

# 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.

## Breeding, Feeding and Weeding The Dairy Herd.

The systematic breeding of the dairy cow is a subject that should be of considerable interest to the general farmer. The high prices received for butter and cheese during the past season, and the prospect that the business will be equally prosperous for another year, should be an incentive to use every available means for increasing the profits. This does not necessarily mean that we should increase the number of cows in our herds. In fact, it would more often be found wiser to dispose of several. The chief function of a good dairy cow is to produce economically, large quantities of milk, and when she ceases or fails to do this, her usefulness as a source of profit is gone. It will not perhaps, be untimely to discuss in brief several points in connection with this question, submitting conclusions from personal experience and observation. In order to get the best results out of dairy cattle there are three essential features which may be concisely stated: Breed, feed and weed. Usually if one is to procure a herd of good paying cows he must breed them himself, as only in very rare instances will he be able to purchase such from his neighbors. In almost any herd there are a number of good individuals which may serve as a foundation. By using good judgment in the selection of a bull of the proper dairy type and sticking to the same breed a few years will show considerable progress. In selecting a sire particular attention should be paid to his dam. Provided, as an individual he is satisfactory, and has good breeding, based on performance, he is almost certain to get good calves. If it were only more generally realized, how true is the adage that, the bull is half the herd, there would be more attention paid to the principles of breeding and their application.

No cow is capable of doing her best without proper food. The feed must largely depend on the surrounding conditions, such as the adaptability of the land to produce the necessary crops, or the price at which they can be bought to advantage in the market. Whichever method may be pursued, there are certain principles of feeding that should serve as a guide in compounding a ration, judgment being used in applying them to suit individual requirements. All feeders are composed chiefly of protein, carbohydrates and fat. The first of these nutrients goes to form the hide, hair, hoofs, horns and muscle, and also enters largely into the formation of milk. The other two go to produce heat, energy and fat. It has been found by experiment that

about one part of protein to six of carbohydrates and fat gives the best results in feeding. This relation is as the nutritive ratio. Thus by referring to a chart giving the composition of the various feeding materials, it is a simple operation to figure out what proportion of the different food stuffs at hand are required to make up a balanced ration. Having gone this far, we must consider the age of the animals we are feeding. Young animals require food richer in protein than older animals, as they are building up new bone and muscle. A dairy animal should be so fed from birth to maturity, as to encourage a rapid growth without acquiring a tendency to put on fat. To grade up a herd successfully it is necessary to keep a record of the yield of each cow.

Not only are we able to weed out unprofitable ones by so doing, but the utility of such records are of great importance as a guide to the feeder. By their aid one is able to tell what any particular cow is doing and thus judge the ration for each accordingly. This will often result in feeding more economically. The writer's experience in this connection has been very satisfactory. By using the scales we have been able to increase or decrease the ration, as circumstances might warrant. It is sometimes urged that such a system of keeping records entails too much trouble, and is unnecessary to ascertain the best milkers. This may in a measure be true, but when weighing is practiced in connection with a systematic use of the Babcock test, and in sections where patrons are paid according to the butter-fat content of their milk the testing of individual cows is of no little importance. Not infrequently, the cow that yields the smallest quantity of milk in a herd will be discovered by the test to be as profitable as, or more profitable, than some of the heavy milkers. But the objections in regard to time, labor, etc., have never, to our knowledge, been made by any person who has given the system a fair trial.

A spring balance is placed in a convenient place in the stable, as are also the record sheets. When a cow is milked it only takes a few seconds to hang the pail on the spring balance, which instantly denotes the weight of the milk plus the pail which, of course, has to be deducted before the record is made. Another feature that should not be overlooked is the interest it creates in those engaged in the work, hence better care and more comfort to the cows. In short, we find it a most important factor in building up and maintaining a dairy herd.

## Moos

The pig that makes a profit for the owner must be strong and thrifty from the start. The number in the litter and the vigor and size of the pigs are features that may be largely controlled by the management and feeding of the sow during the gestation period.

