to be better general demand. Prices here are 25c. for No. 1 white east, 23½c. for No. 2 middle weights, and 23c. west. On Toronto farmers' market oats bring 29 to 30c. per bushel.

The export barley market is easier. The market here is steady at 37 to 43c. west according to quality, 43 to 48c. are the prices on Toronto farmers' market.

Peas and Corn.

There is still an export demand for peas with 67 to 67½c. afloat Montreal at the prices quoted. The market here is steady at 58c. middle weights, and 56 to 57c. north and west. On the farmers' market here peas bring 59c. per bushel.

The corn market keeps steady, No. 3 American being quoted here at 49½c., Toronto and Canadian old at 42c., and new at 35c. west.

Bran and Shorts.

Ontario bran is easier at Montreal at \$14.50 to \$15, and shorts at \$16.50 to \$17.50 in car lots. City mills here sell bran at \$13.50 and shorts at \$16.00 in car lots f.o.b. Toronto. Quotations at the mills west of here are \$14 for shorts and \$12 for bran.

Eggs and Poultry

The English market has declined 3d. to 6d. per 120, owing to large receipts of Russian eggs. But this has not affected the Canadian markets much and prices are still firm, with 15 to 15½c. quoted for fresh-gathered stock at Montreal in round lots. Some later cable reports show an improved market. There have been large arrivals here with fresh-gathered stock quoted at 17 to 18c. in a wholesale way. On Toronto farmers' market new-laid bring 20 to 22c. per doz.

Live chickens for the Government fattening stations are being purchased at 8 to 8½c. for selections of Plymouths and Wyandottes, whilst ordinary stock can be bought for 4 to 6c. per lb. alive. The dressed poultry export trade has not opened up fully yet. The market here continues about the same, though

some large shipments of inferior stock have depressed trade. In a wholesale way turkeys are quoted at 10 to 12c. per lb., and geese at 5 to 7½c. per lb., and chickens at 25 to 50c., and ducks 50 to 65c. per pair. On Toronto farmers' market prices are from 10 to 15c. per cwt. higher than these figures.

Potatoes.

At Montreal potatoes are firm at 45 to 50c. per bag in a wholesale way. Quotations here are 30 to 31c. in car lots on track. On farmers' market potatoes bring 30 to 35c. per bag.

Hay and Straw.

Though there will be a fair quantity of hay this year, the quality will not grade as high as other years. No. 1 quality is very scarce. Canadian hay has been selling well in England. At Montreal baled hay keeps firm at \$8.50 to \$9 for No. 2, and \$7 to \$8 for clover. At country points east, buyers have paid \$7.50 to \$8 f.o.b. for export. Many farmers are inclined to hold for higher prices. Car lots are quoted on track here at \$9 to \$9.50 per ton. On Toronto farmers' market hay brings \$12.50 to \$14, sheaf straw \$13, and loose straw \$6 per ton.

Seeds.

On Toronto farmers' market alike brings \$7 to \$8.50, red clover \$5.75 to \$6.25, and timothy \$1.40 to \$1.80 per bushel.

Fruit.

The apple market shows quite an improvement over a few weeks ago. At Montreal early fall varieties command \$1.50 to \$2 per bbl., and choice red qualities \$2.25 per bbl. Prices at country points, as shown elsewhere, show considerable advance. Choice winter varieties bring from 70 to 75c. per bbl. on the tree, some holders refusing to sell at 85c., and others ask \$1. These are fair prices, considering the large crop in the country. Some account sales show net prices at point of shipment ranging from \$2 to \$3 per bbl. The quality of the fruit is improving, and there may be a better wind-up to the fruit trade this season than many expected. Cable reports are steady for good fruit. On Toronto farmers' market apples bring 75c. to \$1, and \$1 to \$1.50 for choice quality.

Cheese.

Prices have taken an upward turn and quotations last week were ¼ to ½c. higher than a week ago. If the weather keeps fine it is expected that there will be considerable cheese made after October, though pastures in some places have been scorched by frost. Factorymen have not sold quickly this fall and it is expected that there is quite a lot of cheese in the factories. The English home make is being marketed very freely, and it is not expected that there will be a very large

surplus when the season is over, and Great Britain will have to depend chiefly on Canada for her supply. Dealers there grumble at the high prices for Septembers that have to be paid here and are looking to New Zealand for a cheaper supply. Exports from Montreal and Portland continue to show large increases as compared with last year at this time. At Montreal finest Westerns have been quoted at 11½ to 11¾c., and finest Easterns at 11¼ to 11½c., and milder grades at 10¾ to 11½c. At the local markets during the week prices have ranged from 11 to 11½c. per lb., with a fair amount of business doing.

