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Devoted to Country Life in Canada
J. W. WHEATON, B.A., Editor

D. T. McAINSH, Manager

The Farming World is a paper for farmers and stockmen, devoted to country life in Canada, published on the 1st and 15th of each month, with illustrations.

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The Farming World

And Canadian Farm and Home

VOL. XXIII

TORONTO, 1 JULY, 1904

No. 13

The Militia's Opportunity

WOULD not the farmers of this country have been greatly benefited had all the time and energy wasted in the recent Dundonald discussions about military equipment and control been expended in devising ways and means of solving the farm labor problem and of providing sufficient help to gather in the big harvest of 1904.

The extermination of weeds and the gathering in of the coming harvest are the two chief problems confronting the farmer at the present time. If the country's welfare is the aim of all military expenditure, then let the "soldiers" be marched in force into the root, corn and grain fields, now awaiting recruits. We submit, and we believe, the Minister of Agriculture will agree with us, that there is no lack of arms and ammunition here. A hoe, a rake, and a pitch-fork awaits each member of the force, and with these he can do effective work in the defence of his country. Under Captain Practical Farmer, the hoe, the rake, and the pitch-fork drill, will develop muscle, encourage thrift, and prove most effective in solving for the great farming community their most serious problems. Besides, it would have a most wholesome effect in allaying some of the "jingo" spirit which is becoming a little too prevalent for the nation's welfare.

Is it Fair or Just?

Our contention that the basis of distributing grants to agricultural societies in Ontario should be changed, is strongly supported by some recent figures obtained by Supt. Cowan. These show some glaring discrepancies. One society receiving a grant of \$380, paid out \$2,410 for agricultural purposes, while another society receiving \$800 paid out only \$1,488 in prizes for agricultural purposes. A third society received a grant of \$600 and distributed only \$60 for agricultural exhibits. Then there is the Notawasaga Township Fair, which received a grant of only \$80 and paid out \$1,019 in prizes. Compare this with a leading district society of Eastern Ontario receiving a grant of \$800 and paying out only \$1,125 for agricultural purposes, and we have a most striking example of how unfair is the present plan of distributing grants to agricultural societies according to membership. If the basis of division were according to the amount of money expended in prizes for purely agricultural purposes this inequality would not exist. The society doing the most effective work would then

get its just share of government funds.

Surely there can be no two opinions in regard to the need for rearranging the distribution of the grants to agricultural societies on a more equitable basis. What do our readers think of it?

Harvest Will Soon be Here

The growing season for hay and grain crops will soon be over. Then comes the harvest, for this, farmers in the older parts of the country are, perhaps as well prepared as they were a year ago, so far as help is concerned. In Manitoba and the North West Territories they are better prepared, and with the extra supply that will go forward from older Canada, when the harvest excursions begin, are not likely to suffer. In the East, and especially in Ontario, many a well-to-do farmer, who has been accustomed in the past to hire nearly all his work done, has had to turn to himself to save the situation. We have met several during the past week or two who would be willing to pay for all the help required if they could get it. But it cannot be had, and so a large expenditure of their own muscle and energy is necessary.

They Want to Get at it

Canada is very much to the front these days. Her agricultural resources are not only attracting thousands of people who wish to settle on the land, but also the large manufacturing concerns, chiefly of the United States, who see in this country's development a large market for their produce. So great is the desire of American manufacturers to gain a foothold in this country, that the question of reciprocity with Canada is discussed by them at every convention or gathering of any kind. The importance attached to the Canadian field as a market for manufactured goods, chiefly implements, carriages, etc., is shown in the following extract from a recent issue of the "Implement Age":

"The greatest foreign opportunity for American implement manufacturers is in Canada. Nowhere else in the world is there so great an agricultural empire awaiting American methods of cultivation. Canada is larger than the United States, and more than two-thirds of its area lies south of the northern line at which wheat has been grown successfully. Good wheat crops have been raised in the Canadian Northwest on the sixty-second parallel, 13 degrees north of the international boundary. We can get an idea how far north the Canadian wheat belt extends when we consider the fact that the thirteenth parallel south of the international boundary runs through Tennessee and Oklahoma."

Canada could have no better advertisement than this. The very desire of these people to reach the Canadian field is, in itself, proof that the great Canadian West and the new lands of Ontario are all that the most optimistic claim them to be. Truly, we have a rich heritage, which Canadians should be first in developing.

To Promote Better Seed Grain

The association formed at Ottawa a week ago for the improvement of seed by selection, is destined to have a far-reaching effect upon the grain growing possibilities of Canada. What is surprising, now that we know what can be done in the improvement of seed by selection, is that something of this kind was not attempted years ago. Had a similar movement been inaugurated, say twenty or thirty years ago, when the farmers of older Canada began to experience a gradual falling off in grain yields there might be a different story to tell today in regard to average crop yields per acre. While a large share of this decrease in yield has, no doubt, been due to a failure on the part of farmers to properly maintain the fertility of their lands, yet it cannot be denied that much of it has been caused by the sowing, year after year, of inferior seed, lacking in vitality and the power to give vigorous growth to its offspring. One may have the richest kind of soil, and yet if the seed sown lacks in vitality a maximum crop yield cannot be expected. The same reasoning holds good in the animal world. A farmer may have an abundant supply of the very best kinds of foods for fattening purposes, and yet if the animal to which they are fed, has not had developed in it the power to lay on flesh profitably, the maximum of beef production, both in quality and quantity, cannot be realized. The quality of the seed put into the soil has much to do with the crop yield, in quality as well as in quantity.

The new association starts under most favorable auspices. It has, through Professor Robertson and Mr. Clarke, Chief of the Seed Division, the backing and active co-operation of the Dominion Department of Agriculture. The four hundred or more persons who took part in the recent MacDonald seed grain competition are already enrolled as active members, besides a number of farmers who have made seed selection more or less of a close study. Work has, therefore, begun under favorable auspices, and the success of the movement is reasonably assured.

We bespeak for the association the

active support of every grain grower. Though building more for the future, perhaps, than for the present, its work cannot but have a most beneficial effect upon Canadian agriculture.

Canadian Dairymen! Wake up!

Our English correspondent digresses a little in this issue, and instead of his regular letter on English market topics, gives our readers a most interesting description of butter-making in Holland. It is only about twenty-five years since the first butter or cheese factory was opened in that country and the progress made, especially in butter-making, has been most marked. Today, Holland exports to Great Britain alone nearly 39,000,000 pounds of butter, or a total of 62,000,000 pounds to all countries. No fewer than 324 head of cattle are maintained on every 1,000 acres of arable land.

Dairy progress in Holland is not without interest to Canadian dairymen. Countries like Holland, Denmark and Norway are our strongest competitors in the British butter market, and a study of their methods will be profitable.

One part of their practice which Canadians could very well copy is that of pasteurizing cream or milk for butter-making. This practice, as our correspondent points out, vastly improves the quality of the butter. We cannot hope to compete successfully with either Holland or Denmark in supplying the British market with a first-class butter product unless the quality sent over is uniformly good. And this cannot be secured under co-operative dairying methods unless pasteurizing is more generally practised by our creameries.

While we have good reason to feel proud of the position of Canadian dairying today, yet there is no getting around the fact that we are woefully behind in some things. One of these is the slowness with which our dairymen take up new and up-to-date ideas that are essential to the successful practice of modern dairying. While we are hesitating, other countries are forging ahead and will soon overtake us, if they have not already done so. A pasteurizing outfit is recognized by experts as essential to successful butter-making on the co-operative plan. And yet, how many creameries are there in Canada that have a complete outfit? Very few, indeed, and at the progress we are now making it will be a decade or two before we accomplish anything worth while in this direction.

This seeming apathy of our dairymen to properly equipping their cheese factories and creameries, is not due altogether to a lack of appreciation of these things. The "penny wise and pound foolish" policy of cutting down the price of making to the lowest possible notch is largely responsible for it. One naturally concludes upon seeing some of the filthy, ram-

shackle places where Canadian cheese and butter are made, that our dairymen are only in the business for a season or two, and will gradually drift away to some other fields; like the miner when he has worked one mine for all it is worth, seek new pastures. But there is nothing of a temporary nature about the business. For nearly forty years Canadian dairying has been a fixture, and present indications are that it will continue to be one for many, many years to come. Then, why try to run it in this hand-to-mouth fashion. Give the industry stability and permanence in appearance as well as in fact, by supplying good, up-to-date buildings, equipped with the latest and best machinery for turning out the finest product. Other countries are doing it, and we must do so if our present position is to be retained, let alone making progress. Besides, it will pay in improved quality and higher prices.

Some Figures that Speak

Since 1885, over 66 per cent. of the cattle and calves received at Chicago market have been slaughtered. In 1893 the percentage ran up to 73. Only one year did it go below 60, and that was in 1889, when only 59 per cent. of the receipts were slaughtered. In 1903 the total receipts of cattle and calves were 3,799,008, of which 1,295,699 were shipped alive and the balance converted into dressed meat at the big packing houses. Of the 2,407,530 slaughtered, 245,499 were calves. Previous to 1885 the average percentage slaughtered was 42.

During 1903 the total exports of live cattle from the United States and Canada totalled 511,172, and of sheep 241,092. The total exports of dressed beef for the same year was 1,359,222 quarters. This was an increase of over 350,000 quarters as compared with 1902.

The exports of live cattle from Chicago to Great Britain in 1903 totalled 269,227 head, which sold at Chicago at prices ranging from \$4.35 to \$5.80 per cwt. The prices paid in London per lb. dressed weight, sinking off, ranged from 8½¢. to 14½¢. In 1902 the figures were 138,811 head; British price, \$4.75 to \$7.50 per cwt.; Chicago price, 10½¢. to 16½¢. per lb. dressed weight. The lowest prices were in 1890, when 339,535 head were shipped, realizing from \$3.75 to \$5.75 per cwt. at Chicago, and 8½¢. to 13¢. per lb. in London.

Taking the past twenty years, the figures representing the total receipts of cattle and the number converted into dressed meat bear a pretty constant relation to each other. The dead meat trade has obtained a firm foothold and the much larger number of the cattle reaching Chicago are taken by the big packers. That the business is a profitable one goes without saying. Other centres, such as Omaha, Sioux City, Kansas City, and St. Louis, are miniatures of Chicago in

pushing the dead meat trade, which is now the big industry of the country.

Canada should have this trade established, too. If, say, 60 per cent. of our live export cattle were slaughtered here, we would have an industry that would be worth something to the country. Cattle values would be better and a more stable market provided.

Western Canada's Possibilities for Wheat Growing

The title "Granary of the Empire," as applied to Canada, has been disputed by an authority who claims that we have not sufficient railway accommodation to enable us to produce wheat in sufficient quantities for Great Britain's needs. Mr. George Johnston, Dominion Statistician, claims that this contention is without foundation.

He reasons this way: Manitoba alone has 2,200 miles of railways. A strip five miles on each side of the railways would give 14,000,000 acres of land. At the average rate of production in that province during the past eighteen years—18.65 bushels per acre—this would yield 261,000,000 bushels of wheat or 60,000,000 bushels more than the United Kingdom has imported in any one year from all the wheat exporting countries of the world. The North-West Territories have at present about the same mileage of railways as Manitoba, which, computed in the same way, would yield another 261,000,000 bushels of wheat.

If the whole wheat-growing area of Canada, that is, the area which would be able to produce wheat, if under cultivation, be taken, the production would exceed the present demands of Great Britain for import wheat by 66 to 1. The total area in Canada capable of producing wheat reaches 770,500,000 acres. One can picture what its possibilities are when once brought under the sway of the settler.

The wheat acreage of Manitoba, actually under cultivation, has grown from 623,245 acres to 2,040,000 acres during the past thirteen years; and the corresponding yield from 7,200,000 to over 53,000,000 bushels. Thus, Manitoba alone already produces one-quarter of Great Britain's demands. If only the last thirteen years' growth is repeated within the next thirteen, the day when Canada can supply the United Kingdom with all the surplus wheat she needs is not so very far away.

Beef Cattle Sketches

Professor C. S. Plumb, of the Ohio State University, has published a neat little book entitled "Little Sketches of Famous Beef Cattle," that promises to fill an important place among beef cattle breeders. It gives a brief sketch of some of the leading beef animals that have won distinction, chiefly in the United States. It sells at 60c.



Team of imported Clydesdale mares, winners at the Gait Horse Show; first for draught team, first for single draught and first and second in class for age. Owned by A. Aitchison, Guelph, Ont. Imported by T. H. Hassard, Millbrook, Ont.

Central Experimental Farm Visited

In the Ottawa Valley section the spring season is usually from two to three weeks later in opening up than in central and western Ontario. But this year is an exception to this rule. To our surprise when visiting in that district about the middle of the month we found vegetation as far advanced at Ottawa as in Toronto, or any point west of here. The reason is that that part of the province has been favored with better growing weather and more favorable conditions for seeding operations.

Situated as it is in this highly favored section, the Central Experimental Farm is looking exceptionally well. At the time of our visit it presented a most attractive appearance, the trees and shrubbery looked their best, and the fields indicated a bountiful harvest a few weeks hence. In general appearance, the Farm has greatly improved in recent years. The ornamental trees and shrubbery have reached a large growth and give a picturesqueness to the landscape that is most effective. It is indeed a delightful spot on a bright June morning, and one would gladly linger longer did not other duties compel a hastening on.

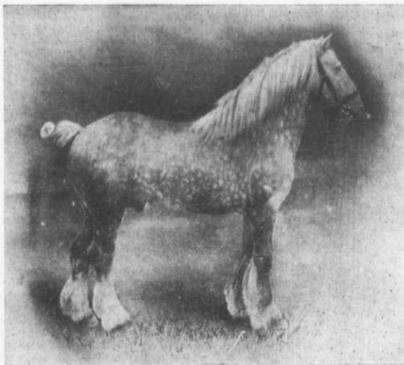
The work of the Farm has settled down to a somewhat regular routine each year though none the less effective on that account. Correspondence has greatly increased, and the number of inquiries for information and help on a great variety of farm topics, prevent the staff from undertaking much new experimental work each year. However, some new experiments are undertaken each year and the results published in the annual report. The Director, Dr. Saunders, has this year undertaken some important work in testing the different grades and varieties of wheat as to the quality of flour they will produce. This is much needed. Every grade and variety of wheat will not make the same quality of flour, and consequently of bread. It is most important, therefore, that the exact properties of each in this respect should be known and the results published. The experiment might, perhaps, be more conclusive, if the flour of each grade or kind were made into bread.

One of the most important and far-reaching pieces of work carried on is that of producing hardy varieties of fruit for the North-West. This work was begun several years ago and is now beginning to bear fruit. These hardy trees have, for the most part, been produced by crossing the Siberian Crab with the apple (mostly Russian varieties). Over 100 of these trees are now fruiting and there should be some reliable data forthcoming shortly. These trees are allowed to grow with little or no pruning, as it is not considered advisable to do much pruning in a cold climate. A great many of these hardy varieties have been sent from the Central Farm to the West to be tested. They have been planted at various elevations, ranging from 400 feet, at Winnipeg, to over 4,000 at the Rocky Mountains, and reports generally indicate that they have wintered well. The Central Farm is strong in Hor-

ticulture. Under W. T. Macoun's direction some valuable work is being conducted in this department. The fruit trees on the Farm, as elsewhere, suffered much from the past severe winter and consequently a great many of the less hardy varieties will have to be dug up. It is, perhaps, a case of the survival of the fittest, and those left will have shown themselves to be the ones that will give growers in the colder parts of the country the best service. Mr. Macoun has been experimenting largely this season with the hairy vetch as a cover crop for orchards. Though not conclusive, the work so far shows that this plant may lessen the need for cultivating the orchard every season. It has the properties of conserving as much moisture in the soil as it gives off and should prove most valuable to orchardists as a cover crop. Most of the fruit trees have low heads. This gives ease in gathering fruit, the fruit does not blow off so easily, and the trees are better protected. A most interesting spot in the orchard of Wealthy apples. It is "Wealthy" in more than name. The orchard was planted in 1896, the trees being very close together, or 430 trees to an acre. Fruit bearing began in 1899. In 1902 the average net returns for each of the preceding four years was \$121 per acre. In 1902, 250 barrels per acre were sold off this orchard.

Mr. Macoun is carrying on a very practical test in growing vegetables under canvas, the main object being to keep off insects and other pests. So far, it has proven most successful, and vegetables of all kinds grown under canvas were much farther advanced and of much more rugged growth than those planted at the same time outside. And what is more, not a worm or pest of any kind was to be seen. In the Experimental Farm report for 1903, full particulars of this work for last year are given. It will pay everyone interested in garden work to look this up. In 1903, an enclosure 62x16 feet, and 6½ feet high, covered with cheesecloth, was built for a total cost of \$23.98. As such an enclosure will last for several years, Mr. Macoun estimates the net cost for one year at \$7.99. Considering the possibilities of growing vegetables under canvas, this is not a high figure.

Mr. J. H. Grisdale, Agriculturist, intends conducting a series of experiments this season with the various



Three-year-old shire stallion Moulton William 21657, a prize winner in England. Imported and owned by Messrs. Bowden & MacDonald, Exeter, Ont.

stock foods sold and made in Canada. These foods will be fed to horses only and the results noted. Tests will also be made with tankage, blood meal and various green feeds. The cattle feeding experiments in the next three years ago, will be continued. Last year's work, as stated in the annual report, does not show much profit for the feeder. In fact, a loss is reported for nearly every experiment. This is largely accounted for by the fact that stockers and feeders were high in price and the price had dropped materially when the finished animals were ready for market.

A most interesting feature of the experimental plots is the growth of clover. A plot of Sanfon shows most marvelous growth. Mr. John Fixter, Farm foreman, and who also has charge of the Experimental Farm apiary, thinks this plant will revolutionize the bee-keeping industry. This year the plants were planted on May 28th, and the blossoms were most vigorous looking on June 15th. It blooms much earlier in the season than the ordinary clover, and is thus of value for honey purposes between tree blossoming time and the period when the common varieties of clover come into bloom. In addition to this quality, Sanfon is of great value as a fodder crop, being very much similar to alfalfa in this respect.

The poultry department is progressing under Mr. Gilbert's direction. The incubator hatch this season has been exceptionally good. This delicate piece of mechanism, as operated at the Farm, has discounted the hen in the percentage of success. Mr. Fletcher and Mr. F. T. Shutt were absent, the former in the Maritime Provinces and the latter in British Columbia, but the splendid work connected with their respective departments of entomology and chemistry. J. W. W.

Before the Railway Commission

The newly appointed Railway Commission met in Toronto last week and heard representations from a variety of sources, touching mostly on freight rates and railway equipment. The railways were largely represented by prominent members of their staff and by counsel. The grievances as set forth by those representing the agricultural interests, chiefly the fruit trade, have been frequently referred to in these columns. In opening the case of the fruit growers, Mr. W. H. Bunting, President of the Ontario Fruit Grower's Association, made a most admirable appeal. He did not ask for too much, but stated in a plain and concise manner, the difficulties under which the fruit trade is laboring and which, from the impression made upon the members of the Commission, seem in a fair way to being rectified. In fact, the case was well and strongly put by all the fruit growers' representatives. Mr. Bunting asked for redress, as follows:

(1) A reduction of the classification of fresh fruit in less than car lots, from first to third class, and of car lots from third to fifth class; (2) that apples and pear boxes and barrels should be in the same classification; (3) that car lots of fruit should not contain more than 20,000 lbs.; (4) that the cost of icing of cars en route be changed from a flat rate to one covering the actual cost to the railways for this service.

