

Soils and Crops

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The Grading of Wool.

The official grading of wool has had a wonderful effect in improving the quality and preparation of Canadian wool for market. It is a well-known fact that not so many years ago Canadian wool was held in poor esteem abroad owing to its coarseness and deficiency in purity. Now this is largely remedied, and wool from this country is able to compete in some measure with the best wool from New Zealand and Australia and to command as good a price. During the war the demand for wool was enormous, and prices naturally soared very high. Now they have dropped to some extent in every market, but there is abundant evidence that with the return of settled and normal conditions prices will be found remunerative and fluctuation considerably checked. The valuable work done by the official graders is testified to by the fact that the demand for Canadian wool has been greatly increased. Their task is hard and exacting. Its extent is denoted by the fact that for the year ending March 31, 1920, 3,788,138 pounds were graded for farmers' co-operative organizations. Of this amount 780,379 pounds were from Ontario, 743,562 pounds from Saskatchewan and 1,464,161 pounds from Alberta. The system has undoubtedly given stability to the wool industry and led to an increase of sheep breeding, and sheep of an improved quality. It also equalizes prices and encourages farmers to take greater care of and more pride in their flocks. Grading, after all, is only one step that has been taken to develop the wool industry. Exhibits have been made at home and abroad. In Canada displays were made at all the leading fairs. In ten western exhibitions there were shown the grades of wool, processes of manufacture of both wool and mohair, a full line of shepherd's supplies and samples of the best feeds for sheep. In the east at several of the principal exhibitions demonstrations were given in the preparation of wool for market, shearing, grading of wool and dipping. Stationary wool exhibits have been supplied to the agricultural colleges and placed on view in museums. Demonstrations have further been made by experts in the finishing of sheep and lambs for the market in docking and dipping, in shearing, and in the care of sheep generally, both on the farm and in transit.

The Apple-Growing Industry.

One industry that suffered owing to the war was that of apple-growing. Owing to the embargo on apples

placed by the British Government and the lack of exportation facilities due to the demands of the war, trans-oceanic shipping was entirely at a standstill for such commodities. As a consequence of this and because of other discouragements orchards suffered greatly. In addition, during two seasons the weather was unfavorable and scab developed to such an extent as to reduce the vitality of the trees. Vigorous efforts are now being made to remedy this state of things. Meeting are being held in the various apple-growing districts, conducted in co-operation by provincial and Dominion authorities, at which demonstrations are given in the proper methods of pruning, spraying, grading, packing and shipping. Organization and co-operation for marketing purposes are being urged. As a result of these efforts, officials feel warranted in saying that apple-growers have every reason to feel optimistic as to the future. It is also said that although prices for many agricultural products have declined, the price for the best quality of apples has not fallen, nor is it likely to do so owing to the fact that production, even under favorable conditions, is not greater to-day than it was a quarter of a century ago, and cannot be materially increased for some years to come.

Provincial Butter-Making Standing.

Ontario does not appear to stand extra well as regards butter-making compared with other provinces. During the past year or two Dominion-wide contests have been held with the objects of establishing a uniform type of creamery butter throughout the country, to create a healthy rivalry between the provinces, and to help in the standardizing of methods and practice in the butter-making industry. As a result in these contests, Ontario stood last of all the provinces, stood last in 1919 and eighth in 1920. The standing of the provinces last year was like this:

For flavor: Alberta, Quebec, Nova Scotia, Manitoba, Saskatchewan, Ontario, British Columbia, Prince Edward Island, New Brunswick.

For workmanship: Nova Scotia, Alberta, British Columbia, Quebec, Saskatchewan, Prince Edward Island, New Brunswick, Ontario, Manitoba.

Samples from the contests are exhibited at the dairymen's conventions in every province of the Dominion, at the dairy schools, at produce merchants' conferences, at butter graders' conferences and during butter-scoring competitions.