Try to avoid the use of a "scalawag" boar; keep a type in mind and look for strength, length and quality. He should be neither over-fat nor too thin. Both conditions in the sire at breeding will likely mean a disappointing litter—thin, weak, unthrifty pigs. The boar should be well fed, vigorous and hard from plenty of exercise.

The sow at breeding time should be in good flesh or, in any case, rising in condition. Particularly, in the sow, avoid a too-thin or an over-fat condition. With either of these present it is useless to expect a successful litter. Breed the sow as late in the period of heat as possible—with average individuals on the second day. All evidence points to the truth of the statement that a larger litter will result.

With both sire and dam at breeding two features are of paramount importance—exercise and conservative feeding. Over-feeding is, first, a direct loss of an increasingly valuable commodity. Further, such practice is ruinous to the unborn pigs. Surprising though it may be, more litters would seem to be ruined through over-kindness than from neglect.

Make three rules in feeding and caring for the bred sow. 1. Supply

a shelter; a well protected shed or a cabin will do, provided it is dry, well bedded and that it will house three or four individuals. 2. Give the sows access to a paddock or barnyard; arrange that they not only can, but must, take exercise in order to get their food. 3. Supply these food requisites—succulent feeds, roughages, mineral requirements and a light meal ration carefully fed.

In detail, the following ration is recommended.—Roots, such as manure and sugar beets, pulsed and fed raw, or turnips and potatoes cooked, 5 to 10 pounds daily. Alfalfa or clover hay, well cured and of the best quality, fed in racks kept constantly filled. Meal in the form of bran and shorts, equal parts, or ground oats and shorts, equal parts, (particularly for the young sow), 2 to 4 pounds daily. Barley may be used also, sparingly. In general, avoid corn except as one quarter of the meal ration or less. Mineral requirements in the form of ashes, earth, soda, charcoal, etc. should be constantly accessible during the winter. Hairless pigs, or those lacking in evidence of bony structure, usually owe such condition to a lack of mineral requirement in the sow's ration.

In conclusion, pure, fresh, dry air, no matter if frosty, never killed or harmed a healthy pig accustomed to it, gradually. Warm stuffy, damp, "comfortable" quarters have caused more crippled sows and ruined litters than all other causes combined. Be guided accordingly. Mill feeds of all kinds are scarce and high-priced. Feed them sparingly, and make the fullest use of roots and clover hay.

To educate without religion is only to produce clever devils.—The Duke of Wellington.

Dustless dusters can be made by sprinkling cheesecloth squares with furniture oil and rolling tightly over night.

The Victory Loan total of \$676,000,000 is equal to nearly \$84.50 for every man, woman, and child in Canada. The per capita contribution to the last Liberty Loan was \$62, and that was considered a wonderful achievement.

## The Right Way is to Weigh.

"How do I know that all these accounts are correct, and that I made a profit on my farm last year? Why, I weigh everything."

The banker was going over a farm account-book with John Blair, one of the most prosperous farmers in the community. After asking himself the banker's question and answering it in four words, the farmer explained.

"I know it paid me to feed stock last winter; my knowledge really begins further back than the feed lot, though. Every load of grain crosses my scales before it goes into the crib or bins at harvest time. That tells me whether I'm getting any more grain from the use of fertilizers and manures, or from extra care in cleaning, testing and treating my seed-grain. I find that I doubled my profit on oats by treating for smut."

"Do you trouble to weigh the steers in the feed lot every week?" interrupted the banker.

"I weigh them, but it's no trouble; each animal is weighed separately once a week. In the spring or fall one of the boys does it before or after school, for I seldom feed more than a car-load at one time. If a steer gains less than he did the previous week, and continues that way, I cut him out of the bunch and sell him before stowing away a lot of grain in him."

"How long have you had scales?"

"For fifteen years. I always used to sell most of my stock by the head. It got so that stock buyers always wanted to buy my stock that way. After I bought my scales I knew why. I had been guessing too low on weights. Now I know how much I'm going to get for a load before it leaves the farm. I can tell how heavy to load the wagons for market. I always pay my corn-huskers by weight, and when I rent a field from my neighbor on the shares, there's no guesswork about dividing the crop. The scales near the driveway, so it's no trouble to drive across them."

