

# Soils and Crops

This Department is for the use of our farm readers who want the advice of an expert on any question regarding soil, seed, crops, etc. If your question is of sufficient general interest, it will be answered through this column. If stamped and addressed envelope is enclosed with your letter, a complete answer will be mailed to you. Address: Agronomist, care of Wilson Publishing Co., Ltd., 73 Adelaide St. W., Toronto.

## Developing The Young Dairy Animals

The calf is the fundamental factor in cattle breeding. Success or failure with a herd is dependent upon securing a living calf, lusty with the inherited merits of its ancestors. The care and development of the calf are more important than a knowledge of pedigree in blending the blood lines. Not only the increase but the improvement of the herd depends upon the calf. If there is not ample provision made for the reception of the youngster and the later care and development, then no wisdom in the purchase price of the dam, no study of pedigree, no familiarity with breed history, can save the herd from passing into oblivion.

Hundreds of breeders of registered cattle, who have made liberal investments in stock and equipment, have failed simply because they had not the gumption to secure the services of good calf takers or were unwilling themselves to give vigilant watchfulness and daily attention to care and feed. Some neglect to bring sunshine and fresh air to the calves; others think clean pails and feed boxes too much trouble. Some will feed more than the calf can digest; others will let the calf "rough it." The general appearance of the calf tells a story which the good caretaker can interpret with keen perception and avoid trouble. Getting a good start is important in every undertaking, and nowhere is it more important than in the life of a calf that is expected to make a return on an investment and express the merits of the breed. Right care and proper precautions would save many calves that are lost, and the loss is great because of the investment in the sire and dam and the long period in embryo life; but even calves that are born strong do not always continue to thrive for the simple reason that some painstaking caretaker does not look after them once a day to discern the slightest indication that health and growth are not as they should be. The sire with pedigree and individual merit has only the calf to express his value; the cow, true to type, and noted for her excellence, is a disappointment if she fails to produce a good, lusty calf.

On many farms where whole milk is sold the use of prepared calf food has been found profitable. It seldom pays, however, to depend upon these substitute foods until the calves are from four to five weeks old, and then to use them merely as a supplement to the skim-milk and hay ration. At the leading experimental farms it has been found that the use of skim-milk or powdered milk is necessary to enable the calf to make efficient use of these prepared foods. It has been demonstrated that the addition of protein, such as the albumen of milk or the proteins of meat helped out wonderfully in making the proteins in the cereals more easily digested. This undoubtedly explains the great value of a feed like skim-milk or soluble blood meal in supplying the deficiencies in grain feeds and prepared mixtures as well as promoting the health of the calves. Some of the

best caretakers report excellent results from the use of about one tablespoonful of soluble blood meal mixed with each feed served to keep the bowels of the calves in good condition, and since it is a comparatively inexpensive feed a wider use of it on breeding farms might be profitable.

Young animals that are being developed for breeding purposes should not be closely housed and pampered. A strong rugged heifer is the basis of success in producing well developed cows and to that end the young stock should be given as much outdoor life and exercise as is consistent with a healthy growth and normal development. By close stall feeding it is possible to obtain greater growth during the first year but it is a question whether or not this method tends to make the animals more susceptible to disease and common ailments. The calf that is well fed and allowed to run outside a few weeks to grow and develop strong muscles and a vigorous constitution is capable of making better gains from the amount of grain and roughage consumed than one that has been kept inside during the summer and fall months. When cattle become so refined in type and pleasing to the eye that the rugged life of outdoors is denied them, destructive diseases increase with the rate of improvement. It is well enough to assist nature in caring for stock, but in his misguided zeal man often seeks nature's ways aside. The calf, contentedly chewing its cud in a warm, richly bedded stall, surrounded with every comfort which her owner can think of, may not have the productive ability or the reproductive usefulness of the moderately fleshed, rough coated calf that hustles about the pasture for a living.