Poultry

One of the best schemes to discourage broodiness, widely used and endorsed by the foremost authorities, is to place the broody hen in a coop that is fitted with a slatted bottom. The hen is unable to squat in a comfortable position, because her feet protrude through the openings between the slats. She has no sense of privacy or security, and the sensation of currents of air under her is not to her liking. Two or three days of this harmless penalty usually disgusts her with the notion of setting, and when released she is only too anxious to rejoin her companions in the laying house.

It is understood that food and water are kept in the coop at all times, for the "chicks" should be encouraged to maintain their physical trim and not be starved. The coop should be kept in a well-ventilated place, under perfect sanitary conditions, preferably where there is strong light, because plenty of light is distracting to the sitting hen, who naturally seeks a dark, secluded spot in which to bring off her brood.

In mild, pleasant weather the "broodies" can be turned into a yard and made to sleep outdoors. Do what you will with them to distract the inclination to sit, provided they are not injured, frightened or impaired in any way. By all means feed and water them liberally.

The chief consideration is to segregate the hens as soon as they become broody, if possible on the first day. A hen removed from the nest at this time is very much easier to discourage than when she has been allowed to indulge her fancy for a week or more.

To insure getting the "broodies" at an early stage, the poultry keeper should make it a hard and fast rule to go over the nests every evening about an hour before sundown, during the spring and summer months, and to remove therefrom any hens found at this time. Very few hens lay after 4 o'clock in the afternoon, consequently any is entitled to view with suspicion any fowls found on the nests in the evening.

Don't be afraid of thinking too highly of yourself, for if the Creator made you, you must have inherited divine, omnipotent possibilities, you must partake of His qualities.

The Dairy

Propensity is the power which gives a bull or cow the ability to stamp its own characteristics on its offspring. The value of the pure-bred bull on the grade herd rests in this ability to mark the calves and make them both better lookers and better producers than their mothers.

The gestation period of the cow is nine and one-half months, or two hundred and eighty days. Sometimes a breeder figures it as nine months to the day, and then worries because it seems to run over a couple of weeks and the calf is not born when supposedly due. For example, a cow bred on January 1 would be due about November 8, not on November 1. The date of calving is found by counting forward the two hundred and eighty days from the date of service.

Weakness in breeding stock is often laid to inbreeding but facts prove that the greatest progress in producing fine cows has been by skilled men who have used inbreeding. But such breeders have known the blood lines of their stock and they are thus able to mate so that strong points will be made stronger instead of weak points made weaker, as is often the case when breeding methods are careless.

An argument for fall freshening of cows is the fact that summer is a busy season on the farm and it is difficult to give cows the best and most regular attention about harvest time. If the milking work is reduced when the work with crops is heaviest it is a great help on the farm. Then the cows can freshen in the fall when the weather is cooler and the field work less heavy.

Horses and Motors.

Of special interest both to farmers and horsemen is the effect that motor traction is having on the horse industry. In the United States investigation is being made on the cornbelt farms with the object of finding out to what extent the tractor has replaced the horse. Enquiry has also been made as to the disappearance of the horse in cities and towns. Nothing in this direction so far has been done in Canada, but in the estimates at Ottawa this year a small amount has been voted to meet the cost of a similar investigation. When completed the information received will undoubtedly be of considerable public interest.

Specimens of the smallest pike in the world, measuring scarcely two inches in length, have reached London from Singapore.

The Children's Hour.

Some say that the ants were not always industrious. They spent their days worrying their neighbors and were always in trouble because of their idleness. They laughed at the bee because he worked so hard at making honey, at the spider because he worked so hard over his web and at the bird because he worked so hard in making his nest. They were friendly with the shiftless flies.

The laziest of all the ants was a young ant named Bill. There was a certain little fly named Jack, who was even lazier than Bill. The two were perpetually up to mischief; no one had ever known either of them to do anything worth while.

One day Jack and Bill met a bee on his way to gather honey. They stopped the bee and asked him to play with them and seek with them among the flowers.

"No," said the bee; "winter will soon be coming, and I have no time to waste."

He hurried off, and Jack and Bill went to hunt up the spider. The spider was spinning his web. The two friends were afraid to go near his house, but they stood a short distance away and made fun of him.

"Why do you not work?" the spider said. "Where will you get your dinner to-day? I know; you will steal honey from the bee."