"You have only one scale," the banker suggested.

"One is enough if placed right and supplied with a movable pen for

## FUNNY FOLD-UPS

CUT OUT AND FOLD ON DOTTED LINES



THAT HOUSE YOU SEE IS WHERE I LIVE

I'LL SKETCH IT HERE FOR YOU

NOW DON'T YOU LAUGH FOR IT WILL LOOK

ALL RIGHT WHEN I GET THROUGH.



stock. It takes but a few minutes

to set the pen up on the scales, and no longer to remove it. I have a lane leading up to the scales, so it is easy to drive stock on the platform. Of course, I have smaller scales in the granary for sacks of grain."

When the ground is frozen hard, a top dressing of manure on wheat fields will increase the yield sufficient to make the operation profitable. Look over farm and garden implements now. If any parts are needed order them at once, to make sure of having the tools complete and ready for business when wanted next spring.

## FARM VS. CITY EMPLOYMENT

By M. Rigby

In many sections it is not only the draft that has reduced the available supply of farm labor. Men and boys have been drifting to the city for ten years or more because of the seemingly high wages that have been paid in the factories. Some men who would have been owners by this time if they had remained on the farm are now working for wages and spending most of their income to meet the daily bills.

A wage of \$6.00 per day looks quite large to many farmers and in addition when that wage is guaranteed, it seems to be a doubly fine proposition. Right now, there are some farmers who can hardly resist selling their land, investing the money in bonds and hiring out in factories where their income will be guaranteed. They forget the cost of living in the city. It seems as if it is good business to stick by the farm in these uncertain times.

The shorter hours of city employment usually appeal to the farmer. One farmer who became tired of twelve and fourteen hours on the farm hired out to work in an automobile factory where the men worked ten hours each day. On the farm he had worked long hours, but the work had constantly changed and he never became entirely sick of one job before it was finished and another came to vary the monotony.

In the factory he was placed on a drill press and for several weeks he made three holes through a certain piece of metal and then he took another piece and made three holes through that, and so on for three weeks. It was the same job over and over. He saw a brother laborer in the next building was putting on wheels and screwing on the hub caps. He asked the foreman for a change of work. The foreman replied in substance that the wheelman put on the wheels and the drill pressmen worked at their drills, and that they had no time for monkey-work and every man stuck to his own job and minded his own business or quit. This man worked on his drill press until he realized how fine it was to work in the fresh air and be his own boss and he is now making plans to return to the farming business. It is absolutely true that the monotony of many kinds of farm work is nothing compared to the drudgery of doing the same job in a factory, day after day without a chance of a change of work.

Farmers live near their work and waste no time in going back and forth. In our largest Canadian cities, a great many of the employees of the factories have to spend an hour going to work and an hour going home. In the winter when the streets are crowded and the windows closed, that hour going home from work is one of the hardest and longest hours of the day. The time spent before the factory and the home is seldom considered by the farmer who thinks about the short hours of city workers.

Most good farmers enjoy live stock and like to work with animals. They make friends with their cows and horses and enjoy the presence of the family dog. When such men go to the city and find that their little flat

only enables them to keep a couple of goldfish for pets, they feel that something is missing from their lives. A man who has always worked with animals is always lonesome without them. I know of one farmer who worked in a city for a short time instead of farming as he would have liked to have done. The vaudeville shows soon became uninteresting, it was lonesome in the crowds and the advantages of city life seemed very few, but that man never tired of stopping in front of a bird store where they had day-old chicks, pigeons and dogs for sale. The familiar pets which he had owned back on the farm were of more interest than all the diversions which he had looked forward to enjoying in the city.

City wages are not large when the cost of living is considered. Some men with special training do very well in the city and many men acquire that training from experience but the farmer who knows the farming business knows a trade that is worth money to-day and he should try and work where his skill will do most for the country.