Sun, air and grass are needed in securing that superb vigor which immunizes animals from disease. It is always better to practice safe and sane methods of growing young stock than to go to extremes. During the first three weeks of the calf's life from four to six quarts of whole milk per day divided into three feeds will give good results. Thereafter skim-milk, grain feeds and hay may be profitably fed until the youngster is six months old. Skim-milk should play an important part in the diet of the calf. One cannot afford to omit skim-milk entirely, although prepared calf foods may be used to supplement a scant supply. When the calf is three months old silage may be fed once a day while at six months of age it will make good use of two feeds of silage each day. As early as possible grain should be introduced into the calf ration. One-half a pound a day of a mixture made up of equal parts of cornmeal, wheat bran, ground oats, with the hulls removed, and half a part of linseed meal constitute an excellent calf ration. The skim-milk and grain ration should be continued after the calves are turned out to pasture, unless grass is unusually good and they are old enough to maintain growth and flesh condition without additional feed.

## Food Control Corner

There is not a scrap more food in the world because peace—"white-winged peace"—has come back. Those lands with plenty, as Canada will, in reality, be obligated by a dictate of humanitarianism, to send still more of their surplus food to the needy. Leaving out the enemy countries—and apparently they have been so battered and starved, and their spirits so depressed by an unvarying ration for four years, that they are bordering desperation and starvation—there are anything up to 150,000,000 people who will have to be helped over the interval until the next harvest. Even then, possibly, the normalizing of food plants and of food animals may not be complete. Out of our existing stores we were able to keep our Allies so marvelously well fed that none of them were reduced to the state of depressed, dejected national spirit which plainly contributed to the utter debacle of the once great German Empire.

None the less, the Allied home supplies have during the war been greatly eaten into, and their grain fields have been much reduced.

Dr. Vernon Kellogg, who was for

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two years the night-hand man in feeding Belgium, and who is now touring Europe, says that the losses in cattle in France and Italy are very serious. Not only are meat and milk directly affected, but in these lands oxen are largely used for draught purposes, and the areas which can be ploughed next year are likely to be greatly reduced by the absence of beasts to draw the plough and harrow.

Then as to cereals, the International Agricultural Institute has declared that the production of wheat in Italy, while greater than it was last year, is below the average for the years before the war. Spain, Great Britain, Italy, Luxembourg, Switzerland, Canada, United States, India, Japan, Egypt, and Tunis (a list which, with the exception of Russia, Argentina and Southern Australia, comprises all the chief wheat-producing countries) show an increase of only 8 per cent, above the average for five years, 1912-16, these including two years of war. That 8 per cent. will make but a poor showing even to feed the Russian people, much less help in raising the general level of wheat supply for the better nourishment of millions and millions of Allies.

Rye, however, in the six chief countries, shows an increase of 50 per cent, over the average for the same period, and barley an increase of nearly 7 per cent. Oats show a drop of, roughly, 15 per cent. for the same five-year period, and (maize) corn in Spain, Switzerland, Canada and the United States altogether is estimated to show a diminution of about 3 per cent. Linseed, now more largely used than ever for animal feed, and highly important for its essential oils for human consumption, has decreased at least 16 per cent.

Sugar beet production in all the European countries, including Germany and Austria, has dropped from 8,500,000 tons in 1914-15 to 4,428,000

tons for last harvest. Sugar was selling in Spain a month ago at from 21 cents to 26 cents a pound. And Spain was neutral. In Austria it was from 30 cents to 54 cents a pound, when procurable, while in Turkey, just before her capitulation under smashing blows in Palestine and Mesopotamia, sugar was selling, or at least was quoted, at from \$1.70 to \$5 a pound. These figures show a globe-wide shortage.

## Pedigreed Seed.

When seed grain is advertised as pedigreed seed, it should mean two things; first, that the record of that particular strain is known from its origin; second, that it is rich in the qualities that make it superior to other selections of the same sort.