Mr. E. D. Smith, M.P., Winona, Ontario, followed. He emphasized two special needs which the fruit growers, or better, shippers, required to be supplied by the railways: (1) quicker transportation; (2) and cars when wanted. Severe losses resulted

from the shipper not being able to get cars when wanted. In regard to the movement of freight, they had not much to complain of so far as car lots were concerned. The greatest grievance in this respect was with less than car lots. There appeared to be no system about the moving of this kind of freight. He estimated that fully 25 per cent. of the fruit going in less than car lots is delayed en route. Better accommodations at railway stations for storing fruit should be provided.

Mr. R. J. Graham, Belleville, specially representing the apple shippers, emphasized the need of better equipment of cars for fruit, and especially for apples. He made a strong point by stating that he was not so much concerned about freight rates as the producer had to pay that. It was equipment and quick transportation that concerned the shipper most. A great deal of fruit was seriously damaged because of lack of equipment, and Canadian railways are very much behind in this respect. He considered one week was a sufficient time to order cars ahead. Both ventilated and frost proof cars were wanted. Another serious grievance was the trouble in getting a clean receipt for goods shipped, especially at the smaller stations. The usual custom was to give one with shippers' load and count by which the railways could not be held responsible for the exact amount of the goods shipped. It was also hard to get tracing of cars when one had gone astray.

Mr. Dawson, Toronto, took up the question of unpaid claims. This was a serious grievance. Very often the shipper had to wait a year or longer before a just claim for damage to goods or a rebate was paid.

The railways replied to these demands, admitting some of the grievances set forth and denying others. They stated that some of the remedies asked were unfair, especially was this true in regard to the demands respecting classification of freight.

Mr. J. Locke, Wilcox, Alexandria, took up the question of rates on behalf of the farmers generally. The tariff of rates should be published. He also asked that all special rates and rebates be published. In the case of oats, the grower was discriminated against in favor of the miller. The Canadian farmer was also discriminated against in regard to cattle. The Canadian farmer should be placed on the same plane in regard to railway rates as the American farmer.

On the whole, a strong case was presented, which should make an impression upon the Commission, whose decision will not be rendered on most of the counts for some time at least.

Are Young Stallions Overworked?

Many farmers complain of the difficulty of getting their working mares in foal. If properly managed, a mare ought to do her share of the work and raise a colt every year. Dealing with this difficulty, "Wallace's Farmer," in a recent issue, says:

"The owner of the mare is no doubt partly to blame. Farm work is usually pressing during the breeding season and the time required to take the mare to the stallion is grudgingly given. She is driven to the horse as quickly as possible, brood, trotted home, and worked the remainder of the day in the field. If she settles to the service after this sort of treatment it is the exception rather than the rule. If it is worth while taking the time necessary to breed the mare in the first place, it is worth while to take a little more time and endeavor to settle her at the first service and

not be compelled to return her two or three times. After the service she should be put in a stall away from other horses and allowed to remain there quietly for an hour or two, or longer, if possible, and then driven some slowly and kept quiet the remainder of the day. If it is the intention to get a colt if possible no thing should be allowed to prevent returning the mare for trial not only at the end of the first period but the second as well.

"To the pernicious practice of overworking the stallion, however, is due, more than to any other one thing, the small percentage of colts. One of our readers who was in the office last week spoke incidentally of having taken a mare off to the stallion at 4 o'clock the morning before, and on being asked why, said that the horse was being permitted to serve two to five mares per day. How can a horse that is abused in this manner be expected to get a reasonable percentage of strong colts? This reprehensible practice is more common with company horses than those owned by individuals. There should be some regard for their horses and as a rule refuse to allow them to be seriously over-worked and debilitated. The members of some companies, however, seem to think that having invested two or three thousand dollars in a horse they must make him earn it the first year, and as a result they prematurely injure him. In many cases, and get considerably fewer colts than they would under a less greedy policy."

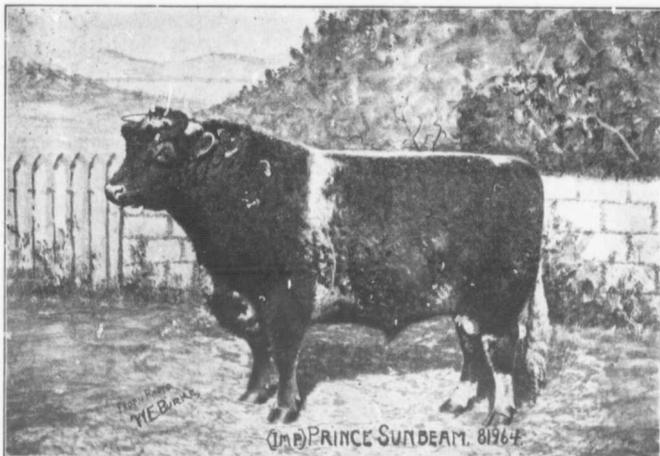
Sore Necks and Shoulders

Writing on the above subject, Dr. A. S. Alexander says:

When shoulders tend to become sore see that colts fit well, is kept clean, always dried at noon and never allowed to remain on horse during meal times. Sponge shoulders with solution of half an ounce of tannic acid in half gallon of water three times daily to toughen shoulder skin. Saturated solution of alum, strong salt water, are also useful in same way. If shoulders swell and have sore spots from collar, paint enlargement twice daily with solution of one part tincture of iodine and three parts extract of witch hazel. Should large sore, or sore tarty to heal, form on shoulder, back or back of neck, keep it clean, and three times daily apply the following ointment: Iodiform, one dram; tannic acid, two drams; lanolin or lard, one ounce; mix. When top of neck under collar becomes sore, never clip off the hair. That only leaves a lot of stout bristles, which the collar forces into the sore, making it worse. Keep part clean, cut out dead skin, then apply above ointment. Zinc pad under collar sometimes helps in this condition. If hard tumors form in shoulder, by treatment is to dissect them out and afterwards treat the place as a common wound. This also applies to boggy tumors and large flat, fungus sores on shoulders. In clipping horses never remove hair from parts on which harness rests, as under saddle and under collar conditions. If horses. Best have harness fit well at first than have sores to heal afterwards.

Canada's Trade with Australia

In 1903 Canada exported to Australia, the goods to the value of \$200,000 and imported from that country goods to the value of \$123,000. A large share of the exports were made up of agricultural machinery, timber, and manufactured goods.



Imported Shorthorn Bull, Prince Sunbeam, a grandson of the great Scottish Archer (50893) and descended on his dam's side from the great Heatherwick Mayflower family. Owned by W. D. Flatt, Trout Creek Farm, Hamilton, Ont.

Canadian Seed Growers' Association

Representatives of the agricultural interests from all parts of Canada met in Ottawa on June 15th and 16th and formed an organization, the work of which will, no doubt, have a most far-reaching effect upon Canadian agriculture. The meeting was called by Prof. J. W. Robertson, Commissioner of Agriculture and Dairying. The successful outcome of the MacDonald seed grain competition, so ably managed by Prof. Robertson, has shown what can be accomplished by the careful selection and improvement of seeds. Four hundred and fifty young people carried it through to the third year. And marvellous were the results. In the case of oats, there was an increase of 27 per cent. in the weight of grain produced from the selected seed as compared with the average crop of the farm. In spring wheat the increase was 28 per cent. Though this was due to some extent to better care and cultivation generally, the greater part was due to selection. In addition to these, 22 per cent. of the practical farmers associated with this work reported an improvement in their general crops from selected seed.

To extend and carry on this work, so well begun, what was known as the MacDonald-Robertson Seed Growers' Association was formed a year ago, having for its membership those who had taken part in the three years' competition and others who had done successful work by seed selection. The new organization, which will be known as the Canadian Seed Growers' Association, will continue and extend the work begun by the MacDonald-Robertson Association. Branch associations will be formed, and every effort will be made to improve the seed grown in all parts of the Dominion. More than this, the work will be systematized and pure seed produced by a careful selection of the growing plants during three or more consecutive years, recognized by a certificate of registration. In other words, operating members of the Association who carefully follow the directions will

have their selected seed recorded and be granted a certificate by which such seed shall be known as pure-bred or improved seed. Our readers are quite familiar with the recording of pure-bred live stock. The work of recording to be conducted by the Canadian Seed Growers' Association, will be somewhat similar, but with this distinction, that while the live stock breeder can register an animal of inferior quality, so long as the breeding is right, the plant breeder cannot do so. He must have quality as well as pedigree in the seed he offers for registration. Seed, good enough to merit a certificate will therefore be of a quality that will ensure its being of very much greater value than ordinary grown seed.

Upon this basis the Association begins its work. To start with, records will be kept of seeds of wheat, oats, barley, flax, corn, millet, peas, beans and potatoes, grown by members according to the regulations laid down for their guidance. Work with other seeds will be taken up later. The Association will comprise operating and honorary members. Its work will be in the immediate charge of the Department of Agriculture. It starts under most favorable auspices, having the promise from the Hon. Mr. Fisher of a liberal grant with which to carry on the work.

The officers for the current year are: President, Prof. Robertson; Secretary-Treasurer, G. H. Clark, Chief of Seed Division, Ottawa. Executive Council—The President, Secretary, and C. A. Zavitz, O.A.C.; G. A. Gignault, Quebec; W. F. Davidson, Quebec; C. C. James, Deputy Minister of Agriculture for Ontario; J. H. Grisdale, Ottawa Experimental Farm.

Directors—Dr. Jas. W. Robertson, Ottawa; Prof. C. A. Zavitz, O.A.C., Guelph, Ont.; Prof. C. C. James, Toronto; G. A. Gignault, Quebec; Prof. J. H. Grisdale, Ottawa; Walter Simpson, Bay View, P.E.I.; Thos. A. Peters, Fredericton, N.B.; W. S. Davidson, Bethel, Que.; George Harcourt, Regina, N.W.T.; John Mooney,

Valley River, Man.; J. H. Smith, Langbank, Ont.; J. W. Wheaton, Toronto; W. L. Smith, Toronto; Wm. Thompson, Derwent, Ont.; Dr. W. Grignon, Ste. Adèle, Que.; F. L. Fuller, Truro, N.S.; Geo. Batho, Winnipeg; W. D. Albright, Sussex, N.B.; Thos. W. Drysdale, Allan's Corners, Que.; S. A. Bedford, Brandon, Man.; J. R. Anderson, Victoria, B.C.

To Regulate U. S. Seed Trade

Canada is not the only country seeking to regulate the seed trade. Secretary of Agriculture Wilson, at Washington, is sending out the following in reference to impure seeds: "The act of Congress making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1905, contains the following: 'The Secretary of Agriculture is hereby directed to obtain in the open market samples of seed of grass, clover, or alfalfa, test the same, and if any such seeds are found to be adulterated, or misbranded, or any seeds of Canada blue grass (poa compressa) are obtained under any other name than Canada bluegrass or poa compressa, to publish the results of the tests, together with the names of the persons by whom the seeds were offered for sale.' Announcement is hereby made that the collection and testing of seeds, as directed by this act, will begin July 1, 1904."

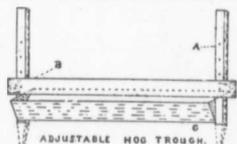
Will Refine Raw Sugar

The acreage of beets at the Wallaceburg factory will be far in excess of what it was last year. After this season's operations are over, it is expected that some important changes will be made. It is proposed to install machinery for the refining of raw sugar on an extensive scale. This raw sugar will be brought in from the West Indies or from Cuba and can be landed at the factory without rehandling. It is not possible to get enough beets to keep the factory running for more than three months of the year. With this extra equipment the full staff of employees would be retained for ten or eleven months of the year.

Farm Implements and Conveniences

A Clean Hog Trough

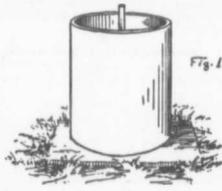
There are several methods for building hog troughs, which may be used with desirable effect; one, as illustrated in the accompanying drawing, is as follows: Drive a 4x4 post in the ground at each end of the trough and nail the trough to these posts. Put several holes for bolts in



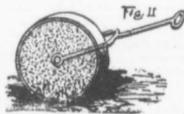
the 4x4 posts as at A, and a hole in each end of the 6-inch board B suspended over the trough. The bolts in the post can then be changed and the board over the trough raised or lowered according to the size of the hogs. In addition to this, there should be a floor on either side of the trough at least two feet wide, and this should be made of 2-inch stuff. The idea is to keep the contents of the trough clean.

A Garden Roller

Get a piece of two foot earthenware tiling about fourteen inches in diameter and set it on a board as shown in Fig. 1. Place an iron rod exactly in the centre, passing down through the board about an inch and projecting



above the tiling about the same distance, that is, two inches. Now, fill in the tiling to the top with cement and broken rocks, the cement being two parts sand to one of dry cement. Have the ends faced with the clear mixture of sand and cement, that is, with none of the broken rock appearing in view. Now arrange a handle upon the projecting iron bar



in the centre, as shown in Fig. 2, and the roller is complete. Should the outer covering of tiling ever become broken by accident, there will be left a firm roller of cement that has hardened to rocklike consistency.

A Substantial Driveway

A plank driveway into the barn is usually steep (to save planks), and is constantly breaking and rotting out.

Drive down stakes, as shown in Fig. 1, and fill in between with stones,



rubbish and earth, packing all down firmly. When hard and full to the top of the stakes, throw some earth against the outside of the stakes, and



sod over the sides, as suggested in Fig. 11. Such a driveway gives a long easy rise, is attractive in appearance and will last indefinitely.

Sewage Disposal on the Farm

One of the modern conveniences is water supply in the farm home. This can be easily obtained where a windmill is in use. With a water supply it is a very simple matter to install a bathroom and water closet in the home. The great drawback to this is the disposal of the sewage. It would not be suitable to discharge this sewage on the surface of the ground or into tile drains. The usual plan is to build a cesspool. This cesspool must be made water-tight or the surrounding soil will be polluted and the health of the family endangered. Even if made watertight it must be cleaned out frequently, a very filthy and disagreeable task. A better plan than this is now suggested, that of the septic tank.

The civil engineering department of the Iowa Agricultural College is now working on a plan of septic tanks which it is hoped will make a cheap and effective method of disposing of farm house sewage. The system works well when practiced on a large scale. The experiment is being conducted with a plant for a private house which can be built for \$25 or less. It consists of three barrels buried in the ground. The first two contain about 50 gallons each, constituting a septic tank. The sewage enters the tank at the top of the first barrel and both barrels full of sewage all the while. Once a year it will probably be necessary to dip out some of the sediment from one or both of these barrels. The third barrel is of about 30 gallons capacity and contains an automatic siphon which whenever the sewage reaches a certain level in the barrel, will automatically discharge its contents down nearly to the bottom. Thus in the third barrel the level of the sewage fluctuates. The siphon in the third barrel discharges the sewage upon the surface of the tile ditch. This tile ditch is 20 feet long by 3 feet wide by 3 feet deep, and is filled with sand instead of earth. The joints of the tile must be surrounded by fine pebbles to keep the sand from entering the tile. It is hoped that the water passing off in the tile underdrain will be clear and pure so that it will not clog a tile drain if the outlet is into such a drain and so that it will not be objectionable to discharge upon the surface of the ground if there is sufficient fall to do this.

Advertising

In advertising, the principal point is to avoid statements that cannot be fully substantiated by a practical test of the article advertised. Another point is, stick to the subject and avoid guarantees. Guarantees are useless and the public know it. In advertising Herbageum the object is to induce feeders to test it and that is all. Advertising does that and Herbageum does the rest. Statements made in advertisements re Herbageum are facts, and a test fully proves them. The feeder who gives Herbageum a trial becomes at once Herbageum's friend and is seldom backward about saying a good word for it, and his good word for it is the best possible advertisement.

NOTE.—Applications for our book, "Stock Pointers," have been so numerous that our present edition is exhausted. We have received hundreds of orders which cannot be filled until our new edition is out. The book is free, write for it at once and mention this paper and we will fill your order as soon as the new edition is out. Address, The Beaver Mfg. Co., Galt, Canada.

Good Words

"I cannot say too much in praise of Herbageum. I always get good results by feeding it. I have been feeding it for two years and therefore know what I am talking about. It keeps my hens free from lice and makes them lay more eggs. I feed it to my pigs and the good results are certainly remarkable. The benefit to my horses has been alone worth more to me than I have paid for Herbageum for all my stock. I would not be without Herbageum."

STEPHEN STEPHENS,
Glendinning, Man.

Dec. 9th, 1903.

"I have tried a great many stock foods and condition powders, but I have found nothing to equal Herbageum. I feed it to horses and cattle and I have found it of special benefit when fed to my horses that have been on the delivery wagons in Toronto."

A. H. HANN,
Egremont, Ont.

Feb. 20th, 1904.

"I am satisfied that there is a good profit from the regular use of Herbageum. I feed it to my stock and the results are always satisfactory."

EDWARD HAWKINS,
Micksburg, Ont.

Jan. 6th, 1904.

"I believe Herbageum to be the best thing on the market. I find it especially good when fed to young calves with skim-milk."

ROBERT BARBOUR,
Varney, Ont.

Jan. 23rd, 1904.

"I feed Herbageum to calves, pigs and turkeys, and it is always satisfactory. It makes skim-milk fully equal to new milk for calves and pigs."

W. E. CAMPBELL,
Heatherdale, N.S.

Jan. 27th, 1904.

"I feed Herbageum regularly to my stock. It increases the flow of the cows' milk, keeps horses in good trim and is a great benefit in feeding and fattening hogs. I use continually and would not be without it."

I. W. ROLFE,
Marbleton, Que.

Jan. 18th, 1904.



Topsyman of Woodruffe, son of Topsy Belle, 1st prize Ayrshire heifer under 36 months, Ottawa Dairy Test, 1903. Owned by J. G. Clarke, Ottawa.

Correspondence

Maintaining the Fertility of Orchards

Editor THE FARMING WORLD:

In view of the favorable reputation which Canadian apples hold in Great Britain and the European continent, and the large and rapidly growing trade which is carried on in fruit of all kinds, but especially in apples, we, as fruit growers, should do everything in our power to increase the quantity and add to the quality, in face of the increased competition from other countries.

The question, "How shall we maintain the fertility of our orchards?" will be asked by all who heard Mr. Caston, president of the Ontario Fruit Growers' Association, make the statement that a large number of the orchards, especially in the older sections of Ontario, were starving for lack of plant food, and that in many cases the deterioration of certain varieties was principally due to lack of food. A statement of this kind, coming from such an influential fruit grower should cause us to pause and reflect on how we can economically provide this plant food for the trees.

Some say, use stable manure. This is all right as far as it goes, only it is not a complete manure for orchards, having an insufficient amount of potash, and under our present system of growing leguminous cover crops, it has much more nitrogen than is necessary. But the chief argument against its use for the orchard is that no farmer has more stable manure than he can apply with profit to his annual farm crops, and if he applies it to the orchard, he must skimp some other part of his farm, which system, if followed for some time, will eventually run down the farm.