If a man knows where he is going to land in the city it may be a safe adventure. He may succeed and earn more money than he can obtain on the farm. However, this is a poor time to speculate and the average farmer who can make a living on his land is not going to gain much by going to the city. He will not be sure of much more than a living in the city and it will cost just as much effort and it may bring a smaller return. If you have a good farm home and a chance to earn \$150 a month in the city, just take out the little note book and the stub pencil. At the top of the list mark \$40 for rent. Count the kids in the family and consider their appetites. Then note the prices of food stuffs quoted in the daily papers. Figure on more clothes for everyone in the family. It takes more in the city. Don't forget the laundry bills. Electric light and gas bills must be paid every month, also the telephone bill. When Cousin Bill comes in to spend a week, he will need to be entertained. Possibly he will bring his family with him and theatre tickets are sold for cash.

Then make a little allowance for doctor bills. Many a man picks up headaches in the city that he never experienced on the farm. The automobile which was housed in an old shed on the farm will have to use a rented garage in the city. It costs money at every turn to live in a large city and obtain many of the pleasures that seem to come on a farm for practically nothing. Of course, it costs money to live on a farm and it costs a lot of work to obtain many of the things which do not mean an outlay of actual cash. It pays to balance up all of these things before making any important changes. The average city man sees all of the good things about a farm and none of the detriments. The average farmer notes all of the desirable points about city life and sees none of the disadvantages. By balancing these things a farmer will see that he should be thankful that he has a farm.

## 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 these columns; 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.

**Jaundice.**

Jaundice is a group of symptoms, not a disease. In rural districts where certain sick people are said to be suffering from "yaller jaunders," attention is thereby called to only one phase which is common to several diseases including cancer, malaria, lead, arsenic or phosphorus poisoning and Bright's disease, this term, however, giving only a hint of what the disease may be.

In reality, jaundice means discoloration of the tissues and fluids of the body with bile pigment, making the skin and other tissues yellow, like the eyes of a weasel or the yellow bird after which the condition is also called icterus.

This discoloration may come from a variety of causes, great shock or intense emotion, or great strain such as that which infants often experience in the process of birth will cause it, so also will poisons and infections of various kinds.

One of the most common causes is mechanical obstruction in the ducts of the gall bladder or liver or both, from the presence of gall stones, indeed it is altogether probable that when all the evidence is boiled down it will be found that mechanical obstruction within the liver or gall bladder or in their immediate vicinity, is in some way responsible for nearly all cases of jaundice.

Thus it has been observed as the result of swelling of the duodenum, which is the first portion of the small intestine, and into which the bile duct empties its bile, swelling, especially from cancer, of the head of the pancreas which also pours its secretion into the duodenum, and pressure upon the bile duct of any kind, of abdominal tumor preventing the outflow of bile from the liver to the duodenum.

Strictly speaking the skin in jaundice is not always yellow, it may become green, or olive, or almost black when cancer is the fundamental cause.

Yellow is the constant color of the mucous membrane which covers the eyes, the inside of the sweat, the tears, the milk, and the expectorated mucus if pneumonia is present.

The urine is sometimes yellow but it may also be dark brown or even black.

It is important to notice that since in jaundice, particularly if directly and clearly due to obstruction, bile does not enter the intestine, constipation will alternate with diarrhoea, the evacuations being clay-colored and pasty.

Other symptoms which are associated with discoloration are loss of appetite, coated tongue, offensive breath, indigestion, slowness of the pulse and of breathing.

There may also be haemorrhages into the skin, intense itching, boils, headache, irritability, depression, drowsiness and dizziness. When jaundice is intense it may mean such a degree of blood poisoning that unconsciousness and convulsions may be expected.

When jaundice is present with malaria or typhoid fever the liver will be very large and very soft.

When simply due to removable obstruction it may last only a few days or it may be continued through many weeks.

It is always important to remember that it is one of the evidences of cancer and this becomes the more probable if it is unattended with pain and there is enlargement of the abdomen from dropsical effusion.

When it is found to be due to obstruction from gall stones or some kind of removable tumor, as determined with or without an X ray examination the obstruction must be removed surgically as soon as possible, but it is not generally best to do such operations while the jaundice persists, the condition of the blood and of the liver being unfavorable to operations, or to the use of an anesthetic.

