

# Soils and Crops

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## SUMMER FEED FOR COWS.

Tiding the cows over the dry period of summer is a difficult and important matter for us dairymen. Cows which freshen late in winter and in the spring produce well for a short time and then fall off heavily in the milk flow, due very largely to the decline of pasture and the lack of some early maturing succulent feed. Oats and peas make an excellent combination for summer feeding. I have grown them heretofore for forage with excellent results. The crop may be cut green and fed as a soiling crop or matured and stored. I would sow one and one-half bushels of oats and one bushel of peas to the acre as early in the spring as the soil can be made ready.

Where a large acreage of clover hay is grown, some of it can be cut early and used for feeding. I have done this as early as the fifteenth of June. Alfalfa can be used in the same manner. A neighbor has been feeding alfalfa as a soiling crop and likes it very much for the purpose.

For summer and early fall feeding, I have been growing a small acreage of sweet corn for my cows. It is ready at a time when pasture begins to decline in quality and aids materially in keeping up the milk flow. Sweet corn is highly palatable and produces a large tonnage of fodder. I sow the corn as early as possible after the early spring frost has melted. A good clover seed which has received a covering of manure during the winter. About twelve quarts of seed per acre are required.—Leo C. Reynolds.

## HOW I RAISE BETTER OATS.

From experience covering over twenty years, I find that most inferior oat crops are due to inferior seed. I do not mean that farmers intentionally sow inferior seed, but rather that many farmers sow inferior seed without being aware of the fact.

I find that the cost of improved seed is very low, considering the good results that are sure to follow its use. Nor does good seed necessarily mean high-priced seed. Good seed will make a rapid early growth, which is very essential to a good crop of oats; a good crop is rarely seen from a field that makes a slow growth in the spring. Just as much labor is required to sow poor seed and harvest a small crop as to sow first class seed and harvest a good crop; hence, the balance is all in favor of the better seed.

A good way to secure good seed oats is to take a good variety of native oats and run it through the fanning mill three or four times, until only the largest and plumpest kernels remain. We fan out about 90 per cent. of our oats, leaving only the strongest and

best-filled kernels. This seed will germinate quickly, sending forth strong, hardy shoots. By following this plan year after year, the same strain of oats will increase in weight as well as in yield. Since we adopted this plan, we raise from 25 to 30 per cent. more oats than we were able to raise before. There is no waste in this method, as the light oats are used for feed; whereas, if the oats are sowed without cleaning, a large percentage of the light kernels will not germinate, and will therefore be wasted.

Smut in oats will reduce the yield to a large extent. However, this is easily prevented by the formalin treatment. I find that the amount of seed to sow per acre varies greatly according to the condition of the ground. In sowing grass or clover seed with oats, it is not safe to sow the oats too thick. We have raised our best crops by sowing from 2½ to 3 bushels of oats to the acre. This leaves room for a good seedling for the next year's hay crop. When grass or clover are not sown in connection with the oats, 3 to 3½ bushels to the acre is a safe amount to sow on well-prepared ground containing plenty of fertility.

When farmers are annoyed by oats lodging, most generally it is supposed that the land is too rich. This is not always the case, however; it is often because the soil lacks some essential element. The soil may lack potash, which gives strength to the stalk. If fertilizer, containing a goodly amount of potash, is applied, this trouble may often be overcome.—L. M. D.

## APPLE APHIDS EASILY CONTROLLED.

Aphids on apple trees are quite easily controlled by the use of a spray containing lime-sulphur and nicotine applied just as the insects are hatching out in the spring.

There are two kinds of aphids commonly found on buds of apple trees in the spring, one known as the rosy aphid and the other as the green apple aphid. The feeding of these insects results in dwarfed, mis-shapen fruit buds for market and is frequently a serious loss to growers.

Experiments have demonstrated that thorough spraying with a mixture containing two and one-half gallons of lime-sulphur, three-quarters of a pint of nicotine sulphate, and water to make 100 gallons at the time that the tips of the leaves of the fruit buds protrude from one-fourth to one-half inch will control the pests most effectively.

Careful spraying from the ground and under the tree rather than from the top of the spray tank is regarded as an important factor in the control of these pests.

## HORSE

Horse stalls so arranged that a heavy inch rope, stretching across each stall behind the horses, saves the necessity of halters. The attachments for each rope are made in a blacksmith shop and must be reasonably heavy and bolted firmly to the stall. One end of the rope is fastened to a ring and bolted to the stall. The other end has a heavy hook to drop into a ring when fastened. Arrange that the stalls are high at the front end so horses cannot reach each other's heads. This method of fastening prevents the horses backing up and kicking at each other. Horses that attempt to kick at another while passing behind soon learn that the rope is there and is effective. Horses are easily cared for and apparently enjoy the greater freedom of their bodies when not tied by the head. The halter headstalls are hung up in case of need, but are rarely used.