This system of "robbing Peter to pay Paul" is seen to perfection in Southern Wisconsin among the tobacco growers, where it is a common saying that tobacco ruins a farm, and a man wishing to buy a farm will steer clear of one which has grown tobacco. Here the fault is not so much with the tobacco as with the farmer.

Tobacco being a money crop, and also requiring large quantities of manure, it is a common practice to apply the entire amount of manure made on a farm to a few acres of tobacco, which practice in a series of years will surely run down the farm.

The same argument holds good in Ontario as in Wisconsin, where they say, or at least the thinking farmers do, that if tobacco will not pay for its fertilizer, better go out of the business. So, before we, in Ontario run down our farms, we had better decide that if fruit will not pay to buy fertilizer for, we had better dig up our trees by the roots and plant something else.

The next question would be, "What shall we use?" Those who are situated near towns can buy stable manure, but for the majority of farmers this is impracticable. Even in favorable cases it is doubtful if for each fruit it will pay for the reasons given above.

In some cases as with small fruits, poor land, or where a proper system has not been followed, it may be desirable for a time to use stable manures, but the successful farmer must get his nitrogen cheaper than paying 12 to 16 cents per pound for it, and he can obtain it for nothing by means of a leguminous cover crop. Of all the different crops advocated, I believe Lucerne clover to be the best, as it will make a better growth in the dry weather, which we usually have in the fall, and also a better root growth than the common red clover, which is favorably known for this purpose. Lucerne is subject to being winter-killed, but this makes little difference where it is sown to be plowed under in spring. The Hairy Vetch is also highly recommended for this purpose. But I would give a word of advice.

Don't sow too early in the season, remember that it is a full apple barrel rather than a luxuriant cover crop, which is wanted. I believe that in dry seasons the fruit grower loses an enormous amount by stopping the cultivator too soon, and as a rule, cover crops should be sown a month later than usually advised. Never sow a cover crop until you feel sure that the apples are safe, even in case that no rain should come until picking time. This system might not produce such a fine cover crop, but it will produce more apples. Leguminous cover crops will provide for all the nitrogen necessary, but something else is required, or we will ruin our fruit crop through unbalanced feeding. I firmly believe that the popularity of cover crops, together with the use of stable manure, has had much to do with the

cry that Canadian apples are not keeping as well as they did in former years. We all know that an excessive amount of stable manure, which is largely a nitrogenous manure, will grow a large, pale, soft apple, lacking in color, flavor, long-keeping qualities, and that indescribable element often called "snap," for which Canadian apples are noted. I know for a fact that dealers are beginning to keep records in order to find where the poor keeping apples come from. Thus we see we can provide ourselves with an abundant supply of nitrogen and humus, but we can not get in that way the potash and phosphoric acid which are also needed.

Experiment stations recommend a fertilizer containing 2 per cent. of nitrogen, 9 per cent. of potash, and 7 per cent. of phosphoric acid, but if a proper system of cover crops is followed, I think we can leave out the nitrogen and use potash and phosphoric acid in above proportions. In order to obtain this "common sense" would teach us to use our own waste matters, that is, bone meal and wood ashes, which at present we ship across to the United States to improve the quality of their fruit.

In bone meal the steamed will be found more economical than the raw, being less in price and having a higher percentage of phosphoric acid, though lower in nitrogen, which is no detriment in a properly managed orchard.

For the potash we should use the ashes produced at the farm and in addition thereto the commercial potash salts, particularly sulphate and muriate of potash, which are very high grade, containing 50 per cent. of pure potash, while ashes contain only 5 per cent. on an average. Weight for weight, the potash salts mentioned are worth five times the value of ashes, and as a commercial article, the former are usually a more economical source of potash than the ashes.

G. FLEM. MANN,
Grey Co., Ont.

Improving the Sulky Two-Furrow Plow

Editor THE FARMING WORLD:

The time has come for farmers to economize labor by using three and four-horse teams as much as possible, allowing one man, in a good many particulars, to do two men's work. The sulky plows now have rolling colters which are very much lighter in draft than straight colters. The objection has been that it using jointers on the two-furrow plows with straight colters, the draft was too great for three horses to pull, and this difficulty has been overcome by a simple device to attach the rolling colter and pointer or skimmer to all sulky plows. Where known, they are in demand, as most all farmers will admit that if the draft can be so arranged that three horses can handle a two-furrow plow with jointers attached, the work is so performed as to make a better mould than without the jointer, and at the same time preventing the growth of grass between the furrows, thus making a better seed bed.

We are happy to inform the farmers throughout the country that it has been accepted by the Ontario Dairy Board Woolley of this county, who has taken out a patent for the same.

FARMER,
Norfolk Co., Ont.

"How do you stand?" asks the Italian when he meets a friend.

The Polish greeting: "How do you have yourself?"

Butter Making in Holland

The struggle for the British butter market has always been a keen one and, generally speaking, it can truthfully be said that in the better class butters, the European competitors have had the best of the fight. Of course such results have not been attained without great efforts, and Canadian readers will be interested to hear what has been done in Holland to foster and encourage the industry.

Cattle breeding has always been the principal feature of Dutch agriculture, but during the last twenty-five years increased attention has been paid to the butter industry. The low corn prices seriously affected the growing of cereals, compelling farmers to replace them by fodder crops. It is remarkable to find that in a small country like Holland the number of cattle is 1,546,856, of which 967,422 are milch cows. There are no fewer than 324 head of cattle to every 1,000 acres of land under grass or crops, hence it will be readily seen to what a large extent stock figures in the Dutch farming economy.

The first butter and cheese factory was opened in 1879 and this was a private venture, but at a later date co-operative production came to the front and at present it predominates over individual enterprise. The transfer of butter making from the farms to the factories has much contributed to the improvement of the quality of Dutch butter. Government assistance has been given in various directions and care was taken that all necessary information was available.

The government experiment stations, of which there are at present five with a technical staff numbering 27, made numerous experiments in connection with cattle feeding and milk production. Lectures were given by government teachers of agriculture with a view of pointing out to owners of cattle the important advantages could be secured by proper breeding, by the cultivation and purchase of the most suitable feeding stuffs, and by rational feeding.

It is estimated that the export of butter now amounts to 17½ million kilos (a kilo is 2.2 lbs., English) to Great Britain, 7 to 8 million kilos to Germany, and 3½ million kilos to Belgium. The export to England takes place via Harlingen, Rotterdam and Amsterdam, while that intended for Germany, France and Belgium is, of course, forwarded by rail. Consignments from the north of the country partially going in refrigerator vans. It is now nearly always packed in beechwood casks containing about 50 kilos (100 lbs.) of butter, also in tubs, cases and boxes containing butter in rolls of ¼ kilo or small parts of various weights. Butter intended for tropical climates is packed in air tight tins. It appears that the mode of packing formerly in vogue (double casks separated by salt) is gradually disappearing.

As far as the butter itself is concerned it is forwarded both fresh and salt. France and Belgium take almost exclusively fresh, Germany chiefly fresh, whilst England and Scotland receive slightly salted butter. Although a small deal of butter is sold to order or through agents, large quantities are forwarded by way of consignments. The co-operative factories, especially in Holland, in this way of their production in England.

In most of the large factories, which are all supplied with steam power, the most modern machinery is used. The custom of pasteurizing both the cream and the skim-milk is fairly gen-

eral and this vastly improves the quality of the butter at certain periods of the year. In order to make a product that will keep in the warm season, a great many factories have ice-houses attached, which, however, of late years have been replaced by refrigerating and ice-making machinery. In dealing with the milk, all kinds of centrifugal systems are used. Especially in those provinces where no half cream cheese or skim cheese is made, a practically complete separation of the cream is aimed at and it may be said that as a rule hardly one-tenth per cent. of fat remains in the separated milk. In ripening the cream pure cultures are largely used.

No matter what care is taken in the manufacture of the butter, it is necessary to protect it from adulteration before it reaches the consumer. The Dutch parliament have a number of stringent acts dealing with butter substitutes. The principle on which legislation is based is that all products resembling butter, in so far as they contain fats which have not been obtained from milk, are considered to be margarine, and have as such to be transported, exported, exposed for sale, etc. Where butter and margarine are allowed to be sold together in shops, conditions must be observed that both are kept visibly separate. Infringements of the act are punishable by fine and imprisonment.

Although legislation has benefited the honest butter producer, it has not succeeded in putting a stop to adulteration and this has given rise to butter control stations, which are under government direction and inspection. The control is of a continual and stringent nature, and is of such a nature as to practically guarantee the quality of the butter produced at the factories under its aegis. H.W.S.

New Use for Skimmed Milk

Mr. Richard Guencher, of Frankfurt, describes a newly-invented milk-stone, or petrified milk. It is manufactured in the following manner: By a chemical process the casein is precipitated as a yellowish brown powder, which is mixed with formaline. Thereby a hornlike product is formed, which, with various admixtures, forms a substitute for horn, turtle shell, ivory, celluloid, marble, amber, and hard rubber. Handles for knives and forks, paper-cutters, crayons, pipes, cigar-holders, seals, marble, stone ornaments, and billiard balls are now made of skimmed milk. The insolubility of "galalith," as it is called, its easy working, elasticity, and proof against fire, make it very desirable. Already 20,000 quarts of skimmed milk are daily used for this purpose in Austria.—The Dairy.

Big in Milk and Butter

The imported Guernsey cow Hayes Rosie, 15476, holds the year's record for both milk and butter in the advanced registry of the American Guernsey Cattle Club. During the year ending March 31st, 1904, she gave 14,633.08 lbs. of milk, which yielded 774.31 pounds of butter fat—equivalent to 833 lbs. of butter. Hayes Rosie was imported from Guernsey in the fall of 1902. She had been a noted prize winner at the important English shows. She consumed during the year of test, 2,518 lbs. of shorts, 602½ lbs. oil meal, 661 lbs. cluten, 2,223 lbs. of carrots and mangels, and 1,322 lbs. of ensilage. She had the run of a small paddock during the forenoon of each day in summer

METALLIC

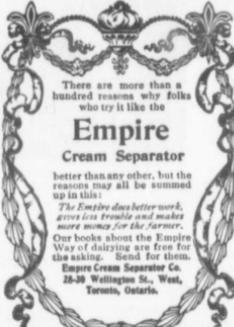
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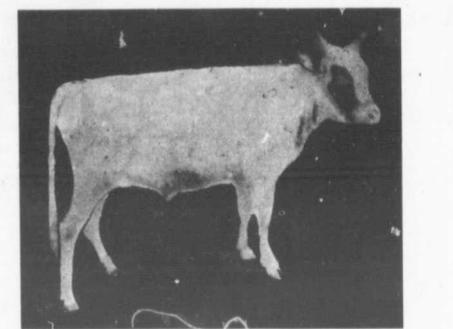
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Minto of Woodruffe, son of Minnie Clyde, winner as First Prize Ayrshire in Dairy Test, Ottawa, 1923. Owned by J. G. Clarke, Ottawa.

The Scientific Feeding of Dairy Cows

While Canada is a great dairy country and leads the world in cheese production, comparatively little attention is given to the scientific feeding of dairy cows. Our dairy men in a general way have a pretty good idea of cow feeding, and yet there is very much room for improvement. A little more attention to the feeding problem will mean increased profits from cow keeping.

Some of the earliest investigations in scientific cow feeding were made by Wolff. His feeding standard, which claims that a mature animal which is being fed a ration just to maintain its weight requires daily 18 pounds of dry matter, containing the following amount of digestible nutrients: 7 pounds protein, 8 pounds of carbohydrates and 1 pound of fat or ether extract per 1,000 pounds of live weight. By a maintenance ration is understood the amount of feed required by the animal to maintain its normal weight provided the animal is not producing milk or other products. The Wolff standard for dairy cows at work is 24 pounds dry matter containing digestible nutrients as follows: 2.5 pounds protein, 12.5 pounds carbohydrates, and 4 pounds fat per day per 1,000 pounds live weight.

Woll, of the Wisconsin Station, later recommended the following digestible nutrients for a dairy ration: 2.15 pounds protein, 12 to 13 pounds carbohydrates, and 74 pounds of fat. A number of other investigators have found that the Wolff maintenance ration was too large because when fed to animals at rest, a gain was obtained showing that more food was being fed than would maintain the animals at a constant weight.

Among those who made a careful study of this question was Prof. T. L. Haeccker, of the Minnesota Station. His wide experience in feeding dairy cattle led him to believe that the German (Woll) ration contained more protein than seemed necessary.

In a series of experiments during a period of three winters, Prof. Haeccker has shown that his barren and dry cows, at rest in the stall, maintained their weight and even gained a slight amount on a ration containing 11.58 pounds of dry matter, having digestible nutrients as follows: 62 pounds protein, 575 pounds carbohydrates and 12 lbs. fat.

In Bulletin No. 79, he concludes: "It is tentatively suggested that the food of maintenance for a barren dry cow when at rest in stall be expressed in nutrients, 6 of a pound of protein, 6 pounds of

carbohydrates, and 1 of a pound of ether extract per 1,000 pounds live weight and when at work in a dairy with ordinary good care and comfortable quarters, 7 of a pound of protein, 7 pounds of carbohydrates, and 1 of a pound of ether extract be allowed per 1,000 pounds live weight or one-tenth as much per cwt.

After having determined what is a correct maintenance ration, Prof. Haeccker took up the question of how much protein and other nutrients a dairy cow should be fed. The majority of dairy farmers do not feed as narrow a ration as is recommended by Wolff or by Woll and still good results are obtained in many instances. The question then is, should a narrow ration with a nutritive ratio of 1:4.5, the Wolf-Lehman modified standard, or a wide ratio of 1:6.9 proposed by Woll, be followed? To solve this question, Prof. Haeccker set to work and fed his cows rations having different nutritive ratios, varying from 1:6.3 to 1:9.7, or practically from 1:6 to 1:10, and he found that the wide rations were as effective in the production of products as were the narrow rations. Records were kept of all food consumed, milk and butter fat produced, for a period of three years. Instead of recommending a definite dairy ration containing a definite amount of protein, the following conclusions were reached:

First, that after deducting the nutrients required for maintenance, the amount of protein, carbohydrates and fats, a cow should be fed, depends upon her age, the amount of milk she produces and the amount of fat this milk contains. In regard to age, it may be said that this has reference only to the period before and after full maturity. That is, a heifer requires more nutrients for the production of a pound of milk and a definite quantity of butter fat, than does a mature cow. In other words, a "balanced ration" for dairy cows should not mean a definite nutritive ratio like 1:5 or 1:7 or one to any other number, but a certain number of pounds of digestible protein, carbohydrates and fats, the relative amount of which should depend upon the milk and fat yielded as well as upon the weight and age of the animal.

To enable farmers to ascertain the amount of food which should be fed to dairy cows, Prof. Haeccker determined exactly how much protein and other nutrients are required to produce a pound of milk after the food for maintenance of the animal in question has been taken

care of. From his table of results we take the following, applicable to mature cows and heifers:

Net nutrients used by dairy animals for the production of one pound milk, testing a given per cent. of fat.

	Mature Cows		
	Milk Testing	Protein	Carbohydrates-Ether Extract
2.5 per cent.	.362	.164	.0124
3.0 per cent.	.397	.181	.0136
3.5 per cent.	.432	.197	.0147
4.0 per cent.	.467	.214	.0159
4.5 per cent.	.502	.230	.0170
5.0 per cent.	.537	.247	.0182
5.5 per cent.	.572	.263	.0194
6.0 per cent.	.607	.280	.0206
	Heifers		
2.5 per cent.	.380	.188	.0127
3.0 per cent.	.443	.217	.0148
3.5 per cent.	.505	.245	.0170
4.0 per cent.	.568	.273	.0192
4.5 per cent.	.630	.302	.0213
5.0 per cent.	.693	.330	.0235
5.5 per cent.	.755	.358	.0256
6.0 per cent.	.818	.387	.0278

Food of maintenance for both mature cows and heifers 67 pounds protein, 7 pounds carbohydrates, and 21 pounds ether extract.

To illustrate the use of the above table when calculating a ration for a mature cow, let us suppose we have a cow weighing 900 pounds, giving daily thirty pounds of milk testing 4 per cent. For maintenance food she would require nine times 67 lbs. protein, or 603 lbs.; 9 times 7 lbs. carbohydrates, or 63 lbs.; 9 times 21 lbs. ether extract, or 189 lbs. Consulting the table of mature cows giving 4 per cent. fat we find that she should be fed for each pound of milk produced (which in this case is 30), .0467 lbs. protein or 1.40 lbs.; 30 times .214 lbs. carbohydrates or 64.2 or 30 times .0159 lbs. fat, or 58 lbs. Adding to this the food of maintenance as above figured we obtain a daily requirement for this cow of the following nutrients:

Protein, 250 lbs.; carbohydrates, 272 lbs.; and fat 67 lbs. If, however, the cow weighed 1,000 lbs., and yielded 40 lbs. of milk testing 3.5 per cent. fat according to this method of figuring she would require the following nutrients for maintenance: Protein 77 lbs., carbohydrates 77 lbs., fat 11 lbs. For milk production, protein 1.73 lbs., carbohydrates 7.88 lbs., fat 59 lbs., or total protein 2.50 lbs., carbohydrates 15.58 lbs., and fat 70 lbs. The former ration would have a nutritive ratio of 1:7.1 and the latter 1:6.9. In regard to the amount of dry matter a sow should be fed, Prof. Haeccker finds that the Wolff standard which recommends 24 to 25 pounds of dry matter, for 1,000 pounds of weight, is fairly correct for mature dairy cows. One important conclusion which we find in Bulletin 79 of the Minnesota Station is: "An excess of nutriment in a ration does not seem to increase materially the flow of milk or yield of butter fat, but results in an increase in body weight and a relative decrease in dairy products. While a diminished nutriment supply resulted in a decreased gain in live weight and a relative increase in dairy products."

The City Boarder

"Wal," said Farmer Wilkins to his city boarder, who was up early and looking round, "ben out to hear the hay-cock crow, 's pose?" and he winked at the hired man.

"No," replied the city boarder, "I've been out tying a knot in a cord of wood."

Farmer Wilkins scowled at the hired man and wanted to know why he was not getting to work at milking those cows.—The Furrow.

Nature about the Farm

EDITED BY C. W. NASH

BIRD NOTES

The other day I visited a friend's farm in this county and there found that a small colony of Barn Swallows had established themselves under his driving shed. Formerly, he said, had resorted to this shed to nest for several years and as he had always protected them they had become very familiar, some of the nests were so low that I could easily reach them with my hand; the birds, however, were so confident of their safety that they remained upon the nests while we went around and inspected them. During the early part of the afternoon the birds were working for insects over the orchard and around the barnyard, but towards evening the cows were brought up and put in a field just opposite the shed, for a time. As soon as the cows arrived, all the swallows in the shed left their nests and went over to where the cows were, the birds which had been working outside also went over, and the whole colony circled and hovered about the animals, eagerly feeding upon the flies which infested them. That Barn Swallows are particularly fond of hawking for flies around domestic animals is well known and may be observed in any pasture field where stock are grazing. In this instance, however, the birds evidently knew the rule of the farm, and those engaged on the nests waited until the cows were brought up, so that they could get their evening meal, without being very long absent from their eggs.