Jack and Bill laughed and went away. At a turn in the path they met a robin who was hunting food for his little ones. The robin flew down to the ground. "Now I have caught you!" he cried. "You are so useless and harmful that I am going to feed you to my little birds. That's what I'm going to do!"

Seizing Jack and Bill he flew off to his nest. As he dropped Jack off into the big mouth of a young bird Bill tumbled to the ground. He was so much frightened that he ran home as fast as his little legs could carry him.

When he reached home he cried, "O mother, Jack has been eaten up by a robin, and I was nearly eaten up, too! If we do not build us all, we ought to work, like the rest of the world!"

Bill trembled with earnestness; he had learned a great lesson in a short time.

"Let us start right now," replied his mother. "We will build us a house and store up food for the winter."

That very moment they began to carry out their resolve. And all their ant neighbors, seeing them so busy, began to follow their example.

From that day to this ants have worked so hard that "as busy as an ant" has become a common saying in the world.

Canada's Healthy Live Stock.

The report of the Veterinary Director-General recently issued covers two years, the first part for the year ending March 31, 1919, and the second part for the twelve months terminating March 31, 1920. The health of Canada's live stock during both years is shown to have been highly satisfactory. In fact, it is easy to believe that Canada is the healthiest country in the world for all breeds of live stock. No country can claim to be absolutely free from ailments in its cattle, horses, sheep and swine any more than it can that every human being is health-perfect. But Canada, it is safe to assert, comes nearer to ideal state than any other land. None of the epizootic diseases that cause most anxiety to sanitary officials, such as foot and mouth diseases, cattle plague, and contagious pleuropneumonia, are found within our borders. Diseases that do exist to a very limited extent, such as glanders, hog cholera, and cattle mange, the report shows are being kept well under control and are diminishing in number year by year. Glanders is prevalent in the north, but in the provinces of Saskatchewan and Manitoba and in those provinces extremely few cases are reported. All the outbreaks, the Veterinary Director-General is able to state, have been efficiently dealt with and the disease eradicated. Where hog cholera and cattle mange have appeared vigorous action has immediately been taken, with the result that contagion has been everywhere checked and districts entirely cleared. Regarding hog cholera, experience shows that nearly all cases originate on premises where garbage is fed to the animals. Cooking, if properly done, is stated to be an effective safeguard. Full statistics are given in the report of the activities undertaken all over the country which indicate the remarkable results achieved. A marked increase is shown in the number of live stock inspected for exportation in the year 1919-20 compared with the previous year, the figures being 340,000 as compared with 100,000.

The Coming Game Bird.

Young guinea fowl, weighing about two pounds each, are rapidly taking the place of wild game on the tables of the exclusive. These birds are easy to raise, requiring but little care and feed after reaching the age of one month. They are marketed at the age of three months or earlier. The writer has received as high as \$2.50 per pair and as low as \$1.75, when the birds arrived at a weight of two pounds. Poultry and commission houses in the large cities buy them alive. If marketed dead, the head and feathers are not removed.

Usually it is better to hatch the youngsters with common hens, confining the little birds closely for the first few weeks. Once the feathers get a start, the birds may go anywhere without danger. Wet grass is fatal at the start, but later they seem immune to illness and hardship. As to feeding, any program, which brings success with common chicks will find success with guineas. During late summer and early fall the youngsters will pick up most of their feed from the fields. Usually the old guinea will adopt the young birds when they are about half grown and will lead them over a wide range. We have never lost a young bird through hawks and foxes, as has often been the case with the chickens. The best time to market guinea broilers is from the middle of November to the first of January. Birds hatched in July are ready for market in October but usually this is a little early for highest prices. Last summer we hatched in August and marketed in November. September hatchings would prove profitable but grasshoppers are not as plentiful as the season advances, hence the cost of growing is a little more. The guinea requires care similar to that given the turkey but is not subject to the ills that have made the raising of the turkey something of a gamble over a large part of the country.

The Dipping of Milk Cows.