In order that the term pedigreed may have the proper significance to those who wish to purchase seed grain of high quality, the following outline is given of the essential methods in the primary selection work of pedigreed varieties or strains of grain. Before seed grain can be termed pedigreed it must be descended from a single plant; that particular plant must have been a superior plant to others of its kind and must have had the ability to transmit the high yield and the desirable characters for which it has been selected. This superiority can only be determined by careful observation at the time of the first selection and by a careful test under uniform conditions with the parent or other standard varieties. Also, this selected strain must be watched closely during the multiplication period for the appearance of false heads or the breaking up of the variety. This is the essential work in the propagation of pedigreed seed and unless it has been selected in accordance with the above methods, the word pedigreed should not be used.

Apart from those who are associated with experiment stations there are but few men in Canada who have the facilities and the knowledge essential to perform the primary selection work in the production of pedigreed grain. Any observant person can, however, obtain pedigreed seed and by the maintenance of a seed plot and the careful roguing out of the false heads and chance impurities, preserve the purity and quality of his seed grain that it may continue to rank as pedigreed seed. As the production of pedigreed strains and varieties is practically confined to the various Dominion and Provincial Experiment Stations, any so called pedigreed seed that does not trace back to these sources, or is not registered in the Canadian Seed Growers' Association should not be purchased as such, without careful inquiry into its origin.

Pedigreed seed bears the same relation to the grain grower as the live stock industry, and its use is necessary if a grower desires to maintain the yield, purity and quality of his grain. Experimental Farms Notes.

## GOOD HEALTH QUESTION BOX

By Andrew F. Currier, M.D.

Dr. Currier will answer all signed letters pertaining to health. If your question is of general interest it will be answered through this column. If not, it will be answered personally. If stamped, addressed envelope is enclosed, Dr. Currier will not prescribe for individual cases or make diagnosis. Address: Dr. Andrew F. Currier, care of Wilson Publishing Co., 73 Adelaide St. West, Toronto.

### Cold in the Head.

The influenza, or by courtesy, the Spanish influenza, was so recently with us, (indeed is still here and will remain a long time through the seasons that have come out of it) that it seems hardly fair to begin a talk about colds in the head.

And yet those disagreeable visitors are always with us; summer and winter, more abundant in winter than in summer and with varying degrees of misery accompanying them.

We speak of "catching" cold as if there were something infectious or contagious about it and there probably is sometimes but not always.

One catches cold by contact with somebody who has it, or by exposure to the influence of certain irritating germs, but one catches cold just as effectively, at any rate with the same symptoms, by exposure to pungent gases or to draughts of air or to cold and wet.

The symptoms are familiar enough, a paroxysm of sneezing, watery discharge from the eyes and nose, swelling of the nasal mucous membrane, and necessity of mouth breathing, difficulty in sleeping on account of general discomfort.

This continues two or three days and then if there are no complications the discharge diminishes, it is no longer watery but mucous, the breathing becomes less troublesome, the general condition improves and after a few days the afflicted person seems to be as well as ever.

It is not always easy to know how to treat a cold and I take the liberty of describing the method used by a dear old medical friend, Dr. Beverly Robinson of New York, who has had more experience in public and private practice than comes to the lot of most doctors.

When sneezing, chilliness, and cough first appear give to an adult 5 to 10 grains of salicylate of ammonia and half a grain of caffeine in capsules every two hours, four or five times.

If this does not break up the cold it will probably shorten it, and pre-

## FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



ONCE WHEN MY BATTING EYE WAS RIGHT I HIT THE BALL WITH ALL MY MIGHT. HOME RUN I HEARD THE BOYS ALL SHOUT BUT BOB WAS THERE AND CAUGHT ME OUT.



Early hatching means better chicks, better success in rearing, higher prices for surplus cockerels sold as broilers, mature pullets in the fall that will lay more eggs during cold weather, and larger, plumper roasters and capons for the holiday markets. It also means greater use from incubators and brooders and better labor distribution by putting the hatching and care of the small chicks ahead of the rush of spring planting.

It is very difficult to break hens of the egg eating habit. Various methods, such as filling an egg shell with red pepper, placing a china egg in the nest, etc., have been tried, but with very little success. This habit is started because of the lack of animal food, or accidentally a hen breaks an egg in getting out of the nest and thereby establishes the habit. However, if the hens get plenty of beef scraps or sour milk and are kept busy during the day, they are not as likely to begin such a habit.