There is no more novel or interesting family of birds known than the Swallows. In this province we have six sp. sp. viz., the Purple Martin, Barn Swallow, Tree-toad Swallow, Cliff Swallow, Bank Swallow and Rough-winged Swallow, the last a rare species, and as it closely resembles the Bank Swallow, it is often be confused with it. A peculiarity of the family is that all of them, with the exception of the Bank Swallow, have abandoned their original nesting sites and have attached themselves to buildings erected by men. The Barn Swallow and Cliff Swallow construct the outer shell of their nests of mud; formerly they built them in caves or under overhanging ledges of cliffs, the Barn Swallow now builds inside farm buildings, while the Cliff Swallows nest in colonies on the outside, usually under the eaves. In Manitoba when the land was first taken up, the Cliff Swallows seemed to follow the settlers, colonies taking to the new buildings and barns soon after they were built and the influence they exerted in lessening the super-abundant insect life of the prairie was very great. The Purple Martin, which is the largest of the Swallows, and the White-breasted Swallow, both originally built their loose nests in hollow trees, and it is probable that they still do so in unsettled districts, but with us they invariably resort to holes in buildings, or boxes put up expressly for their accommodation, and which, however they are frequently ousted by trespassing House Sparrows. The Bank and Rough-winged Swallows still adhere to their original habit of digging holes in the face of a sand bank and making a loose nest at the end of the tunnel. In this province they always associate in large colonies and generally select a sand bank in the vicinity of water for their nesting site, but along the banks of the Assiniboine, in Manitoba, I often found single pairs quite isolated from others of their kind.

During the summer, and while with us in Canada, all the swallow tribe are purely insectivorous, usually capturing their food while on the wing, but on the cold, windy days that frequently occur in early spring the insects upon which they depend are too chilled to fly and then the swallows seek them in open places on the ground.

In the latter part of July and the beginning of August the large female ants swarm from their nests, each one prepared to found a colony for herself were she permitted; the swallows, fortunately for us, however, interfere, and gorge themselves upon these creatures, the Purple Martins particularly destroying vast numbers of them, even after the ants have discovered themselves of their wings. When this has taken place the Swallows alight on the ground, pursuing them there with the greatest activity.

The Chimney Swift, which somewhat resembles the swallows in its aerial habits, belongs to another family of birds altogether, but like them it has forsaken its old manner of nesting and now resorts to our buildings for that purpose.

INSECT LIFE

I find that we are not to be exempt from the attacks of the cutworm this season, for they have now appeared in force and are making up for lost time; the cold weather and backward condition of vegetation undoubtedly delayed their appearance near the surface of the soil, but having arrived, they will feed later than usual before changing to the pupa state. If they are doing serious damage, the poisoned bran bait composed of 1 lb. Paris green, 6 lbs. bran, made into a moist (not wet) mash with sweetened water, should be used. Distribute the bait in small lumps over the infested land and the insects will be destroyed.

So far, insects have been remarkably scarce, butterflies are rare, and but few dragon flies have appeared, even the pestilent mosquitoes have failed to torment. The green Rose aphid, however, is troublesome, but can be kept in check by frequent waterings with soap solution or by using Pyrethrum powder. I prefer the latter if only a few plants have to be protected.

FARM FORESTRY.

It is often said that the farmers of Ontario compose the one perfectly independent class of the community; no matter what may happen to other industries in which our people are engaged, the farmer's lands will always supply him with all the necessities and many of the luxuries of life. This was perfectly true so long as the land bore its fair proportion of trees, but of late years, owing to the excessive and wasteful clearing which has been done, the farmer has

become dependent upon the miners and the railways for their fuel, and will (if prompt steps are not taken to prevent it) shortly have to resort to some system of irrigation for water. Substitutes for wood and coal as fuel may perhaps be found, but none for water; this essential element has, however, always been supplied by nature in sufficient quantities to render successful agriculture possible, but of late years, although the supply has been ample, the loss by evaporation and surface drainage has been so rapid that even in seasons having a normal rainfall water is apt to be scarce.

Water management is the great problem of the future, upon the solution of which our continued success in agriculture depends, and with the solution of this problem, the problem of re-stocking our waste lands with trees is most intimately connected, for without having a proper proportion of our land under trees, no rational water management is possible, and without a water supply that can be no productive agriculture.

The close investigations of modern naturalists have proven that all forms of life and all conditions in nature are dependent one upon another and that no change can take place in one condition without corresponding changes in others; in no case is this more clearly exemplified than in the relationships which exist between the forest cover and the water supply.

To support plant life, the soil must contain a constant supply of water. This supply can only be kept up by the maintenance of reservoirs, from which the water will gradually and evenly circulate through the soil by natural underground drainage. A true cover, properly located, operates as such a reservoir, by conserving the moisture it receives from the clouds and the evaporative influence of sun and wind, and secures proper circulation by changing surface drainage into gradual sub-surface drainage. The soil porous, and by its deep-reaching root system insures the percolation of water to the sub-soil. Whereas, on bare land or cultivated fields, the rain as it falls compacts the soil, thus preventing percolation and causing rapid drainage over the surface, while the water which falls on tree-covered land finds its way immediately underground and thus furnishes the desired constant supply by its circulation. This explains the constant, even flow of springs and streams in a wooded country, while after deforestation we find the springs dry up, and the streams are either raging muddy torrents or dry gullies. Floods and droughts alternate according to the season and the fields are eroded and crops washed out by every rainfall.

While the conservation of the water supply is, perhaps, the most urgent reason for immediate action in tree planting, yet there are so many other advantages to be derived from it, that the attention of the public cannot be too quickly turned to it.

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THE HOME WORLD

Labor, if we would but perceive it, is one of the greatest of earthly blessings. It rewards with health, contentment of mind, cheerfulness of spirit, and sound, refreshing sleep, few of which blessings of life are long enjoyed by those who do not daily, in one form or other, labor.

Love Lightens Labor

A good wife rose from her bed one morn,

And thought with a nervous dread
Of the piles of clothes to be washed,
and more—

Than a dozen moths to be fed.
"There's the meals to get for the men
in the field,

And the children to fix away
To school, and the milk to be skim-
med and churned;
And all to be done this day."

It had rained in the night, and all the
wood

Was wet as it could be;
There were puddings and pies to
bake, besides

A loaf of cake for tea.
And the day was hot, and her aching
head

Throbb'd wearily as she said:
"If maidens but knew what good
wives know
They would be in no haste to wed."

"Jennie, what do you think I told Ben
Brown?"

Called the farmer from the well,
And a flush crept over his bronzed
brow,
And his eyes half-bashfully fell.

"It was this," said he, and coming
near,

He smiled, and stooping down,
Kiss'd her cheek; "T'was this; that
you were the best
And dearest wife in town!"

The farmer went back to the field, and
the wife,

In a smiling, absent way,
Sang snatches of tender little songs
She'd not sung for many a day;
And the pain in her head was gone,
and the clothes

Were white as the foam of the sea!
Her bread was light and her butter
was sweet
And as golden as it could be.

"Just think!" the children all cried in
a breath,

"Tom Wood has run off to sea!
He wouldn't, I know, if he only had
As happy a home as we."
The night came down and the good
wife smiled

To herself, as she softly said:
"Tis so sweet to labor for those we
love—

It's not strange that maidens will
wed!"

A Visit to the Old Home

I recall a wedding I once attended,
where the bride went from her
father's house a slender, lily-white
girl, who had been brought up most
delicately in an atmosphere of ease
and luxury. She accompanied the
husband of her choice into a rough,

hard pioneer life in a new country,
and there, far from neighbors, from
church privileges, or any social advan-
tages, she spent many years. Child-
ren came rapidly. Her cares were
numerous. She grew old and hard-
handed, and prematurely bent.

At last there was received a press-
ing invitation from her girlhood's
home for her return there, to make a
long and restful visit. True to her
habit of self-abnegation, she was re-
luctant to consent, and desired to
send a representative in her graceful
Maud, the image of herself at seven-
teen, or her dimpled Agnes, a lovely
child of fourteen. But the children
were firm. Mother must go, they
said, and go she did. A new black
silk gown for occasions was an un-
heard-of extravagance, but it was pro-
cured; her wardrobe, though very
simple, was augmented until she felt
that it was presentable, and a shy, re-
served, timid stranger, the woman
who had forgotten the lightness of
her youth, appeared again in her
olden place. At first she described
her sensations by the homely appear-

mother who went home. It was a
mother rested, refreshed, and wonder-
fully rejuvenated; freed from the fet-
tering grooves, and with new
strength, new interest, and new de-
light in living. Such a new lease
might be given to many a tired out
mother.

When mother is blue, or a little dif-
ficult, or set too much in her own
way quite to suit the headstrong wil-
fulness of the juniors, bear with her
and set about bringing back her sun-
shine. Half the everyday sorrow of
this earth would melt into thin air
if we were all more anxious to give
joy than to get it, to be rather love-
worthy than grasping, and to make
others happy whether or not we were
happy ourselves.—Margaret E. Sang-
ster.

Home Courtesies

In the close relations of members
of the same household and the con-
stant contact through long associa-
tion, there is apt to be a lack of the
friendly greetings and delicate atten-
tions which are given to visitors and



Baby's Bath Time

ance of a cat in a strange garret; but
the unfamiliarity wore off, the rough
hands smoothed, and she found that
leisure had attractions of its own.

People did not know her when she
emerged from the enfolding solitude
of her far-off home, but bit by bit
they discovered her to be the same
that she used to be, and when, after
three swift months had gone, she
said that she must turn her face again
to husband and children, it was pre-
dicted that they would hardly know
her there. Nor was it quite the same

strangers in the household. Children
are commonly not trained to sweet
courtesies in their treatment of par-
ents and one another. Husband and
wife do not preserve their first gra-
cious care of each other. But thought-
ful and loving little services sweeten
home life and pour the oil of joy over
daily experiences. When a husband or
son is prompt and helpful in placing
her chair for her at table what woman
does not feel happier? An act of
courtesy cultivates in its performer
more appreciation and attachment.



Hickory

A Tale of the Lakes

By Eric Bohn

Author of "How Hartman Won."

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CHAPTER XXI.—(Continued.)

"Tom has been showing me his hickory summer-house," Elsie replied with a forced laugh, "and I have been scolding him for spending so much time in fixing it, when he had so much other work to do."

"He must have taken it very seriously," said Genie, in mock gravity.

The work he took seriously enough, whatever you may say of the scolding. Just look at it. The walls of hickory poles, the rafters of hickory branches, the roof of hickory leaves. And the seat. Whoever saw a more cozy one? Built of roots and branches, poles and twigs, all hickory, from within the summer-house itself, and twined together as only an artist could do it."

"I believe Tom is made of hickory, too," said Genie, approvingly.

And this time Tom laughed.

CHAPTER XXII.

The short spring was soon over. Then came the glory and heat of the summer, drying out the brushwood upon Tom's fallow, turning it into tinder, and making it ready for the match to set it ablaze.

Burning a fallow is an exciting event in backwood's life, and full of fascination. The hissing, the crackling, the roaring, the lurid flames, the intense heat, the sweep of the demon, as with rapid strides he throws his forked tongue round every object, grasping the whole in his satanic licking, are intensely interesting. And then there is the element of danger. Man delights in struggle; and when, in a contest with the fiery element, he says sternly: "Thus far shalt thou go and no further," and the devastating god is conquered, he feels a hero.

Tom's fallow was a noted one that year. It was the first to be cut and the first to be burned. There were many others in the neighborhood; but the fact that his was chopped and owned by the dead man came to life again, the lost returned, increased the interest.

People liked Tom. They were glad to see him back again. He had more dash and spirit than other young men whom they knew; and the tale of Jim inheriting the whole of his father's property, having got abroad, added to Tom's popularity, while it detracted from his brother's. Hence, when Tom's fallow was alight, they turned out in a body to fight fire and keep it from spreading. Fences had to be torn down and the rails thrown on the soft earth, but the fire had to stop when bidden, and the woods were saved; while in the fallow all debris was burned away, leaving nothing but charred logs and blackened stumps above the gray earth.

Tom likewise had the first Bee. Everybody in English Canada had bees in those days, particularly in logging time. A man who cleared his fallow with a single yoke of oxen, aided only by the members of his own family, was considered behind the time—slow—poky—stuck-up. Oh, no! Every settler must have his logging bee. It would only take an afternoon to do the whole thing.

Neighbors all round, men and large boys were invited, and every one who had a yoke of oxen. Horses were not in it. They were all right for the roads, and plowing and harrowing, and all that; but for logging! Bah! The men would scowl at the very idea. And then the proportion. Four men and a boy to a team, as nearly as they could make it. One to drive the oxen, the boy to hitch the chain to the logs, and the other men to pile the logs into heaps.

And then the whiskey—ah, the whiskey! A little brown jugful—just enough to set their whiskies once in a while—when excitement was at the highest—but not to get drunk! Perish the thought. How would the men face the merry maids, who danced round the supper tables and laughed in the gloaming, if they dared to even dream of such a thing?

"I tell you it's going to be a big bee," said George Ross, on his return from business in the village.

"What did you hear about it?" Genie asked.

"It's all the talk at Linbrook. Every other fellow I met is going. What's more, a man you'd never dream of seeing at a logging bee will be there."

"Who is that, pray?"

"Gness."

"Johnston the fiddler?"

"No."

"Robert Thornton of the store?"

"He may come, but he's not the one."

"Dr. Hartman?"

"To attend to the wounded? What do you take him for? Guess again."

"I give it up."

This was pretence, for she fully suspected.

"Edgar Armstrong, of course."

"Gracious! What can he do? Besides, his school don't close till four."

"The news came straight. They say he's going to teach a couple of extra hours and close at two."

"I would not tell Elsie," said Genie.

"Let it be a surprise to her."

"All right. It's astonishing the number of girls are going as well. I guess they want to see Tom's house. You know the supper is to be there, and his mother will have charge of it."

"She is very proud of her boy, I know," said his sister.

"I tell you what, Genie, any girl that catches Tom Potter will be a lucky woman."

"Oh! I don't know," she answered, with a toss of her head. "He's good enough, but there are others."

"Are Elsie and you going?" George asked.

"Yes. We meet there after school closes. Elsie will take over a basket of cakes to surprise them."

Before one o'clock the next day half a dozen yoke of oxen had arrived on the scene, ready for the fray; while into the fallow men strolled in twos and threes, until they numbered a couple of score or more. They soon got into earnest discussion, and as Tom and Jim appeared with their respective yokes of black and white oxen, all eyes were turned upon them.

"I move that the Potter boys take the lead themselves," cried Harry Tait, "Jim against Tom—the Whites against the Blacks."

"Jolly for you!" roared Jack Slimmin. "Then oxen's splendid colors for a lead."

"Not so fast, boys," shouted Tom. "Choose who you like for leaders; but for heaven's sake, don't put Jim and me there. A man is never captain at a bee on his own fallow."

"Who has a better right?" insisted Tait. "Tom's little black steers may be young, but they're gritty. They pull like all creation, and I'd match 'em against Jim's white oxen any day."

"So would I," yelled another youth.

"By jove, it's a bargain! If you're willing," cried Jim, on his mettle.

"Shake hands over it, then," returned Tom, with a laugh. "We'll have the fun of it anyway."

Interest deepened at once.

"Now for tests," said Adam Jenkins, the oldest man in the group. "1. Divide fallow in two halves. 2. Jim and Tom to draw cuts for best choice. 3. Each man to have four teams and hands. 4. Best finish forfeits the race."

"Jenkins for umpire," cried Slimmins, and Tait seconding, it was agreed to.

Preliminaries were soon arranged—the side next the Grating stood off in the middle and the opposite centre marked by a red flag. Then the leaders started side by side, flanked by their respective followers.

Jim's big white oxen had grown old at the business. Nothing surprised them. "Whoa! back—baw—baw!" "Ge there!" were obeyed with steady precision. They knew when to hold on, stretch their long necks and pull; and when Jim, with the chains over a huge round, yelled at them, they stuck the toes of their big white hoofs into the soft ground, and bearing all their weight on the yoke, fairly rushed things; and Jim laughed at the idea that Tom's four-year-old blacks could touch his seasoned whites.

But Tom was not unprepared. For a month past he had fed full measures of corn to his little oxen; and though they were young and skittish, and would turn their yokes sometimes, they were better hardened for continuous work than Jim's whites, which had only been fed on grass.

"We'll have to take it easy for a while," Tom said in an aside to his three handspikers, "I'll Buck and Bright get used to it. Then we'll make things hum. Half an hour now is neither here nor there."

(To be continued.)

In Egypt the usual words of greeting are: "How do you perspire?"

RENOCE TEA

Is GREAT TEA

THE BOYS AND GIRLS

The Story of a Hero

From *Harper's Young People*

IN 1871 the steamship *Swallow* left the Cape of Good Hope bound for England. Among the passengers was a child of two years and a nurse. The lady had also brought with her a huge, handsome Newfoundland dog, called Nero.

The voyage had lasted about six days. No land was visible and the island of St. Helena was the nearest point. The day was a beautiful one, with a breeze blowing and the sun shining down brightly on the sparkling waters. A large and gay company of the passengers were assembled on deck; merry groups of young men and girls had clustered together; now and then a laugh rang out, or some one sang a gay little snatch of song, when suddenly the mirth of all was silenced by the loud and piercing scream of a woman.

A nurse, who had been holding a child in her arms at the side of the vessel had lost her hold of the leaping, restless little one and it had fallen overboard into the sea. The poor woman, in her despair, would have flung herself after her charge had not strong arms held her back. But sooner than it can be written down something rushed quickly past her; there was a leap over the vessel's side, a splash into the water, and then Nero's black head appeared above the waves holding the child in his mouth.

The engines were stopped as soon as possible, but by that time the dog was far behind in the wake of the vessel. A boat was quickly lowered and the ship's surgeon, taking his place in it, ordered the sailors to pull for their lives. One could just make out on the leaping, dancing waves the dog's black head, holding something scarlet in his mouth. The child had on a little jacket of scarlet cloth and it gleamed like a spark of fire on the dark blue waves.

The mother of the child stood on the deck, her eyes straining anxiously after the boat and the black spot upon the waves still holding firmly to the tiny scarlet jacket. The boat seemed fairly to creep, though it sped over the waves as it never sped before.

Sometimes a billow higher than others hid for a moment dog and child. But the boat came nearer and nearer, near enough at last to allow the surgeon to reach over and lift the child out of the dog's mouth, then a sailor's stout arms pulled Nero into the boat and the men rowed swiftly back to the ship.

"Alive?" shouted every lip, as the boat came within hail of the steamer; and, as the answer came back, "alive" a "Thank God!" came from every heart.

Then the boat came to the ship's side. A hundred hands were stretched out to help the brave dog on board, and "Good Nero," "Brave dog," "Good fellow," resounded on every side. The hero ignored the praises showered so profusely on him. He trotted sedately up to the child's mother and with a wag of his dripping tail looked up into her face with his big, faithful brown eyes, as if he said, "It is all right; I have brought her back safe."

The dog dropped on her knees on the deck, and, taking his shaggy head in both hands, kissed his wet face again and again, the tears pouring down her face in streams. Indeed, there was not a dry eye on board. One old sailor stood near with the tears running down his weather-beaten brown face, unconscious that he was weeping.

Well, Nero was for the rest of the voyage the pet and hero of the ship and he bore his honors with quiet dignity. It was curious, however, to see how, from that time on, he made himself the sentinel and body-guard of the child. He always placed himself at the side of the chair of any person in whose arms she was, his eyes watching every movement she made. Sometimes she would be laid on the deck, with only Nero to watch her, and if inclined to creep out of bounds, Nero's teeth, fastened firmly in the skirt of her frock, promptly drew her back. It was as though he said, "I have been lucky enough, Miss Baby, to save you once, but as I may not be so lucky again, I shall take care you don't run any such risks in the future."