## Building Up the Poultry Flock

In this bulletin on "Poultry Keeping in Town and Country," Mr. F. C. Elford, Dominion Poultry Husbandman, gives some invaluable advice on how to get pure breeds. He points out that the old theory that mongrel stock gave the best results has not proved true in experiments. The foundation stock, he says, should be pure, but there should be a continuous selection year after year. Only birds of the best type and strongest constitution should be bred. It is advisable for a poultry keeper who does no trap-nesting to purchase a cockerel each year from a good laying strain and use him rather than one of his own breeding. In buying cockerels it is wise to get them, if possible, from the same breeder as the original stock came from.

One way to obtain pure-bred stock is to buy eggs, breeding stock, or day-old chicks. Another way is to buy pure-bred males and grade up the flock already on the plant. The latter way is recommended to increase the egg yield, but is not advised for the purpose of changing a mongrel flock into a pure breed.

Eggs for hatching should be obtained from hardy stock known to be good winter layers and conforming to the general breed type. The nearer home the eggs can be purchased, the better. It should be remembered in exchanging eggs with neighbors that breeding eggs are worth more than market eggs. Never, advises Mr. Elford, be-

## Weedless Farms.

To keep farms free from weeds, few methods give such good results as a systematic short rotation of crops, with regular seeding down to grass or clover at short intervals, remarks the Dominion Seed Commissioner in his bulletin on "Weeds and Weed Seeds."

Weeds are most in evidence in districts where the production of cereal grains predominates and where the systematic alternation of crops is not generally practiced. Thorough cultivation with a systematic rotation of crops, combined with the maintenance of as many sheep as can be kept to advantage, is a certain and profitable means of keeping weeds under control. But superior to all suppression methods is precaution in the sowing of clean seed—that is seed that has been as perfectly purified as possible and which comes off clean land. In many cases proper sieves in the fanning mill will remove most of the weed seeds.

In this backward spring, doing the right thing at the right time is what counts.

The farmer's success is going to depend upon the business he gets. If he waits for the buyer to look him up, or his neighbors to tell everybody about his goods, he is expecting too much of human nature, and it will be a long time before his sales will reach any noticeable volume.

## THE CHILDREN'S HOUR

### MY NEST.

Up on a hilltop ever so high  
There's a grassy nest where I love to lie.  
There I keep very still,  
And watch until  
All kinds of wonders pass me by.  
There's a flutter of wings, a bird draws near;  
He knows I'm a friend and he has no fear.  
He swings to and fro  
On a branch below  
And trills a song that I love to hear.

Bright as the sun and blue as the sky  
Flutters a brilliant butterfly;  
I can hear a deep humming,  
A bumblebee's coming!  
He crawls deep into a flower near by.

Hello, Mr. Squirrel, so gay and so bold,  
You laugh, although you pretend to be  
Your face looks puffed,  
For your cheeks are stuffed  
As full of nuts as they can hold.

A crimson lizard I can see;  
He basks in the sun and he watches me.  
His bright little eyes  
Show no surprise.  
Perhaps he thinks I am part of the tree!

A sea gull floats through the blue of the sky.  
He flaps his wings with a wild, shrill cry.  
Just over the grasses  
A dragon fly passes,  
And locusts snap their wings as they fly.

Running along with a jump and a bound,  
Comes Mr. Field Mouse. Now what has he found?  
He looks so merry;  
In his mouth there's a berry!  
Then he disappears in his hole in the ground.

So now do you see why I love to lie  
In a grassy nest on the hilltop high  
And just keep still  
Such wonderful things come passing by.

—Ethel C. Brown, in Youth's Companion.

### HOW A BIRD FLIES.

How many of us can answer the question: "How does a bird fly?" It seems simple enough, and yet it is a problem that the wisest in such matters have made a study.

The most prominent fact about a bird, in which it differs from every other creature, except the bat and insects—is its power of flying. For this purpose the bird's arm ends in only one long, slender finger, instead of a full hand. To this are attached the quills and small feathers on the upper side, which make up the wing.

Observe how light all this is; in the first place, the bones are hollow, then the shafts of the feathers are hollow, and finally, the feathers themselves are made of the most delicate filaments, interlocking and clinging to one another with little grasping hooks of microscopic fineness. An open wing forms a hollow on its under side like an inverted saucer; when the wing is forced down the upward pressure of the air, caught under the concavity, lifts the bird up, much as you hoist yourself up between the parallel bars in a gymnasium.