Butter.

The export market for butter is firmer and a steadier feeling prevails. There is a good deal of speculative buying. Canadian exports continue to decrease though a large make of Australian butter is expected. A later Manchester cable reports butter up ½s., with an advance in Danish exports. The Montreal *Trade Bulletin* sums up the situation as follows:

"The situation in butter, although quiet, appears to be gradually shaping towards a steadier market, under light receipts, and more enquiry for local consumption. There also appears to be more of a speculative disposition to take hold on the part of some exporters in the expectation that prices will be no lower this season, and that in England they will improve later on. Sales have been made in this market of choice creamery at 20½ to 21c., while seconds have brought 19½ to 20½c. Western dairy is steady at 17½ to 18c., with very little doing on account of small stocks. The sale of a small lot of August make, only fair quality, is reported at 17½c. for shipment west. For choice Western dairy 18c. has been freely bid without leading to business, as Toronto buyers are taking all offerings at 18 to 18½c."

Creamery butter is in good demand here at 22 to 23c. for prints, and 20 to 21c. for tubs and boxes. Very choice dairy is wanted and pound rolls are easily worth 18 to 19c. Other qualities are quiet. On Toronto farmers' market pound rolls bring 18 to 22c. each.

Cattle.

Good fat cattle at Chicago have ruled lower, though at New York and Buffalo later in the week prices were a shade higher. The New York cable of Friday quotes live cattle at 11 to 12½c. per lb. Buffalo on Friday was in fair condition. At Toronto cattle market on Friday receipts were heavy, consisting of 977 cattle, 2,846 hogs, 1,240 sheep and lambs, and 10 calves. There were few finished exporters' or choice butchers' cattle among the lot. Trade was fairly good for the best class, but medium and inferior were slow of sale.

Export Cattle.—Choice lots of these are worth from \$4.30 to \$4.45, and light ones at \$4.10 to \$4.25 per cwt. Heavy bulls sold at \$4.12½ to \$4.25, and light ones at \$3.12½

European Exporters' Association

AN ORGANIZATION FORMED FOR THE PROTECTION OF CANADIAN SHIPPERS.

Head Offices: *McKinnon Building*, Toronto.
EDWARD STILL, Manager in England. HON. G. W. ROSS, LL.D., M.P.P., President. ERNEST HEATON, Manager in Canada.

The Association is prepared to undertake the following services on behalf of consignors of apples, eggs, poultry and all kinds of fruit and produce:

1. To recommend a reliable Consignee at each port.
2. To arrange freight contracts and effect insurances upon shipments.
3. To give attention, through its agents at ports of shipment, to the proper stowage and prompt transportation of such consignments.
4. To have goods inspected when claims are made by consignees, either for damage in transit, or for alleged non-compliance with contract, and to report thereon.
5. To investigate any complaints and report.

Consignors making small shipments under the auspices of the Association can, by co-operation through the Association, receive all the advantages which can usually be commanded by large shippers who desire the protection of the Association are requested to write at once to the Head Office of the Association, at Toronto, for list of apple receivers, list of sailing dates and instructions for grading and packing of fruit for export.

Poultry Shippers
Apple Shippers

to \$3.35 per cwt. Loads of good exporters' and butchers' cattle sold at \$3.90 to \$4.10 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters' and weighing 1,000 to 1,100 lbs. each, sold at \$4.40 to \$4.60. Good cattle at \$4 to \$4.25; medium, \$3.50 to \$3.75 and inferior to common at \$2.50 to \$3.25 per cwt.

Feeders.—Heavy feeders were not quite so much in demand and prices were easy with several lots unsold. Well-bred steers, 1,000 to 1,150 each, sold at \$3.60 to \$3.80 and poorer quality at \$2.40 to \$3.50 per cwt. Short-keep steers, 1,100 to 1,200 in weight, sold at \$4 to \$4.15 per cwt. and light steers 800 to 900 in weight, sold at \$3.10 to \$3.35 per cwt. Heavy bulls 1,100 to 1,600 in weight, sold at \$3 to \$3.25 per cwt.

Stockers.—Yearling steers, 500 to 600 in weight, sold at \$2.25 to \$3 and other quality at \$1.75 to \$2 per cwt. Yearling bulls, 600 to 900 in weight, sold at \$2 to \$2.25 per cwt.

Milk Cows.—These were in good demand at quotations and more good ones could have found ready sale. They sold from \$30 to \$50 each.