When the steamer reached her destination, Nero received a regular ovation as he was leaving the vessel. Some one cried, "Three cheers for Nero!" and they were given with a will. And "Good-by, Nero," "Good-by, good dog," responded on every side. Every one crowded around to give a pat on the head as he trotted

down the gang-plank. To all these demonstrations he could only reply with a wag of his tail, and a twinkle of his faithful brown eyes. He kept very close to the nurse's side, and watched anxiously his little charge's arrival on dry land.

He was taken to the home of his little mistress where he lived, loved and honored, until he died of old age, with his shaggy gray head resting on the knee of the child (now a woman) that he had saved. His grave is in an English churchyard, in the burial plot of the family to which he belonged and is marked by a fair white stone, on which is engraved:

"Sacred to the memory of Nero."
His portrait hangs over the chimney-piece of an English drawing room, beneath which sits, in a low arm chair, a fair-haired girl, who often looks up at Nero's portrait as she tells how he sprang into the Atlantic Ocean after her and held her until help came.

He Saw the Finish

Little Leonard, while out walking with his nurse, saw a blacksmith shoeing a horse, and upon returning home said: "Mamma, I saw the man who makes horses today."

"Are you sure you did?" asked mamma.
"Of course I am," replied Leonard. "He had one nearly finished when I saw him. He was just nailing on his hind feet."

A Correction

In the announcement of the results of our recent prize competition, the third prize was, by mistake, credited to John Hulbert, Kempville, N.S. It should have been Fanny Burrell, Kempville, who wrote the essay, as printed, which secured the third prize. We regret the mistake.



Going to the Picnic

The basket was very heavy when our walk to the woods began, and so I ate some cookies and gave some more to Nan. And when we saw the frosted cake, we thought it wouldn't pay to carry it any farther; so we ate it on the way. We felt so very thirsty and tired with our load. That we ate some juicy peaches as we rested by the road. We ate some more things by and by, and now we rather dread to reach the grove; for how can we have a picnic without buttered bread.

IN THE KITCHEN

The Proper Care of Lamps

It is not an uncommon thing for women who are fastidious in other matters to pay little or no attention to lamps except to fill them when necessary and trim the wicks when they become uneven.

Lamps should be kept perfectly clean on the inside as well as on the outside. They should be carefully examined and filled each morning, and when necessary cleaned out and trimmed. The burner of a lamp should be especially looked after, but this is the part most often neglected. The fine holes in it, or the "gauze" through which air is admitted to the flames, should be kept entirely free from oil and dust. The little machinery which moves the wick up and down must also be cleaned out when necessary. If the lamp is a large brass lamp with a tube for ventilation running clear through the front to the burner, so that air ascends to the wick from beneath, be careful to examine this space, for it is likely to become choked with dust and burned-off particles of the wick.

If the wick needs trimming, take a match or smooth bit of wood and gently rub it over the edge of the wick, after turning the wick down until the metal tube holding it is on a line with the lower edge of the burned out, crusty rim of the wick. The metal tube acts as a guide for the hand, thus making the trimming even.

Whether or not lamps need cleaning and trimming, they should be filled with oil every day. They burn better when the fount is full of oil. When the inside of the fount is found to have a sediment, the residue of oil should be poured out and thrown away, or strained and used for other household purposes, such as cleaning mouldy or damp woodwork in the cellar or in combination with boiling water and soap, for cleaning the iron sink in the kitchen. Use only the best and clearest oil for lamps. Cheap kerosene often gives forth unpleasant odors and does not burn brightly.

Never leave a lamp turned low, and creates gas and uses as much oil as when it burns brightly. If it is necessary to have a light during the night in a sick-room use a tiny night lamp and burn it at full force.

In a country house where a large number of lamps are used, it is better to keep them in a little closet by themselves than to expose them on a shelf in the kitchen, where they are sure to collect dust.

Three Good Ones

ORANGE MARMALADE.—Remove the seeds from—but do not peel—twelve large or fifteen small oranges and six lemons. Cut both into thin slices. Pour three quarts of cold water over them and let stand for forty-eight hours. Put into a preserving kettle and cook slowly until tender. Add six pounds of sugar, if desired very sweet, add more, and cook until the consistency of ordinary marmalade.

FRESH FISH CAKES.—Have ready mashed potato, either hot or cold, and to two cups of this allow two tablespoonfuls of butter and one egg. Put with the potato an equal quantity of flaked fish—baked or boiled—and mix thoroughly. There is no fish sauce with which to moisten the mix-

ture and it seems too stiff, soften it with a very little milk. Form into cakes, fry slices of bacon in their own fat, and after taking them out fry the cakes in the fat that is left in the pan. Keep the bacon hot while the cakes are cooking, and serve it on the same dish with the fish cakes.

GREEN APPLE CHUTNEY.—Pare and core six pounds of greening apples; boil in one quart of vinegar; set off until cool. Boil two pounds of moist brown sugar in one pint of vinegar; add two pounds of Sultana raisins, washed, picked and dried, and four ounces of garlic pounded with vinegar; four ounces of green ginger; two ounces of red pepper and four ounces of salt. Mix well together with more vinegar if too thick. Keep on the back of the stove one day, slowly simmering, stirring occasionally with a wooden spoon. Bottle on the next day.

STRAWBERRY PUDDING.—Make one pint of pineapple jelly and three-fourths of a quart of strawberry jelly for these, using canned fruit, juice and gelatine. Decorate bottom of mould with crystallized fruit and blanched almonds, placing a thin layer of strawberry jelly in the bottom and chilling on ice; then add more, and when firm place a layer of halved strawberries; then pour over a layer of pineapple jelly, slowly simmering, stirring occasionally with a wooden spoon. Bottle on the next day.

To Get Rid of the Odor of Onions—Graters, knives or other utensils used in the preparation of onions should be rinsed in cold water immediately and washed with a little soda. A brush can be used for the grater. For the bread, a little sugar eaten after the onions will banish the odor, as will also coffee or parsley moistened with vinegar. Follow with a thorough rinsing of the mouth and teeth with a few drops of tincture of myrrh in water.

—Chamois is one of the few things which come out smooth and soft from washing if wrung directly from the soap suds without rinsing in clear water. The latter process tends to harden it.

—Lettuce and green peas cooked together make a dainty summer dish. Few people know that lettuce is as good when cooked as spinach. Boiled with young peas the flavor is delicious. Also it is very wholesome.

—One of the reasons why spinach is such a valuable food is that it is such an excellent butter carrier. City dwellers need more fats than most of them get, and butter is almost the best fat in the world. Oil is better, but it is too expensive for every one to use.

—Raisins for fruit cake are much improved by cooking. Let them soak slowly and then simmer until the skin is tender.



More than half the battle in cleaning greasy dishes is in the soap you use. If it's Sunlight Soap it's the best. 63

Splendid Cook Book FREE

THIS book is without doubt, the best of its kind ever published. The price of one dollar is really far too low. Ten dollars would not cover the value of the useful information contained in this excellent volume.

One of the notable features is the latter portion of the book which is devoted exclusively to sick room cookery; and the treatment before the doctor arrives, of persons suddenly taken ill or meeting with an accident.

The book contains altogether, over one thousand recipes which have been most carefully compiled, with the help of friends in the British Isles, France, Germany and the United States.

Grouped together in black-face type at the commencement of each receipt, is a statement giving the kind and quantity of ingredients required. The book is bound in substantial oilcloth cover for the kitchen.

We will send the book free to any one sending us two new subscriptions at 60c. a year.

ADDRESS

The Farming World

90 Wellington St. West
TORONTO, ONT.

HEALTH IN THE HOME

The Healthful Home

The essentials of a healthy home are: 1. A salubrious location as regards the surrounding country. 2. A healthful site as regards position, soil and environment. 3. A properly constructed house, with proper arrangements for heating, ventilation and admission of sunlight. 4. A copious and pure water supply.

If the location is known to be especially malarious in character, this alone should be sufficient to condemn it, as this poison is one of those which produce not only serious but often fatal disease.

If circumstances compel the selection of a home in a malarious locality, care should be taken to ascertain the probable source of the poison, 2. the direction of the prevailing wind. These two points having been satisfactorily settled, let the spot selected for building be located in such a manner that it will be between the source of malaria and the prevailing wind.

After the immediate locality has been determined, the selection of the house is still a matter of much import.

It is essential that there should be good surface drainage in the vicinity of a dwelling, not only to afford easy means of disposing of the waste water of the dwelling, but to carry away quickly the water which falls in heavy rains in excess of the ability of the soil to absorb, and the melted snow of spring, which the frozen ground can not take up. An opportunity for stagnant water should be allowed about a dwelling. It is evident, then, that the centre of a knoll or gentle rise of ground from which the surface slopes in every direction is a most desirable spot for a dwelling house.

A south hillside gives not only good drainage, but protection from north winds in winter, and a greater amount of sunlight. A dwelling house should always front the east or south so that each of the chief rooms of the house may receive a flood of sunlight at some time during the day.

A porous soil possesses great advantages over any other. The least salubrious are the clay and other soils which hold water in great quantities.

All soils, not excepting the most compact, are pervious to both air and water in some degree. A loose gravelly soil admits both in very large quantities. This air in the soil is termed "ground air." Both ground air and ground water are at best more or less impure and dangerous to health. Carbonic acid gas is present in very considerable quantities. These impurities result from the decomposition of the large amount of animal and vegetable matter which is constantly undergoing decay upon the surface of the ground during the warm months of the year, and which is washed down into the soils by the rains, where the same processes of decay continue, being favored by the constant moisture and comparatively uniform temperature existing just below the surface in most soils. Every rain washes down into the ground water some of the products of decay, and bring other decomposing and decomposable substances to deposit in the soil.

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SUNDAY AFTERNOON

A Prayer

O Heavenly Father, the author and foundation of all truth, the bottomless sea of understanding, send us, we beseech Thee, Thy Holy Spirit into our hearts, and lighten our understandings with the beams of Thy heavenly grace. We ask this, O merciful Father, not in respect of our deserts, but for Thy dear Son, our Savior, Jesus Christ's sake. Amen

What Jesus Did

It may not always be easy to tell what Jesus would do, in the changed circumstances of our modern life, but we know pretty well what Jesus did. In what he did he has left us an example that we should follow His steps." The fact that Jesus did certain things is the strongest possible argument for our doing them. The fact that Jesus submitted to baptism is the great motive for his disciple to "fulfill all righteousness." The fact that he prayed is worth all that has ever been said in behalf of the practice. The fact that he regularly and systematically attended the synagogue is the great reason why we should attend the public worship of God. If he in whom "dwelt all the fullness of the Godhead bodily" found it necessary or advisable to "observe external religious rites and public ordinances, surely we have much more need of all the means of grace and aids to faith and life.

The Name that All may Say

At a church gathering not long ago a Chinese convert gave a short address, in which he spoke of the great delight he had found in the Christian life as compared with that he had formerly lived. His English was very broken, and it was only with difficulty that we could catch his meaning. But there were two words which he frequently used and which he pronounced with ease and clearness. They were the name that is above every name: Jesus Christ. He stumbled over many other words, but these he uttered without a tremor or hesitancy.

There was a fitness in this. The name that is dear to the heart of every Christian, Chinese or English, is not only the sweetest in any language, but it is a name that belongs to every race and sounds pleasantly upon the tongue of any believer. Yet this best and easiest of names, if flippantly used, falls harshly and with a discordant note. The example of the Chinese convert is for us too—faith in the Name will make one's use of it the sweetest and truest music of which one is capable.

You Will not be Sorry

For being courteous to all.
For doing good to all men.
For speaking evil of no one.
For hearing before judging.
For holding an angry tongue.
For thinking before speaking.
For being kind to the distressed.
For asking pardons for all wrongs.
For being patient towards every body.
For stopping the ears of a tale-bearer.
For disbelieving most of the ill reports.

IN THE SEWING ROOM

May Manton's Hints

SHIRT WAIST 1830 STYLE 4747

The long drooping shoulders of the 1830 period have indeed taken the world of fashion by storm and are to be seen on the newest shirt waists as well as on those of a more elaborate sort. This very attractive model is eminently simple and is suited to almost all waists, but is shown in white linen lawn with banding of cross stitch embroidery in white and pale blue. Beneath the band at the front is a box plait which can be left plain when preferred.

The waist consists of the yoke, in two portions, fronts, back and box plait. The yoke is shaped by means of shoulder seams and the full blouse portion and sleeves are joined to its lower edge. The box plait is joined to the right front and laps over onto the left and the neck is finished with a regulation stock.

YOKE WAIST 4736

Combinations of muslin and lace always are charming but never have been more effective than at this present time when both are offered in unprecedented variety. The dainty



1747 Shirt Waist, 1830
Style, 32 to 40 bust.

4736 Yoke Waist,
32 to 40 bust.

waist shown is made of sheer white Persian lawn with the yoke and frills of Valenciennes lace, applique of embroidery and belt of messaline satin, but the list of equally satisfactory materials is almost limitless. The model is an admirable one and can be made, as is this one, unlined, or over the fitted foundations when it becomes suited to the many soft silks and wools of the season. The deep, scalloped yoke is eminently becoming and the fall of lace below makes a most graceful finish at the same time that it adds to the breadth of the shoulders.

The waist consists of the lining, which is smoothly fitted, front, back and yoke. Both front and backs are gathered at upper and lower edges and droop over the full belt. The yoke is separate and arranged over the whole and the sleeves are soft and full with groups of tucks above the wrists which provide additional fullness for the drooping puffs.

CHILD'S COAT 4737

Loose, box coats make the smartest of all wraps for the little folk and are made of a variety of materials, silk, linen, cloth, cheviot, pique and duck, each being correct for its special season and service. This one can be plain, as shown in the small

sketch, or finished with the ornamental collar as preferred, and can be closed with buttons and loops of cord or buttons and buttonholes in double breasted style. The model, of natural colored pongee stitched with corticelli silk and trimmed with silk braid, is charmingly pretty and attractive, but cloth and washable fabrics possess undoubted advantages for warm weather wear.

The coat is made with fronts and back and is fitted by means of shoulder and under-arm seams. The sleeves are full, gathered into straight cuffs, and the collar is quite separate and arranged over the coat after they are sewed into place.

GIRL'S COAT 4734

Loose coats are the smartest of all smart things for little girls and are shown in a variety of attractive materials and colors. This one includes an inverted plait at the back, which always is becoming, and allows a choice of round or square collar. Cloth, cheviot, silk, linen, and pique all are worn, with collars of the material or contrasting with it as pre-



4734 Girl's Coat,
4 to 10 yrs.

4737 Child's Coat,
6 mos., 1, 2, 4 and 6 yrs.

ferred, but the model, from which the drawing was made, is of brown cloth with the collar and cuffs of tan color finished with handsome banding.

The coat consists of fronts and back and is fitted by means of shoulder and under-arm seams. At the neck is the big collar and the sleeves are simple full ones, gathered into straight cuffs. The back is laid in an inverted plait that provides additional fullness and the fronts are lapped one over the other and closed in double breasted style.

The price of each of the above patterns postpaid is only 5 cents. Send orders to The Farming World, Morang Building, Toronto, giving size wanted.

A Genuine Bargain



Tireless, tough, quality and price cannot be duplicated at any store in Canada. **Hard Mirror**, suitable for present, it is a **Plummet** graduated with fine imported, 12 inch beveled glass, is carefully sprung in frame, full length 5 1/2 inches, our price, 85c., each. **Wool Brush**, guaranteed real saddle, imported from France, oval shape, 12 rows stiff pure white bristles, 8 1/2 inches long, regular price, \$1.00, our price, 50c. **Rubber Comb**, heavy arched gull back comb, 2 inches long, stamped in gold - Unbeatable - regular price, 75c., our price, 35c., or we will send you the three articles, viz. - **Brush, Comb and Mirror**, guaranteed advertised, postpaid for \$1.15. Do not object in offering you these goods at practically cost price is to gain your confidence, so that after examination you may be induced to send for our catalogue and become a regular customer.

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- TO -

Hon. E. J. Davis,

Commissioner of Crown Lands, Toronto.

Gossip about 1904 Exhibitions

Live Stock Entries at St. Louis

Dates for the closing of live stock entries at St. Louis are as follows: Horses, asses and mules, July 16, 1904; cattle, July 30, 1904; sheep and goats, August 20, 1904; swine, August 20, 1904; poultry, September 10, 1904; dogs and cats, September 10, 1904; carload lots of cattle, October 1, 1904; Southern breeding cattle, October 1, 1904.

The dates for exhibition of live stock will be as follows: Horses, asses, and mules, August 22 to September 3; cattle, September 12-24; sheep and goats, October 3-15; swine, October 3-15; poultry, October 24 to November 5; dogs and cats, November 8-11; carload lots of cattle, November 14-19; Southern breeding cattle, November 14-19.

The Provincial Fruit, Flower and Honey Show

Elaborate arrangements are being made for the Provincial Fruit, Flower and Honey Show to be held in the Granite Rink, Toronto, during the second week in November. It will be the biggest show of the kind ever held in Canada.

The various associations interested include the Ontario Fruit Growers' Association, the Ontario Bee Keepers' Association, the Toronto Horticultural Society, the Toronto Gardeners' and Florists' Association, and the Toronto Electoral District Society.

A series of meetings will be held at the time of the show. The 'Fruit Growers' Association will hold its annual convention, as will also the Bee Keepers' Association. There will also be a meeting of delegates from all the Horticultural societies in the province, as a result of which it is expected that a provincial Horticultural Association will be formed. Cheap rates have been secured over all the railways. H. B. Cowan, Supt. of Agricultural Societies, Toronto, who has the details of the show largely in hand, will be pleased to supply information on request.

The Ottawa Fair

The Central Canada Fair directors are ever working in the interests of the farmer and breeder. They have made changes in the grounds and buildings, and increased the premiums again this year with the object of pleasing and encouraging stockmen. In all live stock classes there have been increases in prize money and in special premiums, as a glance at the list will show.

The special prizes in the various live stock classes include thirty-five of the beautiful gold medals exhibitors are so anxious to possess, and for which the fair is noted. Those who have not exhibited at the Ottawa Fair cannot do better than give it a trial. It is a grand show and has a splendid reputation with all its patrons. The Exhibition proper is not second to any show given in Canada, and its special attractions have never been exceeded. The sports programme includes grand trotting and running races, for which generous purses are given.

The Ottawa Exhibition is to be held at the close of the Western Fair at London, which follows the Toronto Show, and the one display or exhibit would do in the three places. There are very favorable railway rates for the benefit of exhibitors from all over Ontario and Eastern Canada.

The Secretary is Mr. E. McMahon, and he will gladly supply all information desired.

Toronto Exhibition

Many changes, compared with previous years have been made in the prize list of the Canadian National Fair, to be held in Toronto this year from August 20 to September 10. Every department has been carefully gone over, and the rules, regulations and conditions are now so explicitly set forth that the executive believe misunderstandings and misinterpretations will be next to impossible. In the horse classes a variety of alterations have been made. For instance, in the general purpose classes it is provided that horses must only be exhibited by persons engaged in agricultural pursuits, and that they must be horses suitable for the wagon, carriage, buggy, saddle or nose. Docked horses in these classes are not eligible. Instead of one, as last year, two prizes are given for strings of ten horses, each of the value of \$50, and one for heavy draught, any breed, not necessarily bred by but owned by exhibitor at the time of making entry, and the other for any breed other than heavy draught, same conditions.