Experiments prove that the objection of many stockmen to the dipping of milk cows is not well founded, as they evidently can be dipped without affecting the secretion of milk to any appreciable extent. During the dipping of 87 cattle in the southern part of Alberta for the prevention of mange, careful records were kept for two days preceding the dipping and two days following. The total milk produced was: First day, 3,128.4 lbs.; second day, 3,101.4 lbs.; third day, 3,051.9 lbs.; fourth day, 3,113.6 lbs. This shows the effect on milk production of the dipping in the official time and sulphur solution in the standard cage vat at a temperature maintained at from 110 deg. F. to 118 deg. F., 1921.

The majority of our people are many times weaker in confidence than any other faculty. A large percentage of those who are failures could have succeeded if this one quality had been properly trained and strengthened in their youth.

Matters of Agricultural Moment.

Silver-black foxes are henceforth to receive the benefit of registration. A stud book has been opened at Ottawa, wherein it is proposed to record the best producing strains. Foxes which hitherto have been nameless except as regards species will now be given names, and in the course of years will come to have pedigrees, if not as long as any other animal, at least as correctly kept.

Under Dominion auspices, records of performances are to be kept of the best laying hens on a similar principle to that governing the record of performance of dairy cattle. Note will be kept of the best strains of male birds.

The appointment of a woman Home Demonstrator to carry on household science extension work in Peel county, Ontario, is the first of the kind, and is official recognition of the greatly extended sphere that women have entered upon in rural life.

The advantage of summer fallowing is abundantly proven in the Prairie Provinces. Thirty years of trial with the system—the fallowed land being first plowed before July 1, and cultivated as each crop of weeds appears—shows that it is a sure method of preparing land to counteract the effect of dry seasons to which some sections are subject.

It is interesting to note the great progress that has been made by the system of inspection called for by the Meat and Canned Foods Act of 1907. At that time there were fewer than sixty inspectors employed with 28 establishments under inspection and 1,079,698 slaughtered animals passed upon in nineteen months. During the year ending March 31, 1920, a staff of 275 inspectors passed upon 3,738,214 animals slaughtered in fifty plants. These statistics show that Canada's dead meat trade has more than increased fourfold in a dozen years. In addition to animals, all exports and imports of fruit and vegetables are inspected.

The bulk of the apple crop in Ontario is graded and packed in the orchard and shipped as speedily as possible, there being no facilities for storing and protecting the packed fruit against frost. On the other hand, in Nova Scotia and British Columbia, the other important apple-growing provinces, the crop is usually hauled to a packing house especially equipped for the work to be done at a minimum of cost. Selling agencies have also been established, and co-operation has been brought into play between growers' organizations and dealers.

The fancy-work department always offers great inducements to the girls. Even if the premium is only \$1 for first and fifty cents for second prize, it pays to hunt up every quilt and bit of needlework that has a least chance of winning. There are always the latest things, too, in the way of fancy

Fair Premiums For Children

All normal boys and girls are on the alert to make money; and all men and women, who are on the alert to keep the young folks on the farms, want to help them. The fair managers in many counties offer special premiums to young people; but even where there are no special awards it is easy to let the boys and girls earn money at the fairs. Instead of entering farm produce in their own names, fathers and mothers get the children to select the articles and then collect the premiums, only stipulating that the young workers prepare everything, attend to making the entries and getting the things back home again.

Where there are both boys and girls in a family, the girls usually take the domestic and vegetable exhibits while the boys show chickens, grains, and the farm animals. But a family of girls can show the grains along with the fancy work and canned fruits, omitting only the animals. It is hard for a girl to enter and exhibit a pet calf or lamb, and boys on the other hand do not like to potter with vegetables, unless it be mammoth pumpkins or melons.

Everybody wants to succeed, of course, and there are a few simple tricks in the trade that will help success along. Several months before the fair time, get out the list of premiums offered in the previous year. Even if an item or two should be dropped, the list will serve as a first-rate guide. Look it over carefully and mark on a piece of paper every item that could possibly interest you. If you see some vegetable or grain which you can furnish, and in which there will be few entries, mark that thing down with a star, for it's your particular big chance.