Calves.—These continue in good demand at Buffalo where quotations are \$7.75 to \$8 for choice to extra and \$7.25 to \$7.75 per cwt. for good to choice. Prices here were \$3 to \$10 each.

Sheep and Lambs

On Friday at Buffalo trade in Canadian lambs was fair, lambs selling at \$5.40 to \$5.65 per cwt. Prices were easier at Toronto the same day owing to the large run. Spring lambs sold at \$2.50 to \$3.50 each or \$3.50 to \$4.25 per cwt. Prices were easy for sheep at \$3.25 to \$3.50 for ewes and \$2.50 to \$2.75 per cwt. for bucks.

Hogs

Prices for bacon hogs have dropped to \$6 per cwt., while thick fats sell for \$5.75 and light fats at \$5.62½ per cwt. This is the first time this season that prices for the different classes have been so close together. Owing to large run prices were easy at above quotations. Unculled car lots sold at \$5.90 to \$6 per cwt. It is expected that prices will take another drop this week.

At Montreal the market is reported firm at \$6 to \$6.12½ per cwt. for light bacon hogs. Heavy hogs are quoted at \$5.50 to \$5.75 and are scarce. The *Trade Bulletin's* London cable of Oct. 17, *re* Canadian bacon, reads thus:

"The market is very quiet, and there is very little new business reported. Stocks, however, are light, and holders are not pushing sales. Montreal choice lean sides 62s. to 63s.; No. 2 56s. to 58s."

Horses

The big event in horse circles during the week was the big sale of ranch horses at Grand's Repository on Friday and Saturday. There is a large number of horses to dispose of in the West, and this sale was an experiment to test the market. The stock was not specially selected, but was a representative lot showing as nearly as possible the average quality of horses the ranches of the West can supply. The sale must be considered a great success. Prices ranged from \$13 to \$150. Stock consisted of ponies, mares and geldings, ranging from sucklings to six-year-olds; draft-bred horses, mares and geldings, sucklings, to six-year-olds, and a few old brood mares. We will give a more detailed report of the sale in next week's issue. In the regular trade the demand is fairly good, though prices are not very high.

Apple Market Report.

"Bow Park," Brantford, Oct. 17, 1900. Messrs. Simons, Shuttleworth & Co., Liverpool, cable to-day: "Prices remain about the same as last quoted. The market is unsettled. Larger receipts will likely force prices down."

Messrs. Simons, Jacobs & Co., Glasgow, cable: "No actual change to report since our

last quotations, but there is a feeling of weakness that will without doubt develop into a decline in prices, within a short time, or as soon as the heavier exports reach the markets." J. M. SHUTTLEWORTH.

The Cake He Wanted.

"I'm going to get married," he said, as he placed a hand as large as a Dutch cheese upon the counter, "and I want a wedding cake."

"It is customary nowadays," said the pretty confectioner's assistant, "to have the materials of the cake harmonize with the calling of the bridegroom. For a musician now we have an oat cake, for a man who has no calling and lives upon his friends, the sponge cake for a newspaper paragrapher, spice cake; and so on. What is your calling please?"

"I'm a pugilist?"

"Then you'll want a pound cake." —Exchange.

Of Value to Horsemen.

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balm applied as per directions, just as you are turning the horse out, will be of great benefit, and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balm if they were reminded of it, and this article is given as a reminder.

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Three Color Process. Beautiful Designs. Samples and Prices Mailed on receipt of 7c.

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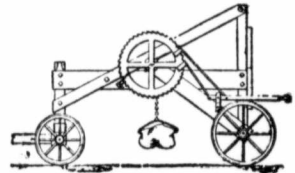
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BEAVER POST-HOLE DIGGER**
will dig in the **dryest of sand** or
hardest of clay. You can dig
any sized hole. Lift out stones,
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and labor saved on one small
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The machine is built of solid
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Windsor Salt

Pure, soluble, even crystals; economical to use.

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Patent Foot and Lever Drive.	No.	Holds	LIST :
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6	5	30 "	6 to 14 "
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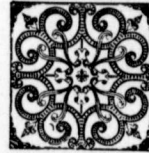
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4. The hopper is between the wheels, and does not choke.

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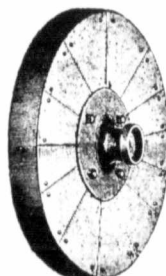
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separates the cream immediately after milking. The skim milk is thus better for stock than when more nature, and so the "Alpha" not only increases the returns from the dairy department, but also increases the returns from the stock department. You ought to know about the "Alpha." Send for a catalogue.

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