Very often there is only a hen or two in the flock which do this destructive work and by carefully watching one can pick them out and get rid of them.

"It is blessed to give; blessed is he of whom it is said that he so loved giving that he was glad to give his life."—Donald Hankey.

vent a complicating gripe or bronchitis.

If there is fever add half a grain of phenacetine to each dose and at bed time take half a teaspoonful of aromatic spirit of ammonia and the same quantity of spirits of nitre in two tablespoonfuls of water.

Rub within the nose a small quantity of carbolic vaseline or menthol salve.

Also at bedtime take a hot mustard water foot bath, dry the feet carefully and wear long woolen stockings in bed.

If constipated, take a laxative pill or Sedlitz powder the next morning. If there are cough and expectorations stop the other medicines, give a teaspoonful of syrup of hypophosphite of ammonium every two hours and wear for an hour or two at a time the Robinson inhalant mask, inhaling equal parts of beechwood creosote, spirit of chloroform, and alcohol.

Paint the chest with compound tincture of iodine and wear an electric pad at night if there is pain in the chest.

If the cold is attended with cough, fever and pain in the chest the vapor of creosote may be inhaled from a croup-kettle or if this odor is objectionable it may be modified by adding compound tincture of benzoin or the oil of pine.

The diet should be very moderate, and it may be entirely liquid during the first forty-eight hours.

If there is great weakness a suitable alcoholic stimulant may be given if relief has not been obtained with hot coffee and tea.

Questions and Answers  
Olive E.—Five weeks ago my little girl had her tonsils removed and each morning her nose is filled up and there is blood upon her pillow, just the same as before the operation.

Answer—I should think it possible that the child had adenoids in the back of her throat and nose, and that if you would take her to a skillful specialist in nose and throat diseases, he would be able to determine, upon examination, just where the trouble is and to do such an operation would give relief.

## PROFITS IN PREPARING POULTRY PRODUCTS

By Earle W. Gage

Putting the finishing touches on a product before offering it for sale yields the farmer the greatest return of any labor. This lack of "finish" is nowhere so clearly seen as in our poultry products as shipped to market.

To prove that producers do not put the care they should on their poultry products before offering them for sale, one may visit any market and he will find that a large proportion of the poultry and eggs exposed for sale exhibit a carelessness that no other business could stand. Good farmers who follow a systematic crop rotation, who conserve all the available moisture in the soil, who never market other live stock except in a finished condition, seem to forget all their business principles when poultry and eggs are being disposed of, and think only of getting rid of them in the quickest and easiest way possible.

The time it takes to prepare produce before it is shipped from the farm is time well spent. No matter what is being sold, be it breeding stock, hatching eggs, live or dressed poultry, or market eggs, it should never be sent from the farm until it is in the best possible condition. Especially is this true when produce is intended for table use.

Well-finished broilers or roasters cost less per pound to the producer than those that are poorly finished, and they are much more palatable to the consumer. Though he may have to pay from twenty-five to fifty per cent. more per pound for them, as a rule, the edible portion really costs less.

The neat, attractive package is a good investment. First appearance goes a long way in determining the price of eggs and dressed poultry. The person who will take the trouble to make a neat box or crate and have it tastefully addressed and marked, will, in all likelihood, have something good to put into it.

Really good produce is sometimes sold for less than it is worth because it is packed in unattractive packages. It is the neat package that will help sell the contents every time. Therefore, it is good business to have produce not only of the best quality itself, but packed in containers that will indicate the prime quality of contents.

The ordinary packages in which eggs are shipped to market are not always attractive. The outside is frequently dirty, lacks neatness and is too often more or less flimsy. Even though the contents of such packages are of high quality they do not bring the price they should because of the unattractive container.

The best size package for ordinary shipments is, without doubt, the thirty-dozen case. For private or special shipments, packages to hold twelve, fifteen, or as low as six dozen eggs, may be made, as the customer wishes. It is an advantage to make these packages all uniform, in size, or half-size, so that in placing them into the car or buggy, they fit in square and fill up the space.