Then when you have decided on your representative for the fair, you can begin to "doll" them up. The fine pumpkin must be watered in dry weather and have all the small pumpkins and buds picked off, so that the vine will have nothing on its hands but the raising of one big vegetable. The choice potatoes can be picked out of the early ones and carefully compared to see that they are of even size and weight. The finest apples can be located and all defective fruit removed from the branch on which they grow. The tomatoes can be trimmed so that the sunlight falls on every side of the fruit, and the vines can be carefully tied to stakes to avoid discolorations or bruised spots at the last minute. Any flowers and plants to be shown should have special attention, and the pots should be made clean and attractive.

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Preventing Soft-shelled Eggs.

When the hen lays a soft-shelled egg, one marketable egg is lost for the poultryman. The egg may be eaten by other hens or the hen that lays it and this often develops the egg-eating habit. If the egg is dropped among other eggs in the nest they are all soiled and have to be washed. And washing eggs is injurious to their keeping qualities.

An over-fat hen is apt to lay soft-shelled eggs, as the fat hinders the proper operation of the shell-forming glands. Such a hen should be isolated from the flock and fed a ration of bran, and water and oats can replace most of the corn in the ration. If the hen continues to lay soft-shelled eggs she should be marketed for table use. In many cases time is saved by marketing fat hens as soon as they are found instead of taking the trouble to reduce their weight. Sometimes the accumulation of fat seems to result when a hen has a lazy disposition and refuses to scratch and such a bird is not a profitable producer and should never be used as a breeder.

Grain and clover contain a certain amount of lime which is sometimes sufficient for a hen to make strong shells on the eggs produced. However, some hens will not seem to obtain enough shell-making material from their regular ration and for this reason oyster shells must be provided in hoppers at all times. We have never found many soft-shelled eggs in houses where the oyster shell hopper is always filled. A soft-shelled egg is a rare find in such a house. Even if the hens make fair quality shells without oyster shells, it is better to supply

bags, aprons, hand-embroidered towels, table-covers, cambric yokes and what-not made in leisure minutes and exhibited with pride and success.

The domestic booth with its canned fruit is profitable also, especially because the canned fruit is not made just for the occasion but must be provided for winter in every home. By taking a little extra care, and selecting jars of the same size and shape, it is possible to pick up many extra dollars in this department. In some counties fruit can be entered as single exhibits and also in groups, so that it is possible to win two separate prizes on the same display. I think nothing gives a greater thrill to a young canner than to see her beautiful fruits and vegetables securely sealed in clear glass and ornamented with the red or blue ribbon that marks the first prize.

Meanwhile, the boys will be getting the calves, colts, sheep, chickens and grains ready for exhibition. The grains should be cleaned and re-cleaned, as the judge will use a powerful glass to determine whether or not there is foreign matter in the exhibit. Selecting corn for the fair is an education in itself, and the boys should be encouraged to ask an agricultural student to coach them in the art of picking winning ears. With beets and pumpkins and turnips, size is about the only requirement; but in selecting corn, clover seed, and oats many other necessary qualities determine the prize-winning display.

Chickens are always interesting to exhibit, as more and more of the young people of the country are finding out. With plumage well washed and coops in good order the feathered-pets attract attention everywhere. Prize winners at the big county fair usually find their way to bigger shows that offer bigger inducements, and because of these the young folks are easily led to develop a really profitable chicken business.

Hares, puppies and other pets often come in for special prizes, besides giving an opportunity to their owners to sell at a profit and have only empty coops to take home from the fair.

Exhibiting calves and sheep and pigs means more work than showing vegetables, but it pays to let the youngsters show off the best stock on the farm and enjoy the premiums. The boy who leads a prize heifer in the ring, or raises the prize colt, will have a more exalted opinion of farming than hundreds of lectures on the superiority of farm life over city existence will ever give him.

Young people sometimes earn from \$10 to \$25 in premiums and then have the articles left for sale or for home use. Often a public-spirited merchant will buy the prize vegetables to display in his window together with the name of the grower; or again some person who expects to exhibit at the Canadian National Fair will buy the best of the display to add to his own collection.

them and obtain the stronger and thicker shells which are better able to stand jostling during transportation.