A third prize has been added to every one of the poultry and pet stock classes, involving an increase in the prize money in the aggregate of \$500. Entries close: For live stock, dairy products, ladies' work, fine arts and natural history, on Aug. 8; grain, field roots, garden vegetables, horticultural and horticultural products, and stock, Aug. 13th; poultry and pet stock, Aug. 20th.

Prize lists, which this year are good-looking productions, can be had on application to the manager, J. O. Orr, 70 King St. East, Toronto.

The Western Fair

The new dairy building for which the Ontario Government has made an appropriation of \$10,000, will add much to the equipment and attractiveness of the Western Fair at London this year. The building will be 130 by 65 feet, which will give a floor space of 8,500 feet. The removal of the dairy department from the old building, which was combined for dairy products, horticulture and agriculture, will give much more room for the last two departments, something which has been very much needed.

All the other departments of the fair are being looked after, and patrons of the good "Old Western" will find it alive, up-to-date and progressive when show time arrives. The prize list is now ready and will be sent on application to J. A. Nelles, Secretary, London, Ont.

A \$200,000 Coliseum

The Union Stock Yard Co., Chicago, has agreed to build a \$200,000 coliseum for the International Live Stock Exposition, provided the breeders and others interested will put up a guarantee fund of \$50,000 to insure the continuance of the show for a period of ten years. Trustee Levering, of the International, has already \$30,000 of this amount on hand, and a good deal more than the total amount subscribed, so a big coliseum for the show is assured at an early date. In fact, preparations are being made to rush the work so that the new building will be ready for this year's Exposition.



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Have now become a standard of excellence with the Farmers of Canada and the United States. At the World's Fair, Chicago, 1903, the only gold and Diplomas given on Hay Carriers, Forks and Slings, was awarded to us on these implements.

Following is a copy of the Judge's Award: "A FULLY equipped trip book to receive the single, annotated cloth, adjustable for size of load, durable, ingenious design of stop blocks which enables perfect control of carrier; long springs regulated for loading car, which has motion in all directions; compact form of fork which can be tripped in any position; the car is reversible and of double action for safety, longevity and usefulness. Excellence of material and construction."

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QUESTIONS AND ANSWERS

Creve Coeur Fowl

I saw in THE FARMING WORLD for February 1st, a cut of the Creve Coeur breed of poultry. Would you please let me know where I may get some eggs for hatching, and oblige—Wm. DYER, Lambton Co., Ont.

The illustration referred to was supplied by a correspondent, and was published to show some of the types of old English fowl. We do not know of any breeder of Creve Coeurs in Canada. If there are such we shall be glad to forward their names and addresses to inquirer.

Scratches on Horses

Could you give through your columns some satisfactory cure for scratches on horses, especially when the affected parts are badly cracked?—A. SUSCIBLER.

When the horse comes in, wipe off the parts nicely, roll a piece of old sack around them to keep them warm, as they are very sensitive to cold air, and clean them with a brush when dry. A good preparation to apply when dry is clean, pure lard, to which has been added a small quantity of powdered alum and unsalted lime. Apply this when coming in and going out. If it is necessary to rest, attention must be paid to the general health of the animal. Give one teaspoonful of saltpetre every night in the feed. If proud flesh springs up, apply some burnt alum. If both the scratches and the health of the animal are neglected, grease is the usual outcome. In bad cases, every night prevention is the best. Never wash the feet or legs in cold or wet weather, and when they are wet, see that they are dry and clean again as soon as possible.

Killing "Live Forever"

Could you tell me through the columns of your valuable paper any way by which I could rid a piece of ground of a verdant growth of "Live Forever"? It has been in the ground for years and has spread over an acre. I would like to know how to kill it.—Ross McLEOD, Oxford Co., Ont.

This plant is very hard to get rid of. The only possible way that we know of to get it out of the ground is by plowing and thorough cultivation. The roots grow and spread out so that it is impossible to get them out of the ground otherwise. If the field is not in crop, plow right away and keep the top soil thoroughly cultivated the balance of the season. If there is a horse or corn crop on it, cultivate thoroughly between the rows and hoe and weed out between the plants. If a grain crop, begin working after harvest or during a dry period as possible. Aim to keep the roots near the surface where they can easily be killed by top working.

Flies on Cows—Salt in Butter

(1) What is a good mixture for the prevention of flies on cattle and what is the best way to apply it? I think myself, the best way to apply it is by spraying. We have used a mixture of tar and other ingredients. I don't remember what it was, and applied with a brush.

(2) What is the exact amount of salt necessary for a pound of butter? I mean just enough salt so that the butter will keep and be neither too salt nor too fresh.—SUBSCRIBER, Bruce Co., Ont.

(1) In his excellent book, "Canadian Dairying," Prof. Dean gives the following recipe for cows in fly time: "Cows should have shade in hot weather, or be kept in a darkened stable during the day. A mixture of fish-oil (one-half gallon), coal oil (one-half pint), and crude carbolic acid (four table-spoonfuls), mixed and applied to all parts of the cow except the udder, once a week, will keep the flies from about twenty-five cows. Light mixtures may be sprayed on once a day for this purpose. This mixture could be sprayed on and should prove effective in keeping off flies.

(2) One of the objects of salting butter is to preserve it. But salting also affects the taste, and consequently the amount of salt to be used will depend upon the market to which it is going. This is especially true of creamery butter. For the home market, from three-quarters to one ounce per pound of butter is sufficient. Export butter should not contain more than three per cent. salt in the finished butter. Butter salted at the rate of one-quarter of an ounce per pound of butter from the churn will contain about one per cent. salt in the finished butter. For the farm dairy, from one-half to one ounce of fine, pure salt is all that is required. One ounce to the pound is sufficient to preserve butter for a long time, provided that it is kept in a proper place.

ABOUT RURAL LAW

In this column will be answered for any paid-up subscriber, free of charge, questions of law. Make your questions brief and to the point. This column is in charge of a competent lawyer, who, from time to time, publishes herein notes on current legal matters of interest to farmers. Address your communications to "Legal Column," The Farming World, Toronto.

Draining Land

Q—A plow furrow that I can mow and reap over, takes the water off one of my fields, and if it were tile drained, a two or a three-inch tile would do it. Does the law compel me to put in 8-inch tile to drain a neighbor's swamp?—R. J., Elgin County.

A—If your neighbor can get no other outlet for his drain he can take certain proceedings (see last issue of FARMING WORLD) to compel you to give him an outlet over your land, but of course he would have to bear the extra expense of the larger sized tile was of no benefit to you.

Rights of Succession in Manitoba

Q—A died in Manitoba without a will, leaving a mother and brother and sisters. 1. How should his estate be divided? 2. The estate is being administered by the Toronto General Trusts Corporation. Should they settle everything and give the heirs their share, or will I have to have a lawyer? 3. Will I take their pay out of it?—W. P. B.

A—1. It should be divided among his mother and brothers and sisters equally. 2. Not necessarily, unless there is something in their accounts which you don't understand or wish to object to. 3. Yes; the amount of it will be fixed by the judge.

Hire of a Horse

Q—I was hired at \$25 a month to carry a load for a company from the town thirteen miles away, the company was to supply me with the horse. I had been doing this for six

months when the company put the horse up for sale, and I bought him. I am still using him to carry the mail. Can I make the company pay me extra for his feed, and for the trip to town every day? 2. Is \$250 a week too much to charge for feed, and is \$100 too much for a trip to town?—D. W. ALTA.

A—1. If your agreement was that they were to supply the horse, you can make them pay you extra if you use your own horse. That extra would be whatever a horse is worth in your part of the country for doing that particular work, and, of course, I could not tell you what that would be. 2. You could not charge them separately for the feed, and the trip. You would have to charge them for the trip alone, which should be sufficient to cover the whole thing, i.e., whatever is the usual charge for horses for that work in that part of the country.

Barn Burned by Lunatic

Q—A, who is a lunatic, burned down my barn, as I can prove. He is well off and has a large estate. I can claim damages from him for so doing, or would the fact that he is a lunatic equal him?—J. M.

A—No; you would be entitled to damages, but you could not prosecute him criminally for arson.

Defective Buggy

Q—My father bought a buggy from a manufacturer, to be used, as the manufacturer knew, by my father and his family. After it was purchased I was riding in it, and one of the hubs broke, the buggy was wrecked and I was badly injured. Can I prove that there was a large crack in the hub, but the manufacturer had caused it to be covered with grease, and the crack filled in? Can I sue the manufacturer for damages?—J. W. S.

A—Yes, since the manufacturer knew that you might use it, he would be liable to you if you were hurt while using it and owing to defect in the wheel such as you allege.

Broken Wagon on Street

Q—A was driving his wagon along the street with a heavy load on it, when the axle broke, and he had to leave it there till he went and got another wagon to take the load off, so that he could move his wagon. About two hours after it broke down, B came along and ran into it and was injured. Can B recover damages from A?—J. M.

A—No, not unless, having regard to the difficulty of removing the wagon, it had been allowed to remain there for an unreasonable time. The wagon would not become a nuisance or obstruction to the highway if the two hours were not an unreasonable time. We do not think that it was under the circumstances.

Going to South Africa

Messrs. E. J. McMillan and Stewart Galbraith, two graduates of the Ontario Agricultural College, have accepted positions with the government of the Orange River Colony. The former will have charge of the Experimental Farm to be established in that Colony, and the latter of the field plot experiments. For several years Mr. McMillan has been Secretary of the Department of Agriculture of Prince Edward Island.

Mr. W. J. Palmer, who went from Toronto to the Orange River Colony last fall as Director of Agriculture, has been appointed a member of the Joint Legislative Commission on the Orange River and Transvaal Colonies.

Turkey Chicks

Although rather late in the season, I wish to say that while the chicks are delicate for the first six weeks or so, after that they are as hardy as anything wearing feathers can be. But for these six weeks or two months, don't allow them to be out in cold or rainy weather; if one can have an open shed—a wagon shed—or something of that kind answers the purpose admirably. It is sufficient and much better than a tighter place would be, for it seems to be shelter from wind and rain that is needed.

If they have been confined during a long cold spell, see that they get plenty of short grass, or something of the kind, and also plenty of grit. Don't feed for 3¹/₂ hours, and give grit with the first feed. Cook all the food when they are "shooting the red," as it is termed, and after that they are hardy to be killed with anything short of an ax or knife. If they are watched when first allowed to roam far out of bounds, are fed just a little to call them back, they will soon learn to stay near their feeding places, and give little trouble.

F. H. Quebec.

The Roosts

Roosts for heavy fowl should be wide. A four-inch-wide board one inch thick will be better for large Asiatics as a roost than anything else, but the small breeds will be satisfied with a round pole or a piece of three-by-four scantling rounded on the edges. The largest breeds prefer to have a support for the breast, as it tires them to hold the weight of the body entirely on the legs.

A Pretty Good Turkey Story

The following is from *Rural New Yorker*: A subscriber sends us the following clipping from a local Ohio paper: "Mrs. John Bromley, of Richfield township, Henry county, has a turkey hen which is a source of continual entertainment, and as a vaudeville artist this remarkable fowl stands at the top notch. Eleven years ago Mrs. B. found one of her hen turkeys was continually abusing one of her brood, would not allow it to eat with its little brothers and sisters, would strike it with her wing and knock it over every time it came in reach. Mrs. B. finally raised the poor little thing into the house and raised it by hand, making a great pet of it. As the turkey grew up it was so entertaining that it was named 'Cute,' and would come at the call of its name from any place within hearing. The first summer of this hen's maturity she laid 80 eggs and hatched and raised 18 turkeys, and for five years she averaged about the same number of eggs and the same number of young. The sixth year Cute made her nest as usual and visited it daily, but never an egg was produced. Finally Mrs. B., to surprise Cute, placed a Guinea hen's egg in the nest and watched Cute to see what she thought of the little egg. Cute came at the usual time, and observing the Guinea egg—turning first one eye and then the other on it—she stepped into the nest and with her foot kicked the egg fully six feet away. She then sat down and went through the usual pretense of laying. At the end of three weeks Mrs. B. placed 18 eggs, turkey, chicken and Guinea eggs, in Cute's nest, and the old girl accepted the situation and hatched them all out. And for the past six years Cute has done the same thing, never laying an egg, but always making a nest and hatching the eggs supplied to her."

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About Canadian Bank Notes

The following by J. W. Johnston, principal of the Ontario Business College, Belleville, shows how strong Canadian banking institutions are and how the holder of bank currency is secured:

The bills of a Canadian bank are promises of the bank to pay the bearer on demand the sums named. If a demand were made for the payment the bank could make its choice of paying in gold or legal tender, legal tender being notes of the Dominion of Canada. To be in readiness to meet a demand for payment of their currency, the banks hold a reserve of gold and Dominion legal tender notes. Every day experience on this continent proves that people don't desire to carry gold money; they are content to receive, keep and pay paper money, because it is convenient and less liable to be lost; and the experience of many years has demonstrated in Canada that an instantly available cash and legal tender reserve to the extent of ten per cent. of all liabilities of the banks to the public is a safe provision.

It must not be forgotten that banking is the giving and receiving of credit, and there is inherent in this commercial risk. The depositor takes a risk when he deposits; the bank takes a risk when it lends to a customer. The ultimate test of a bank's financial ability to meet his obligations is the solvency of the merchants, the manufacturers and the other classes of customers to which it lends the funds at its disposal.

The currency of a Canadian bank is, practically, a currency secured on a gold basis; and to insure that no loss shall come to the holders of bank bills, the law makes special provision for their security and redemption, which is as follows: The bills of a bank have the first claim upon all its assets, including what is known as the double liability of the shareholders, which means that in the event of a failure of a bank, each shareholder may be called upon to pay in, for the benefit of the bank's creditors, a sum equal to the par value of the stock he holds. Besides ranking thus as preferred creditors on the bank's assets, the holders of the currency of a suspended bank have recourse also to the Government, known as the "Bank Circulation Redemption Fund," which was created and is maintained by each of the banks contributing a sum equal to five per cent. of its accurately ascertained average yearly circulation. This fund is available to pay the bills of any suspended bank, irrespective of the sum which the particular bank contributed to it. All the banks are thus made security for the redemption of the currency of each bank. It is further provided in the Bank Act, that in the event of suspension, the notes then in circulation shall bear interest at the rate of five per centum per annum from the day of suspension to such day as shall be named by the directors or liquidators for their redemption and that there shall be some place in each province where, for the convenience of the public, the bills of each bank may be presented for payment.

A bank must not issue bills of a lower denomination than five dollars, nor of any denomination that it is not a multiple of five, and its total issue of bills must not exceed the sum of its paid-up capital.

With such admirable security for redemption, provision for interest, in case of suspension, and convenience in the matter of presentation, no one need hesitate to accept without question the bills of any Canadian bank.

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Combination Shorthorn Sale

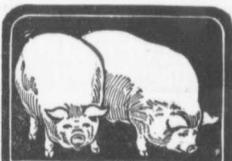
The combination Shorthorn sale, held at the Hamilton sale pavilion on June 28th, passed off fairly well. No big prices were recorded, and the average was below what was expected. There were some good offerings going. Taking them altogether, prices were fair, and though they did not bring big money to the contributor, indicate a fairly healthy condition of things. The highest price was \$300, paid by F. W. Scott for the imported Roan Lady cow Rossetta 8th. A nice Jilt heifer imported by Chas. Rankin, sold for \$300 to Sir Wm. C. Van Horne. D. Milne & Sons' imported bull, Scotland's Fame, was bid in at \$490. He is included in the averages given below. The following is the list of sales and the name of the purchaser:

Contributed by W. C. Edwards & Co., Rockland.—Ruby of Pine Grove 2nd (imp.), \$170; A. C. Pettit, Ice-eman; Missie Maid (vol. 20), \$95; H. J. Wayne, Blount; Ferndale Lady—38369—, \$130; W. F. Wilson, Cumberland; Canadian Rosebud 3rd (imp.), 44887; called Jan. 10, 1901, \$160; T. L. Pardo, Cedar Springs; Lily (imp.), 34998, May 14th, 1896, \$185; W. J. Evans Lawrence; Scottish Lassie (imp.), Feb. 23, 1902, \$175; F. W. Scott; Highgate; Lovely of Pine Grove 2nd, Oct. 12th, 1902, \$60; J. Bricker, Elmira; Elvira's Rose 24th (imp.), March 24, 1901, \$140; T. L. Pardo; Bessie, Dec. 21, 1897, \$95; T. Martindale & Son, York; Missie's Maid, March 1, 1903, \$110; W. J. Shean, Owen Sound; Melrose Queen, Dec. 24, 1895, \$85; W. J. Shean; Mary Leslie, Sept. 11, 1899, \$75; A. Young, Glanford; Melrose Queen 3rd, Jan. 15, 1898, T. Webber, Glanford; Nonpareil of Pine Grove, Jan. 19, 1902, \$66; T. L. Pardo; Fair Shot (imp.), July 21, 1903, \$115; C. Freestone, Meaford.

Contributed by A. D. McGugan, Rodney.—Missie's Ride, Nov. 30, 1899, \$75; J. R. Hux, Rodney; Fry Lass, May 15, 1900, \$70; F. W. Scott; Lady Ramsden, Feb. 21, 1902, \$135; F. W. Scott; Claret King, June 5, 1901, \$105; T. L. Pardo; Canadian Roan Lady, June 20, 1901, \$170; T. L. Pardo; Canadian Roan Lady 2nd, July 5, 1902, \$110; T. L. Pardo; Rossetta 8th (imp.), April 15, 1897, \$320; F. W. Scott; Canadian Red Lady 2nd, July 2, 1902, \$105; A. C. Pettit; Scottish Red Lady (imp.), March 22, 1900, \$260; S. J. Wayne; Canadian Red Lady 3rd, July 2, 1902, \$75; A. E. Hoover, Selkirk; Gipsy Maid, June, 1898, and bull calf, \$120; James Wilson, Binbrook; Gipsy Girl, June 20, 1901, \$80; Col. McGillivray, Uxbridge.

Contributed by Hudson Usher, Queenston.—Rose of Windland, Sept. 22, 1901, \$80; H. Smith, Hay; Meadow Beauty, Dec. 20, 1901, \$100; W. D. Flatt, Hamilton; Vacuna 44th, Sept. 26, 1897, \$185; S. Redmond, Peterboro; Bessie Lady, June 5, 1900, \$210; Arthur Johnston, Greenwood; Queenston Cavalier, Sept. 23, 1902, \$85; D. Eastwood, New Toronto; Queenston Queen, Jan. 12, 1902, \$115; T. L. Pardo; Queen's Jewel, Dec. 6, 1902, \$125; Israel Groff, Alma; Isabella 16th, March 8th, 1901, and bull calf, \$165; J. A. Latimer, Woodstock; Queen's Diamond, May 5, 1899, \$150; Kyle Bros., Ayr; Queenston Chief, Sept. 27, 1903, \$95; David Clark, Glanford; Nora, Oct. 15, 1890, \$110; C. E. Bayne, Lambton; Kinellar Maid, March 6, 1902, \$70; James Wilson, Uxbridge.