Instead of placing his stock on the market during two months of the year, or at the season when there is an over-abundance, which means poor prices, the farmer should arrange to distribute his produce over more of the twelve months than he does.

For instance, instead of keeping the spring chickens all summer long and marketing them in the fall, some of them, at least, may be marketed throughout the season as broilers. Broilers bring two to three times as much per pound in May and June as they bring as roasters in the fall. If, therefore, cockerels that were large enough to be marketed at this time of the year were sold they would command, in most cases, as much per bird as they would bring if kept until fall, and the cost of production would be very materially lessened. The same obtains with hens. Hens that have completed their second laying, winter and have passed through the breeding season should be marketed as soon as the breeding season is over, rather than held until fall. Hens in June bring from fifty to one hundred per cent. more than in the fall, and when marketed in June or July do not come into competition with the cockerels which are marketed as roasters in October and November. The reason that the old hens bring a lower price in the fall is due to the fact that people do not want them when they can get chickens, but, if the same hens are marketed in the spring when there are no fresh roasters, the demand is good and the prices in proportion to the demand.

The same may be said of other lines of poultry, especially ducks. Green ducks, that is, ducks, that have just completed their first coat of feathers, should be marketed at that time rather than be kept until late fall. In an experiment recently conducted with sixty-five young ducks, it was found that when sold as green ducks, at ten and a half weeks of age, they brought on the local market about two hundred per cent. more than it cost to feed them, or in other words, they cost for feed \$20 and at ten and a half weeks of age they brought \$60. Similar ducks that were kept until fall and were sold as flocks are usually sold did not pay for the cost of feed. Large produce dealers claim that they cannot get a sufficient quantity of green ducks and are advising people to sell their ducks at ten to eleven weeks

rather than holding them until they mature.

It is a good plan to be near your market. This, however, is a relative term and does not always mean near in the sense of distance. Some people one hundred miles from the market are really nearer than others within ten miles, in that it does not cost as much to deliver and the produce arrives in better shape.

Distance from market should be considered, not in miles, but in time, condition, and expense in getting produce from the farmer to the market. Two miles of rough country road from the farmer to the railroad station may be a greater distance than two hundred miles from the railroad station to the consumer. One can be miles distant and yet be close enough. Many farmers who consider themselves out of reach of the best markets may be nearer than they think. In such cases a little co-operation may make their position ideal.

The nearer the producer can come to the consumer, that is, the fewer middlemen in between, the higher will be his prices, but the greater will be the labor and expense of marketing. The best paying customers—those who are willing to pay from five to twenty cents above the market price—are the private families who want the best of everything and who are willing to pay for it. More attention must be given to this class, however, and all producers are not so situated that they can cater to it.

Next to the family trade comes the hotel and restaurant trade, which also requires a producer close enough that produce can be shipped or delivered frequently at not too high a cost. Next would come the retail store. There are good retailers in every town looking for producers who will supply eggs regularly each week the year round at several cents per dozen above the average egg price.

A difference of only a few cents per dozen makes a large difference in the income when several fowls are kept. For example, one farmer keeping one hundred hens from which he gets ten dozen eggs each year, may take the wholesale price or he may send them to one of the other markets and get a premium of five cents on a dozen. Five cents on each dozen means fifty cents per hen or \$50 per year for the flock, which is practically clear gain, the result of good business methods, uniformly good quality and honest dealings.

### Grow Roses.

Everyone should celebrate the renewal of peace by planting roses, they will grow anywhere in Canada if a little attention is given them; curiously while roses imported from our Allies and neutral countries bloom for a season or two, it is the roses of England, that flourish and bloom from year to year. British roses in British soil.

The value of a farm may be substantially increased by adding to the knowledge of the manager. The world is full of willing people; some are willing to work, others are willing to let them.

The constant rule for cooking fish is to submit it to intense heat at first so as to sear the outside and keep the juice within. Then the temperatures should be lowered, until the fish is thoroughly done. When the flesh flakes, the fish is entirely cooked.