Platinum is nearly four times dearer than gold.

If your flower garden is a pretty one, some one is sure to be tempted to make one like it.

The cows are in the corn, and there they browse. But if your fence was down, don't blame the cows.

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CAPITAL FOR FARM SUCCESS

One of the greatest handicaps met by the average farmer is the lack of sufficient capital to properly finance his business. This fact has been revealed by every economic survey made of the industry. It can thus be taken as an established fact that as a whole the business of farming is under-financed. Yet everywhere there are examples of farmers who began without capital other than their own resources of brain and brawn and have not only succeeded in financing a prosperous farm business, but have accumulated a considerable surplus for investment in other channels. Nor are these cases a rare exception in the general rule of under-financed farm businesses. They are to be found in every farm community in every section of the province and country. In fact, they are so numerous that enterprising seeking new capital are very generally seeking it among farmers rather than among city business men or capitalists.

These examples are sufficiently numerous to prove that lack of capital is not an insuperable obstacle to the young man with an ambition to become a successful farmer.

This does not mean that better credit facilities for farmers are not desirable, and particularly in sections which are in process of development. But it does mean that the young man with sound economic ideas and the energy to work them out will succeed in capitalizing his farm business, just as the young man with similar characteristics will succeed in capitalizing some other enterprise which he undertakes.

As a matter of fact, the crisis through which we are passing has demonstrated that many other businesses besides farming are under-capitalized. The tremendous bank loans which have strained the credit machinery of the country have not been made to farmers. And in many cases they have proven that too easily available capital for the purpose of expansion may be a handicap, rather than an advantage in the long run. Too often easy credit conditions make for extravagance rather than thrift. And thrift is the basis of ultimate business success. The person or the business firm that has demonstrated the possession of thrift will always be a preferred credit risk, and will least feel the handicap of limited capital, not alone for this reason, but as well because more will be accomplished with the capital already available.

Experimental Agricultural Activities on the Increase.

By the annual report of the Dominion Experimental Farms for 1920, it is evident that the spirit of progress has set in with increased vigor since the termination of the world war. During that period, when many prominent workers had gone abroad to do their bit in the devastating struggle, part of the activities then in prospect had necessarily to be foregone. Many contemplated advances permitting of wider experimental work, have since been made. A modern dairy building, affording space for demonstrations of up-to-date dairy methods and bacteriological research, have been constructed at the Central Farm at Ottawa. Preparations have been made for an expansion of work in connection with live stock. Dairy herds at Ottawa and elsewhere have been strengthened. Horse breeding, notably of Clydes and Percherons, east and west, and of French-Canadian horses at St. Joachim, Que., is receiving increased attention. Sheep raising under range conditions has been put under way at Lethbridge and Lacombe, Alberta. The scope of poultry work has been enlarged several fold. Egg-laying contests have been trebled in number. Experiments in poultry breeding, the investigations of diseases and chemical and biological research are being vigorously prosecuted. Illustration stations have been increased in number and developed in usefulness. In short, in every division and every activity the year 1920 saw new and renewed forces at work, full details of which will be found in the well-prepared and carefully arranged annual report referred to.

Housing of Poultry.

Not all who keep chickens either in town or country know how to secure the best results from their flocks. For lack of knowledge the chicks often develop into spindly-legged, small-bodied, poor-laying creatures. And yet any amount of instructive literature is published and can be had without cost by applying to the Publications Branch of the Department of Agriculture at Ottawa. Housing shares in importance to be gained. In this connection it is interesting to observe that a revised edition of the bulletin on Poultry House Construction by F. C. Elford, Dominion Poultry Husbandman, has just been issued by the Department of Agriculture at Ottawa, to meet the constantly increasing demand for information coming from almost every class of the community. The bulletin, which is based on trials of various kinds of poultry houses in different parts of Canada, treats of the subject clearly and comprehensively. Plans and building instructions, with illustrations and diagrams, are so given as to enable anyone to erect such a poultry house as may be desired.

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