Contributed by Chas. Rankin, Wye-bridge.—Duchess of Aborden (imp.) April 25, 1902, \$300; Sir Wm. C. Van Horne, Selkirk, Man.; Bessie Lass (imp.), Feb. 7, 1900, \$250; Hugh A. Potter, Caledon; Beryl 2nd, April 9, 1903, \$75; A. E. Hoover; Aggie, June 1,



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1903, \$85; T. E. Robson, Iderton; J. Lovely 28th, Jan. 18, 1904, \$100; Geo. Amos, Moffat; First Choice, Sept. 7, 1903, \$65; Chas. Bishopric, Toronto; Tibourus Duchess (imp.), April 2, 1896, \$200; A. C. Pettit; Princess 33rd, (imp.), Feb. 27, 1901, \$270; Chas. Bishopric; Mildred, May 1, 1895, \$80; Geo. Pardo, Cedar Springs.

Contributed by D. Milne & Son, Ethel.—Bessie Lee, Feb. 19, 1899, \$105; F. A. Gardiner, Britania; Roan Lovely, May 20, 1903, \$80; T. L. Pardo; Vanity, June 30, 1902, \$55; Geo. Pardo; Velvet Rose, May 30, 1903, \$95; Noble Milne, Ethel; Scotland's Fame (imp.) April 7, 1902, \$90; Noble Milne.

Contributed by T. E. Robson, Iderton.—Lady Riverside 50th, May 29, 1903, \$730; Sir Wm. Van Horne; Rowena Fairfax 2nd, Oct. 20, 1902, \$80; D. Ross, Streetville; Cecelia Hillhurst 2nd, Dec. 3, 1902, \$100; Geo. Amos; Vain General, March 21, 1903, \$80; W. D. Flatt.

51 females sold for \$6,710, average \$131.56; 6 bulls sold for \$900, average \$150; 57 head sold for \$7,610, average \$133.50.

D. C. Flatt's Sale of Yorkshires

The sale of imported Yorkshire swine, held by Mr. D. C. Flatt, in the pavilion at Hamilton Stock Yards, on June 15 last, was not largely attended, but bidding was lively and prices realized were in most cases encouraging. Most of the leading breeders of pure-bred Yorkshires were present. Only two or three Americans were in evidence, but it was clear that they were after the good ones and willing to pay the price. The average price obtained for the entire herd was about \$85 per head. The offerings consisted of a large number of fine animals of the medium bacon type with a few thick ones and some of the extreme bacon conformation, but it was clearly evident that the mediums were in strongest demand.

The highest price obtained was paid by W. Canfield, of Minnesota, and was the nice sum of \$380 for Summerhill Dalmeny Duchess 49th a year old sow bred by the Earl of Roseberry, a very fine sow of Duchess breeding, and doubtless destined to be seen at St. Louis Fair. The same buyer again paid \$250 for Summerhill Dalmeny Empress, bred by the same breeder, and \$180 for her litter sister. A number of boars were sold for prices ranging from \$20, paid by the same buyer, for Summerhill Dalmeny Clipper. Leading Canadian buyers were J. E. Brethour, Burford; J. Hill, Wellesley; Geo. Amos, Moffat; Matt. Wilson, Fergus, Ont.; W. A. Martin, Corleyville, W. G. Pettit, H. J. Davis, Woodstock; F. Shore, J. G. Gibson, J. Redmond, H. Jennings, J. G. Watson, and other well-known breeders of Yorkshires in Ontario.

Combination Sale at Port Perry

The combination sale of live stock held on June 16th last, was well attended and quite an active interest was evinced. The offerings were a number of young Yorkshire sows and boars contributed by well-known local breeders and from leading breeders outside. Among these, some fine stock were sent in by J. E. Brethour, Burford, and Wm. Smith, of the firm Smith & Richards, Cleveland, importers, of Columbus, Ont. There were about twenty head of milk cows offered, with quite a number of store cattle. Prices received were fair, and in some cases the dairy cows and store cattle, excellent. It is the intention of the management to hold an auction sale of pure-bred Shorthorns in the fall. The auctioneer was George Jackson, of Port Perry.

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 extend 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.

Farming World Man on the Wing
Mr. G. Clemons, of St. George, Ont., is well known as one of the champion Holstein breeders of Ontario. He is a strong advocate of the advanced registry, and few, if any, of his animals that are not performers themselves or closely related to noted performers in the dairy test. Among the young stock on the farm is an 11-month bull calf, a son of Mondamon's Daisy Farrington, a cow that averaged over 50 lbs. of milk for over six months. He has recently sold, to go to a breeder in Quebec, a fine 15-month son of Mary Anderson and Count of Maple Hill. This bull is now a three-year-old. He was sired by the Count Mink Mercedes, and his dam was imported from Holland. One of his performers is Queen DeKol 2nd, who, when four months in milk, produced 2½ lbs. butter in one day in test at Branford. Another has been milking for 6 mos. and is now giving between 50 and 60 pounds of milk per day.

Quite a number of farmers in the locality of Hageraville are showing a very commendable inclination to breed better stock. Mr. James Fleming of Nelles Corners, is the owner of a lot of real good ones of fine type and size. Mr. Matt Hall began a few years back by purchasing a couple of cows of Britannia breeding, sired by Sir Christopher, from James Douglas, of Caledonia. Since that time he has always been able to appear as a contending factor in the local shows, and oftener than not, has landed a first prize. He has now a number of fine heifers that promise to build up a herd to be proud of. John Lishman, the breeder of Miss Canada, a prize winner for Mr. Yeager at the show this year, began some years ago in the same way, and the example is a good one for others, now breeding and feeding scrubs and grades, to follow. Albert Snell is breeding Yorkshire swine successfully and extensively. Albert Hinds and W. Nichol are old breeders, well known, and the section bids fair to take a place among the leading stock breeding districts of Ontario.

The name of Mr. Jas. Bowman has been for years widely known as one of Ontario's leading breeders of the "stoddy" Aberdeen-Angus cattle. The herd kept by him at his Elm Park Farm at Guelph, have for years been winners at most of the leading shows in America, and a reason for this can easily be seen in the type and quality of the individual members of the herd itself, many of them having proved their superiority in the showings of the old land before coming here. Among the older members of the herd is Pride of Langmuir, the dam of

Pride of Rowley 9th, who is a championship winner at the Highland and Agricultural, and the Royal shows in the old country. The aged cow Mayflower will scale 1,600 lbs. and is a magnificent animal, of true typical conformation and fine appearance and nicely fleshed, and is by Kim's Heir, four years champion at Toronto show. Elm Park Kanna is the dam of the champion beef carcass at Chicago, 1901. Elm Park Kima 11th, who will weigh close to 1,700, has a fine bull calf at foot from the present herd bull Prince Benton, champion at Toronto last year. There are about thirty-five head in the herd at the present time, a grand lot, six of the females being imported from England. He has five pure-bred Clydesdales, all by imported sire and dam, and a large flock of Suffolk sheep, headed by an imported ram bred by the Earl of Ellsmere.

Ten championships out of a possible 14 competed for is the show record for the first year during which the Trout Creek Farm of W. D. Flatt, Hamilton, Ont., has been the home of the Shorthorn. Six years ago Mr. Flatt first turned his attention to the Scotch beef cattle, and commenced in the usual way of beginning at the bottom, and building up a herd by the slow process of breeding them. But anything in the nature of plodding methods could not fail to soon prove intolerable to a nature which had found the intense and energetic activity of the lumber business so congenial in the past, and he soon turned his attention to the importing branch of the business. By throwing the same steam and energy and enterprise into this that had characterized his career in business, Mr. Flatt was soon content to the front, "comin' like the cars," too. With true judgment, he saw what was wanted in the business, a better Shorthorn than we had, of better quality and better breeding to make its propagation sure, and when he crossed the waters to get it the shrewd old breeders soon saw that the best was none too good, and nobody had more money to pay for what he wanted than the head-levelled young Canadian who often found it tedious waiting until others had made up their minds, but could always say at a moment's notice what he was prepared to do himself. The same energy and enterprise characterized his dealings at home, and record-breaking sales, private and combination, were exploited, first at Hamilton, in 1899, afterwards in Chicago in 1900-1. At the last of these, in Chicago in the year 1901, 45 head were sold for \$50,000 an average of \$1,122 each. During the past six years, 225 head have been sold at public auction for the sum of \$166,730, an aver-

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IT IS THE BEST.

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**CLOVER LEAF LODGE HERD
OF SHORTHORNS**

Choice young stock from grandly-bred Scotch topped cows. A number from choice milking strains. Well-bred Lincoln Sheep. Also Barred and White Stock poultry and Bronze Turkeys.

R. CORLEYBelgrave P.O. and
Sta., G.T.R.Wingham, Ont.
C.P.R.**RIDGEWOOD PARK STOCK FARM**

Pure Scotch Shorthorns
Clydesdale, Shire,
and Hackney Horses

E. C. ATTRILL, Mgr.,
Coderich, - - Ont.**Ashland Stock Farm.**

Pure Scotch-Topped Shorthorns. Cows bred from imported stock of grand Scotch breeding. Young stock of both sexes for sale.
J. MARSHALL, Jackson P.O., Ont.
Tara Station G.T.R.

**Glenview Stock Farm
CLYDESDALES and HACKNEYS**

All imported Stock
Two Grand Young Hackneys for Sale

W. Colquhoun, Mitchell, P.O.,
and Station, G.T.R.**Dentonia Park Farm,****COLEMAN, P.O., - ONT.**

FOR SALE—During the next six weeks—young stock of both sexes

**JERSEYS, GUERNSEYS
and Ayrshires**

Our prices won at Toronto and Ottawa this year give only a fair idea of the quality of the stock. Our prices are consistent with such quality. Correspondence solicited. Photographs and full particulars will be sent on request.

JOHN H. DOUGLAS,

BREEDER OF

SHORTHORN and**AYRSHIRE CATTLE
YORKSHIRE SWINE**

Young stock of all ages and both sexes for sale.

Warkworth, P.O.

Campbellford Sta., G.T.R.

Waverly Stock Farm**HACKNEY STALLIONS**

AND

FILLIES

Choice young stock, imported and home-bred.

R. BEITH,**Bowmanville, G.T.R., Ont.****Stock Gossip**

J. E. Brethour, Burford, Ont., writes: "Notwithstanding the fact that over eighty brood sows are kept in the Oak Lodge herd, we find it difficult to keep the supply up to the demand. However, we are in the pig business to fill orders and have this week added four more brood sows as well as a choice young boar. These five pigs are imported, and being entirely new blood, will make a valuable addition to the herd. We have a splendid lot of young pigs that are now ready for shipment and invite correspondence. Prices are reasonable.

Mr. H. V. Glendenning, Bradwardine, Man., writes: "My attention has been called to the enquiry by Jno. Stephenson, Lambton Co., Ont., re Red Polled cattle. I might say that I own the pioneer herd of Red Polled cattle in Manitoba and the North-West. I don't know if there are any in the East. I made the first importation a little more than a year ago, and the cattle are doing well, notwithstanding the severe winter. I intend making an exhibit at the Dominion Fair at Winnipeg and it would pay any one interested in the breed to visit me and look over the cattle, as there will be some choice animals for sale."

✽

Pine Grove Shorthorns

A visit to Pine Grove Farm, Rockland, Ont., in June, makes a pleasant and profitable outing. On this farm, Messrs. W. C. Edwards & Co. have succeeded in building up one of the largest and best Shorthorn herds in Canada. Their stock are looking especially good at this season. Especially is this true of the young stock. A finer and more uniform lot of calves it has not been our pleasure to see for many a day. Village Champion's stock is coming very even, straight and blocky, and clean-cut in outline. Village Champion himself has improved wonderfully since he landed two years ago. That he is doing excellent work is shown by the fine bunch of calves he is leaving. The old bull, Marquis of Zenda, though ageing somewhat, is as strong and vigorous as ever and has this season left a bunch of calves that will be heard from later. The cows and heifers at Pine Grove are in good shape. The wide range of pasture is conducive to health and thrift. The \$6,000 Missie cow with her square-built and massive frame, is maintaining her reputation. Almost a replica of herself, only of a roan color, is to be seen in her daughter, got by Bapton Favorite. Visitors at the Ottawa Winter Fair will remember the splendid white heifer shown by Edwards & Co. Though good at that time, she has greatly improved since and stands today an almost ideal type of what a first-class beef animal should be. She was got by a Marquis of Zenda bull and therefore comes by her good qualities right enough.

Pine Grove herd will be strongly represented at Winnipeg and later at Toronto.

✽

Clydesdales for Quebec

We learn that Messrs. A. & W. Montgomery have sold to Mr. Ness, Howick, Quebec, four first-class three-year-old mares and three two-year-old colts. Two of the mares are got by Aeneas and the other two by Royal Carriek. One of the colts is an extra good animal, got by the champion breeding horse Baron's Pride out of a Macgregor mare, and the other two were got by the well-known Baron's Pride horses Up-to-Time and Pride of Blacou. These are an extra

**Stock Farm
FOR SALE**

About 667 acres, 10 miles from Hamilton 557 acres cleared, 110 uncleared; soil, clay and clay loam with clay sub-soil, watered by creek. Two sets of buildings. This farm is admirably adapted for stock.

For prices and terms, apply

The Toronto General Trusts Corporation,
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Live Stock Auctioneer,
ILDERTON, ONT.**GEO. JACKSON,**
Auctioneer, PORT PERRY, ONT
Live Stock a Specialty.

IMPORTED

Clydesdales and Shorthorns

Messrs. Smith & Richardson, Columbus Ont., Importers of Clydesdale Horses and Shorthorn Cattle. STAYONS—Oshawa and Brooklin, G.T.R., Myrtle, C.P.R. Forty miles east of Toronto. Long-distance telephone at residence, near Columbus, Telegraph, Brooklin.

**GRAHAM BROS.,
CLAREMONT, ONT.**

Canada's leading Horse Importers

**Clydesdales and Hackneys
Stallions and Mares.**

Farm one mile from station on C.P.R.

Write for Catalogue.

T. H. HASSARD, V.S.

DEALER IN

**CLYDESDALE,
COACH AND
STANDARD
BRED
STALLIONS**

My last importations were taken directly from the boat to the Toronto Spring Station Show, where they won highest honors.

MILLBROOK, - ONT.**TROUT CREEK****SHORTHORNS****SPECIAL OFFERING:**

Two imp. bulls with superior breeding and individual merit. Also a few imported Scotch heifers and home-bred bulls and heifers.

Send for catalogue.

JAMES SMITH, W. D. FLATT,
Manager, Hamilton, Ont.

good lot of animals, and they are well fitted to enhance the reputation of the breed in the Dominion—North British Agriculturist.

Clyde Fillies Sell Well

There was a large and representative gathering of horsemen at the Repository on June 23rd, to attend the public auction of the Clydesdale fillies imported by Graham Bros., of Claremont, Ont. The fillies were selected by Mr. Thos. Graham, and while not fleshy enough to look to the best advantage, were remarkable for quality at the ground, and all were good movers. While the prices realized could scarcely make the enterprise a very profitable one, yet they show a commendable appreciation of the opportunity offered to obtain mares of the right breeding stock, and the event marks an era in the history of Clydesdales in Canada.

Mr. Walter Harland Smith conducted the sale, assisted by George Jackson. The fifty fillies brought \$15,400, an average price of about \$310. The highest price paid was \$700, by Messrs. Hodgkinson & Tisdale of Baverton, for Donna Roma, a two-year-old, bred by William H. Cannon, of Auchencrain, out of Dandie of Milton, by Woodend Garty, C. R. Bennett, for Donna Roma, paid \$675 for Baron's Lily, another two-year old. \$500 was paid by Robt. Davies for Lovelight, a yearling, and T. A. Cox paid \$435 for Lady Roxburgh, a three-year-old. Following is a list of prices and purchasers:

Three-year-olds — Lady Campbell, \$385; Charming Lady, \$320, Geo. W. Fowler, M.P., Sussex, N.B.; Lady Roxburgh, \$435, T. A. Cox, Bramford; Lady MacRath \$410, Wm. Edwards, Balsam; Lady Anderson, \$335, W. A. Dyne, Amaranth; Lady Lily, \$200, A. G. Darrach, Cotswold.

Two-year-olds—Lady Sceptre, \$360, Donna Roma, \$700, Hodgkinson & Tisdale; Miss Roumania, \$325, Black Beauty, \$305, Lady Valentine \$230, Fair Lady, \$300 Ruby, \$405, and Golden Queen, \$300, George W. Fowler, M.P.; Veronica, \$300, Trinke, \$245, J. M. Gardhouse, Weston; Lady Phillips, \$300, W. A. Bradshaw, Uxbridge; Baron's Lily, \$275, C. R. Bennett, Russellton; Miss Chamberlain, \$430, Robt. Davies, Toronto; Miss Concord, \$245, Nelson Wagg, Claremont; Gay Empress, \$350, Robt. A. Struthers, Milverton; Mona's Queen, \$275, J. W. Widdfield, Uxbridge; Lady Nellie, \$205, William Parrott, Columbus; Jean Crawford, \$255, John McBride, Cheltenham; Dorothea, \$285, O. Sorby, Guelph; Lady Robbie, \$235, G. A. Brodie, Stouffville; Maid of Arisland, \$180, R. Wilkin, Harriston; Gartley's Princess, \$310 Henry McGowan, Marville.

Yearlings—Jane IV, \$210, Lovelight \$500, Robt. Davies; Golden Princess, \$215, Miss Hood, \$185, Lady Fashion, \$185, Nelson Wagg; Bessie, \$200, Grace, \$155, May Fashion, \$175, Rosanene, \$300, Kelton Lady, \$200, Geo. W. Fowler, M.P.; Dromore Princess, \$345, F. M. Chapman, Pickering; Mary, \$345, C. R. Bennett, Russellton; Fair Fortune, \$200, H. Story, Fleton; Rosie, \$220, Thomas McAfee, Bradford; Lovely Fashion, \$205, Lance Johnston, Brougham; Lenora, \$300, W. G. Barnes, Green River; Lady Murray, \$200, John Lowrie, Malvern; Lady Palmer, \$300, Noah Burkholder, Cherrywood; Fashion Belle, \$335, J. Carmichael, Myrtle; Lady Peerless, \$215, Andrew DeChens, Guelph, Ont.; Border Jess, \$205, W. H. Banks, Pickering; Lady Irving, \$300, Alex. Park, Hereward.

OAK LODGE YORKSHIRES

Years of careful breeding have made the Oak Lodge Yorkshires the Standard of Quality for IDEAL BACON HOGS.

The Championship against all breeds has been won by this herd for 3 years at the Provincial Winter Fair, on foot and in dressed carcass competition. Prices are reasonable.

J. E. BRETTHOUR, - BURFORD, ONT.

H. CARGILL & SON,

Importers and Breeders of SCOTCH SHORTHORNS

Present offering SEVEN GRANDLY BRED BULLS. Also a large number of grandly bred young heifers, imported, imported in dam and home bred. Call on or write to

JOHN CLANCY, Mgr.

H. CARGILL & SON,
Cargill P.O. and Sta. G.T.R.

Ontario Live Stock Co., Ltd.

UNIONVILLE Sta. and P.O., ONT.