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## MAKING A RECORD

"Oh, Aunt Nan," cried Bertha with a prodigious sigh, as she came in from her first day of work at Smith & Hartley's. "I am frightened absolutely to pieces! Just let me tell you—"

"Do!" cried Aunt Nan. "Sit right down, my dear, and tell me all about it. Is anything the matter about your new job?"

Bertha nodded. "I should say there is! I've just found out about their report cards!"

"Report cards?" repeated Aunt Nan.

"Well, record cards, perhaps, but they're really just like school reports; they keep a record of everybody in that big business, and grade us!"

"Oh, is that all?" asked Aunt Nan with a smile. "Surely that's nothing to worry about."

"Oh, yes, it is! Why, the girls say that they mark you on intellect and personality and appearance and everything like that! I'm sure I'll never pass!" You know I'm stupid and not at all magnetic and not a bit pretty!"

"Well, of course you don't wish me to agree with you there, exactly, do you?" said her aunt. "They must have been satisfied with your superficial aspects—so to speak—else they wouldn't have hired you in the first place. Your staying on, my dear, depends largely on things that are in your own hands, on whether you have the virtues that wear well. I happened to read an article about this record system just the other day. There were thirty-five headings grouped under four main heads: Physical, Intellectual, Personality and Salesmanship; and the thing that interested me, my dear, was to see how many of the highest counts were for things that are entirely in our own hands: promptness and neatness and honesty and patience, and most of all courtesy. That counted more than twice as much as any one of the others, two and a half times as much as ambition, enthusiasm or honesty, and five times as much as promptness! Just courtesy, my dear, the kind of thing that's possible for everyone!"

"I know a woman who has charge of a Red Cross workroom. She's prompt and efficient and businesslike and enthusiastic—but she isn't courteous or polite or tactful. She evidently doesn't think it worth while to bother about those little things. As a consequence, she fails lamentably; people just won't come to work under her. And she can't understand why, and accuses everyone else of disloyalty and laziness."

"And I know a girl who is as good as gold to her family. She sacrifices herself to give them pleasure; she spends her money for them; she does every outward duty. But she's so cross and abrupt and rude in her manner that half of the time they actually resent her favors, and they never really appreciate what she does for them."

"And I know a waitress in a restaurant who is not half so quick or efficient as the girls round her; but she has twice as many regular patrons, because she is always so polite and agreeable that people like to go to her table."

"But there—I've wandered away from the record cards entirely, haven't I?"

"Nevertheless, you've cheered me up wonderfully, Aunt Nan. For I can be polite—thanks to your years of work, and mother's; and I can be neat and prompt, if I try hard enough. And it is an enormous comfort to think that so many things are in my own hands. I'll make a record in those anyway and not worry about the others."

"Do it in all your daily living, too," said Aunt Nan. "It's the best rule I know for all sorts of success."

### Canada And Her Eggs And Butter

Canada has 27 fowls, compared with 100 in Holland, 166 in Denmark, 65 in Germany, 2 in Argentina and 32 in the United States. This is contained in a handy statement, plain to grasp at a glance, issued by the Canada Food Board. Increased production of live stock is of vital importance to Canada's future and is the most valuable reconstruction work that can be done.

In fifteen of the most important fowl states of the United States there are 196.4 fowls per square mile and a total of 203,000,000 fowls.

Britain normally imports 190,850,520 dozen eggs. She had a war shortage of 124,786,570 dozen. Sixteen years ago Canada exported 2,128,500 dozen, and up to October 31st, 1918, 3,861,389 dozen were exported. If Canada in 1919 exports as many eggs as she did sixteen years ago she will be living up to her egg opportunity.

Britain before the war imported 452,795,204 pounds of butter a year. The shortage of butter in Great Britain due to the war was 209,148,734 pounds yearly. Twelve years ago Canada exported to Great Britain 33,888,074 pounds of butter. Two years ago she exported 6,783,466 pounds of butter. Compared with twelve years ago Canada has not lived up to her butter opportunity.

Australia is also seeking to develop a flax-growing industry, the area in this crop there being 1,500 acres as compared with 400 in 1917.