Purging with suitable drugs like podophyllin, ipecac, and mercury, when properly carried out is often of great service, but the principal measures of treatment are hot alkaline baths, rest in bed, very simple diet especially milk and plenty of sleep.

It is always of first importance to find out whether the jaundice is of a character to be benefited by medical or surgical treatment.

## BOOST OR KEEP STILL

If you can't help the wheels of progress to move more easily, get out of the way and do not throw any monkey wrenches into the cogs. The writer has no desire or intention to become personal in this discussion, but he hopes to say a few things which will bring some of our less thoughtful and less considerate farmers to a realization that by their frequent and outspoken criticisms of the various co-operative enterprises, which are developing as never before, they are hurting the farming business as a whole.

There are two kinds of criticism—constructive or helpful, and destructive or hurtful. The former is always welcomed by officers, boards of directors and others who are in position to profit by the criticism or suggestion. This kind always builds up, aids, helps and boosts.

To illustrate: As a county agricultural agent the writer is criticizing our local creamery organization because it is a stock company, has only a small number of stockholders, has to pay interest on its capital stock, has no means for providing adequate finances, and has no binding force to hold its patrons together. This criticism is being presented, along with the proper remedy, to officers, directors and stockholders. The remedy—which is to organize under the non-profit, co-operative law, and have memberships instead of shares, a collateral note by each member for financing, and regular patronage dividends to all members, and an agreement binding every member to sell to the association under penalty, all cream sold at wholesale. This is a sample of constructive criticism.

But to go around telling that this or that officer is not on the square, or that the creamery is going haywire or some other fool things about the various bull, thresher or market associations in the county, is to be not only the enemy of one's neighbors, but of himself and the very business in which he is engaged.

One never hears professional and business men berating the organizations to which they belong and which are designed to aid them as a class. They know and realize right well that "in union there is strength."

There is another very undesirable man loose in the land. He is of the "rule or ruin" ilk. If the majority thinks a thing should be handled in a manner different from that which he had figured out in his own little brain, he kicks over the traces and tries to upset the whole thing. Such men deserve to be boycotted or ostracized by their colleagues. There are a great many people who criticize and knock more from force of habit, or a bad digestion than for the purpose of injuring their co-operative institutions or their business. Such men need merely to have their attention called to the possible injury which may result and they will cut out the destructive criticism.

It is always best to think several times before we send forth a criticism or a knock which will hurt. Speak well, even of the dog!

To make co-operative organizations succeed each must be willing to lay aside his individual ideas and do as the majority says. He must surrender a portion of his individual freedom of action and merge himself into the group. He must be willing to bind himself to a definite contract and live up to that agreement even though there may come a time when to do so would result in a temporary financial loss. Co-operative organizations will, like all others, have down as well as ups. The real friend stands by in bad as well as good weather.

Fortunately our best farmers see that the old idea of "every fellow for himself and the devil get the hindmost," must be abandoned as a relic of pioneer days, and that definite, optimistic, forward-looking class spirit must be fostered. They have learned, for example, that a breeder of Registered high-class Holstein cattle does not get anywhere so long as he knocks most other Holstein breeders; that the farmer who runs down the land of his neighbors never sells his own to best advantage; and that the farmer who refuses to co-operate with his neighbors in all forward movements for the betterment of farming and farm life is an alien enemy to his own and the best interests of the community.

Boost and the world boosts with you, Knock and you knock alone.—T. B. M.

**"An Eye on the Future.**

Maggie had a new baby brother, which everybody agreed was such a baby as had never been seen before. One day the baby was being weighed, and Maggie asked what that was for. "Oh," said her father, "Uncle George has taken a great fancy to baby, and he's offered to buy him for a shilling an ounce."

Maggie looked startled. "You're not going to sell him, are you, daddy?"

"Of course not, precious," answered daddy, proud to see his little girl loved her brother so.

"No. Keep him till he gets a bit bigger," the child went on, "he'll fetch more money then."

Armanent after this war, if war is still a possibility, will need to be enormously greater than was any armament before the war.—Mr. H. G. Wells.

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