Offer for sale 30 young Berkshire Pigs from imported stock, and 30 young Yorkshire Pigs, also from imported stock.

Price \$5.00 Each, F.O.B. Unionville.

Order at Once.

H. POWERS, Mgr.



The Wheel You Want.
For Farm and General Work.
ALL IRON.
Any size. Any width of tire. Made to fit axle. Strong and durable. Costs nothing for repairs.
Dominion Wrought Iron Wheel Co. Limited, Grifflin, Ontario



Our **QUEEN CITY MANSY WAGON** with iron wheels, strong and of light draft, low and convenient to load and unload, a perfect wagon for the farm, carries five thousand pounds. Write for catalogue of both wheels and wagons.

THE WONDER OF THE AGE

ALL EYES ARE ON THIS INVENTION

Patented 1880-91 and 1903.



The Genuine Tolton Pea Harvester with New Patent Buncher at Work.

1. Harvesting in the most complete manner from eight to ten acres per day.
2. Harvesters to suit all kinds of mowers.
Every Machine Warranted. Our Motto: "Not how Cheap, but how Good." No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send direct to

TOLTON BROS., Limited - GUELPH, ONT.

Market Review and Forecast

The Trend of Markets—Supply and Demand—The Outlook

Toronto, June 29th, 1904.
Trade in wholesale lines is a little quieter as is usual at this season of the year. The cheese factories are helping trade in the country and increasing money circulation, which should help remittances from the country trade. Money is plentiful in the banks. Call loans rule at about 5 per cent. and discounts at 6 to 7 per cent.

WHEAT

Markets are lower and, on the whole, weaker, than at last writing. Favorable weather and more hopeful crop reports with discouraging cables have been the leading causes of the easier feeling on both sides of the Atlantic. Reports from Manitoba and the West are favorable and the new crop seems to be making good progress. In Ontario, fall wheat has picked up considerably, but will be only a partial crop owing to the bad start in the spring. From the United States comes the news of winter wheat improvement, wheat is heading and filling most satisfactorily. In the Southern States where harvesting is in progress, the crop is yielding as well, if not better, than was expected. Locally, the wheat market is quiet but steady at 88 to 89c for red and white; 77c for goosie, and 83c. for spring at outside points.

COARSE GRAINS

Oats rule firmer with higher cables for Canadian. In the S. the oat crop is maintaining a good average condition. Here, if weather conditions continue favorable, a good crop is assured. Oats are quoted here by shippers at 32 to 33½c at outside points. Barley and peas are quiet at quotations. Unless helped out by good weather late in the season, Canada's corn crop will be below the average. Regarding the United States corn crop the Cincinnati "Price Current" of last week says:

"The corn crop has improved in all respects except growth; as a whole the crop is well cultivated, has a fair to good stand, and a healthy color, but is still backward; the nights have been too cool for rapid growth; lately, however, there has been more rapid development in the western corn States, and the crop appears to be approaching more nearly a normal condition."

EGGS AND POULTRY

Egg prices, generally speaking show little change. The export demand for both pickled and fresh stock is not active and values are governed chiefly by the local demand which seems to be active enough to maintain values at a high level. Dealers are complaining some of hot weather eggs. At Montreal, fresh stock sell at from 14 to 14½c. in round lots, and here at 15 to 15½c., with 12 to 12½c. for seconds.

There is nothing doing in poultry in a large way. A produce company in Toronto, last week, paid 20c. per lb. for broilers or spring chickens weighing over 1½ lbs. each, and 6c. per lb. for hens.

HAY AND STRAW

The hay trade continues in a healthy condition. The deliveries at country points continue to increase, but owing to the active demand for the local and export trade, there are no accumulations, consequently prices are

well maintained. Exports of Canadian hay are increasing, and it looks as if England would supply a good market for Canadian hay for some time to come. Some Americans are buying hay in Quebec at top prices. At Montreal, No. 1 timothy is quoted at \$11 to \$11.50, and No. 2 at \$10 to \$10.50 per ton. Baled hay is a little easier owing to increased receipts, the ruling figure being \$8.50 in carlots on track.

WOOL

Canadian fleece continues scarce and prices are reported at Montreal to be largely nominal. Washed Ontario fleece is quoted there at 17 to 18c., and unwashed at 12 to 13c. Nova Scotia washed sells at 20 to 21c. per lb. Receipts of new clip continue very light here, lighter than they have been for years. Quotations are 17c. for washed, 13c. for rejections, and 10 to 11c. for unwashed.

FRUIT

Receipts of strawberries are increasing. Some small or soft berries sold on Tuesday last at 5½c. per box. The ruling figure is from 6 to 8c., with 9c. for very choice lots.

DAIRY PRODUCTS

The make of cheese is keeping up fairly well. The market situation is not very satisfactory. English buyers have refused to follow the advance on this side during early June, and consequently values have gone back a little. It is stated that more cheese are held in Canada at the present time than for several years back. The total shipments of cheese up to June 22nd this season were 280,062 boxes, as compared with 431,663 boxes for the same period last year. The local markets this week rule below 8c., the ruling price being from 7½ to 7¾c.

Butter exports have shown a considerable increase lately, being 47,695 pkgs. for the season to June 22nd,

as compared with 31,243 pkgs. for the same period of last year. Cable reports indicate an increased demand for the better grades. At Montreal, things are easy at 17½ to 18c. for finest creamery. There is a good demand for choice quality here. Choice creamery prints are quoted at 17 to 18c. and solids at 15 to 16c., and choice dairy at 11 to 13c.

LIVE STOCK

Live stock receipts have fallen off considerably this week, there being only 44 cars at the Toronto city market on Tuesday last. A few lots of good cattle were offered, the bulk being half-fat grass cattle. Trade for good cattle was brisk, but for half-fat stuff, especially cows, it was slow. Farmers are not selling quickly as they have plenty of pasture. Choice, well-finished, heavy exporters, are worth \$5.50 to \$5.80, and medium \$3 to \$3.25 per cwt. Choice export bulls sell at \$4.25 to \$4.40; medium at \$3.75 to \$4, and cows at \$4 to \$4.25 per cwt. Choice butchers' stuff, 1,100 to 1,200 lbs. each, sell at \$4.75 to \$5; medium to good at \$4.25 to \$4.75, and inferior to common at \$2.75 to \$4 per cwt. Short feeders, 1,100 to 1,200 lbs. each, sell at \$4.80 to \$5; others weighing 950 to 1,050 each, sell at \$4.25 to \$4.50 per cwt. Choice yearling stockers sell at \$3.75 to \$4.10, and other grades at \$2.75 to \$3.30 per cwt. Milch cows and springers bring \$27 to \$30 each. Calves bring from \$2 to \$10 each, and \$4 to \$5.50 per cwt.

Export sheep are firmer at \$3.85 to \$4.15 for ewes, and \$3 to \$3.25 per cwt. for bucks. Spring lambs bring \$3 to \$4.40 each.

Prices for select bacon hogs rule at \$5.10, and for lights and fats \$4.85 per cwt.

HORSES

There is a general lull in the local horse trade here which will likely continue for a month or more. On Tuesday only some 40 lots were offered at the Repository here. The top price was \$185, paid for a five-year-old good looking gelding of the draught type. The situation, generally speaking, is good. Dealers are not loaded up with horses and will be in good trim to do business when the season opens about the middle of August.

The Canadian Produce Markets at a Glance

The highest quotations of prevailing prices for standard grades of farm produce in the leading markets on the dates named. Poorer stuff lower.

Date	Toronto		Montreal		St. John		Halifax		Winnipeg	
	29	28	23	23	23	22	22	22	22	22
Wheat, per bushel.....	\$ 89	\$ 92	\$...	\$...	\$...	\$...	\$...	\$...	\$...	\$...
Oats, per bushel.....	32	38	43	44	37					
Barley, per bushel.....	41	49	50	53	43					
Peas, per bushel.....	62	70	70	77	...					
Corn, per bushel.....	43½	54								
Flour, per barrel.....	3 65	4 05	5 00	5 20	4 10					
Bran, per ton.....	10 00	17 00	18 00	18 00	16 00					
Shorts, per ton.....	20 00	18 50	20 50	20 50	17 00					
Potatoes, per bag.....	80	63	1 15	1 00	60					
Beans, per bushel.....	1 35	1 30	1 75	1 80	...					
Hay, per ton.....	9 00	11 00	13 00	12 00	12 00					
Straw, per ton.....	5 50	7 50	6 00	7 00	...					
Eggs, per dozen.....	15½	14½	15	15	15					
Chickens, per pound, d.w.....	20	15	pair 1 00	per 1 15	per 1 15					
Ducks, per pound, d.w.....	15	15	16	17	17					
Turkeys, per pound, d.w.....	17	16½	17	17	18					
Geese, per pound, d.w.....	10	10½	12	15	...					
Apples, per barrel.....	3 00	3 75	3 25	4 00	4 75					
Cheese, per pound.....	8½	7½	8½	9	8½					
Butter, creamery, per pound.....	18	18	20	21	18					
Butter, dairy, per pound.....	13	14½	18	18	18					
Cattle, per cwt.....	5 80	5 50	5 25	5 25	5 00					
Sheep, per cwt.....	4 15	4 50	4 25	4 30	4 75					
Hogs, per cwt.....	5 10	5 25	5 50	5 50	4 75					
Veal Calves, per cwt.....	5 50	5 40	5 00	5 00	...					

The Death of W. S. Marr

The death of W. S. Marr, of Uppermill, Scotland, on Tuesday, June 27th, was an event which all stockmen throughout America will hear with sorrowing sympathy. Suddenly in the prime of life and in the floodtide of success, his decease occurred through heart-attack, and his loss will be little short of a tragedy to live stock interests, with which he has been so identified that his name is almost a household word in Canada as at home. In him the Scotch Short-horns found a mighty champion, and through him Marr's Misses, Alexandrinas, Marigolds, and Princess Royals, attained the zenith of their prowess and prestige. A "Marr" bull, especially if he were of the "Missie" tribe, was a coveted possession the world over. In private life he was of a most generous disposition, and was social and hospitable almost to a fault. He was 42 years of age and had never married. The remains were interred at Udney and the funeral was attended by the Earl of Aberdeen and a large representative company of agriculturists.

Prince Edward Island

Summer is here at last. During the second week in June the weather was very cool indeed, and there was heavy frost on June 8th and 9th. Some of the gardens have suffered, and it is feared that some fruit has also been damaged. But the weather is now all that can be desired, and the crops look excellent. Pastures are far ahead of last year. Early potatoes are looking well.

Mr. J. J. Gay is the owner of a fine vegetable garden within the city limits. His vegetables were planted early and look remarkably well. He sells quite a variety of plants. Cabbage plants sell for 10c per hundred. Since cropping has been completed,

the markets have been well attended. Shipping is brisk.

CHARLOTTETOWN MARKETS

Butter, fresh, per lb., 18 to 19c; eggs, 3 to 14c (buyers are giving 13); spring chickens, 75c per pr.; lamb, 60 to 75c per pr.; beef, per lb., small, 8 to 14c, by pr. 6 to 7c.; pork, 6 to 6½c; mutton, per carcass, 6 to 7c.; lard, per bucket, 11 to 12c; flour per cwt. \$4.20 to \$4.50; potatoes per bus., 25 to 30c.; oatmeal per lb., 2½ to 3c.; apples per doz., 16 to 20c. (very scarce); cream, 20c. per qt.; rhubarb, 3c. per lb.; oats per bus., 36 to 38c.; little pigs, \$4.00 to \$4.50; hay per cwt., 65 to 70c.; codfish, fresh, 10 to 20c. each; mackerel, 10c. each.

During the first part of June the lobster fishing has been unusually good on the North Side, and codfish have been caught in large quantities. The mackerel have struck. They are very large and fat.

Several hives of bees for A. E. Dewar, Royalty, and a crate of Tamworth pigs for J. G. Scrimgeour, Cardigan, arrived by express on June 7.

Quite a number of horse buyers from N.S. have been on the Island recently. Good horses are dear, prices ranging from \$225 to \$800.

A. McNeill, Chief Fruit Inspector, Ottawa, and R. Burke, Fruit Inspector of P.E.I., will hold meetings for the purpose of giving instructions in pruning, grafting, spraying, and work relating to the care of orchards. They intend starting from Charlottetown on Monday, June 20.

Some of our farmers have been treating their land liberally with nitrate of soda. They are finding out that it pays.

Will Destroy Mosquitoes

A plant, called the Phulo, recently introduced into the United States from the Tonquin country, China, is said to cause the destruction of the

mosquito. The herb, when young, is between a tobacco plant and a mullein. It is soft, green and spongy, yet bristling with a coat of hairy down, that must seem to the mosquitoes like a thicket of barbed wire fences, with which no wise or well bred mosquito would attempt to fool. Being a perennial plant, it generates few seeds, but this is made up by the multiplicity of sprouts that shoot from its roots.

But its virtues, so it is claimed, are not confined to the ravages it creates among the mosquitoes. The plant may be used still further as a fodder for cattle. It may, like the alfalfa plant, be cut four times a year, furnishing abundant nutriment for cattle. It is also claimed to be a good beef-maker. If, however, it will help to rid this continent of the mosquito pest its introduction will not be in vain.

Spraying for Plant Lice

The green aphid, or plant lice, which caused such great destruction to fruit trees and nursery stock last year, may be controlled very largely by early and persistent spraying. These insects suck the juice from the leaf and are not affected by Paris green and other poisons.

Insecticides which kill by contact must be used. Kerosene soap used at the rate of 1 pound in 5 to 6 gallons water is generally effective. Tobacco water made by soaking 1 pound tobacco stem in 2 gallons water is another good remedy. Kerosene emulsion made by the usual formula of ½ pound soap dissolved in 1 gallon boiling water, to which is added 2 gallons kerosene, thoroughly stirred and then diluted with seven parts water, is used largely. Slaked lime has also proved effective. Treatment should begin early in the season, as soon as any lice are observed, and be continued at frequent intervals to hold them in check.

SCIENTIFIC SUMMER FEEDING

INTERNATIONAL STOCK FOOD CO.

Dear Sirs—About 400 lbs. I received a 50 cent package of International Stock Food from you. I commenced feeding 11 about Feb. 18th to two Durham cows. I put in their middings 10c per day. In reference to 11, I can say: International Stock Food will make any great feeder. It gives them a better appetite. It will prevent and cure worms in calves; it will make calves grow very, very rapidly. It makes them very active and bright. Later on, after it was called for by its milk, I was sending 11 International Stock Food that cost me only very much less than I had before feeding International Stock Food. I think I can say that International Stock Food is just the thing.

Yours respectfully,
FRED M. DICKER.

Be aware of imitations and substitutions. We have thousands of testimonials like this one in our office, and we will give you 50 cents if they are not genuine.

"INTERNATIONAL STOCK FOOD"—3 FEEDS FOR ONE CENT—is a purely medicinal, vegetable preparation, composed of roots, herbs, seeds, berries, etc., and is fed to stock in small quantities, in addition to the regular grain food, for the purpose of aiding digestion and insuring perfect assimilation. It is entirely harmless, even if taken into the human system, and is prepared by a practical stockman, who is a thorough master of scientific feeding.

Extra Profits are made by feeding "INTERNATIONAL STOCK FOOD" to Cattle, Calves and Pigs during the Summer Season.

You can see your pig grow, and your cow produce more milk than any other time, and the use of "International Stock Food" will make you a large extra profit during the summer season. It will make your young stock grow rapidly and keep them healthy and vigorous.



3 FEEDS FOR ONE CENT

A \$3000.00 STOCK BOOK FREE

It Contains 183 Large Engravings.

The cover of this book is a beautiful live stock picture printed in six brilliant colors and without any advertising on it. The book is 6 1/2 inches wide by 10 inches long, and cost our engraving department over \$3000 to produce. It gives history, illustrations and descriptions of the various breeds of horses, sheep, cattle, hogs, goats and poultry. It contains an UP-TO-DATE VETERINARY DEPARTMENT, which treats of the ordinary diseases to which stock are subject, and tells you how to cure them. This department alone will save you hundreds of dollars.

We will mail you this book, absolutely free, postage prepaid, together with a large colored lithograph of DAN PATCH.

This Dan Patch lithograph is printed in six brilliant colors, and is worthy of a place in any home.

Write us at once and answer the following questions:
1. WHERE DID YOU READ THIS ADVERTISEMENT? 2. HOW MANY HEAD OF STOCK HAVE YOU?

INTERNATIONAL STOCK FOOD CO.,
TORONTO, CAN.

Capital paid in, \$2,000,000.

Largest Stock Food Factories in the world.



DAN PATCH 1860.
World's Champion Race Horse.
Eats "International Stock Food" every day.

Please Mention The Farming World when writing Advertisers.

EATON'S

MAIL ORDER NEWS

TORONTO

Women's Petticoats

OUR factory, which is one of the largest and best equipped in the world, combined with our unequalled facilities for buying materials in large quantities direct from the producers, enables us to offer silk petticoats at such little prices that every woman can afford to have one or more in her wardrobe. The styles illustrated are but a few of our popular numbers. You run no risk in ordering any or all of them.

45950. If you are interested in a high grade black tafeta silk petticoat this is an opportunity you cannot well afford to miss. The body of the skirt, which is a splendid width, is made with the popular French seams. The upper bonnee is prettily tucked in clusters and gives a very pleasing effect. The lower bonnee, which is accordion pleated, is finished with a very full gathered frill and gives the much desired amplitude. It also has a wide dust ruffle. There is nothing similar or skimped about this petticoat and for painstaking workmanship it is unparalleled. A petticoat that would be splendid value at \$7.50.

Our Price — **5.00**

45953. This elegant Petticoat is made of a high grade tafeta silk, in black, old rose, holly, pink, turquoise and navy. The top is made with that popular fullness so much desired. It has a double bonnee. The wide under bonnee acts as a foundation for a wide fancy accordion pleated bonnee edged with a dainty frill. Women can scarcely do justice to this particularly styled petticoat.

We have no hesitation in recommending it as a valuable acquisition to any lady's wardrobe, as it is found to please the most exacting. We court comparison with any petticoat outside this store at \$6.00. A prime favorite at \$5.00.

Our special Price — **3.95**

As we have only a limited number of the colored petticoats, we cannot guarantee to fill orders after the present supply is exhausted.

45100. The woman who desires a good serviceable petticoat would appreciate this offering. The material is a splendid quality fast black mercerized seersucker. The seams are felled and double stitched, which makes it exceedingly strong and durable. It is made bonnee effect with two wide and generous frills, which give a very pleasing fullness. Equal to any \$1.25 petticoat outside this store.

Our Price — **.75**

Sizes for silk petticoats are: Lengths 39, 41 and 43 inches. For mercerized seersucker the lengths are: 38, 40 and 42 inches.



45950
\$5.00

45953
\$3.95

45100
75¢

45942
\$3.50

45942. Represents our \$7.50 Petticoat, the bonnee and frill of which are made of high grade tafeta silk, accordion pleated and trimmed at the bottom with six ruching. The top or body of the skirt is made of fine quality mercerized. This unique combination has the pleasing quality of a silk petticoat with the wearing qualities of the mercerized. A generous dust ruffle serves as a background to the pleated silk frill and preserves the appearance and style of the skirt to a wonderful extent. This is a skirt that is well worth \$3.00. Made in black only. Our price — **3.50**

THE **T. EATON CO.** LIMITED
TORONTO CANADA