This explains how the bird keeps itself in the air, but how does it sail forward at such terrific speed? He never in this way could get ahead, and the hardest question is still to be answered. Now the front edge of the wing, formed of the bones and muscles of the forearm, is rigid and unyielding, while the hinder margin is merely the soft, flexible ends of the feathers, so when the wing is forced down the air under it, finding this margin yielding, the air will rush out here, and in so doing, will bend up the ends of the quills, pushing them forward out of the way, which of course, tends to shove the bird ahead. This process quickly repeated by the flapping of the wings, results in the bird moving forward in its flight.

### RURAL OPPORTUNITIES.

Boys and girls, as well as adults, who are fortunate enough to live in either small towns or in the country,



THE WEST FOR ANOTHER CROP.

The western farmer is always optimistic in the spring, and in spite of the talk of limited markets and other adverse conditions, Canadian farmers are preparing for a big crop again this year.

have golden opportunities to make life easy for all kinds of dumb animals, because they live where the animals live. Not all of the humane propaganda should be distributed in cities, one can readily see. Animals used on the farm often suffer, when this could be alleviated, were there some boy or girl or older person who would make the effort to see that animals are given proper care and treatment.

Instead of viewing your fate as unfortunate because of the fact that you have to live in the country or in a village, you should be thankful that you were born so close to nature. You have opportunities to study wild life, and to help conserve it, that many city folks envy.

Humane clubs could well be organized in various rural communities and much helpful propaganda could be spread. A country store, church, or schoolhouse could serve as a meeting place. Humane literature could be distributed from small libraries found in villages, or from the rural school. Nature studies could be made by classes, whose pupils would not have to go far before finding something to study.

This is one way by which monotony can be routed, and the good part about it will be that you are helping to make the world lovelier and the life of dumb animals more comfortable.

Some day you may move away from the country—though it is to be hoped that you will not—and what you have learned about nature and all forms of wild life will be of considerable value. To say the very least, it will prove a pleasant, wholesome memory.

Decide that you will do something along this line in your community now. Do not wait until conditions seem more promising.

There is a great work for you to do in your community.

### Approved Poultry Flocks.

With a view to improving the farm poultry in the Province of Manitoba, the Department of Agriculture at Ottawa has set about the establishing of approved flocks of Barred Plymouth Rocks. These flocks are intended to provide the source of improved breeding stock and hatching eggs for the use of farmers. This work is in charge of the Manitoba Poultry Promoter of the Live Stock Branch, who enters into agreement with farmers wishing to take it up. Under the agreement the breeder places his flock in the hands of the promoter who sees to it that only approved hens and cocks are kept for breeding purposes, and that only eggs from approved parentage and up to a required standard are incubated. Laying records are to be kept, and during the season the flock is to be culled by an official of the Department. These and other requirements are to be observed for a period of three years. The Poultry Promoter, during this period and afterwards, will assist in securing a market for the produce of the flock and render such other assistance as will enable the breeder to keep his flock up to a high state of quality and profit. The details of the scheme are published in Pamphlet No. 25 of the Department of Agriculture, which is available from the Publications Branch of the Department at Ottawa.

This pamphlet also explains the principles and requirements of the Record of Performance "A" for poultry by which certificates of production are granted for trap-nested hens that lay the required number of eggs in a year.

### The Live Stock Market.

Top prices for steers were a shade lower in the week ending April 12 at Montreal and Toronto, when compared with the same date last year, but at Winnipeg there was no change and at Calgary and Edmonton they were 65 cents and 50 cents respectively, higher, according to Dominion Live Stock Branch reports. Calves showed no change at Toronto, were a trifle lower at Montreal and at Winnipeg, although absent of the previous week, but manifested an improvement at both Calgary and Edmonton. Hogs were steady at the previous week's prices at Toronto and Montreal, but were weaker at the three Western points. Lambs were up \$1.00 in all the markets, compared with last year and unchanged as regards the previous week. Sales numerically all along the line were greater than last year, excepting calves, which showed a slight falling off. Up to date this year, the cattle billed through have been 34,103 against 20,517 for the same period of 1922, hogs 56,150 against 18,700, and sheep 15,758 against 15,559.

### Feeding Geese and Goslings.

Geese, like ducks, require a large proportion of roughage in the feeding ration. This can be best supplied in the winter by the use of clover hay and roots. In summer, if given the range of a good pasture, a flock of geese require little else, unless extra rapid growth is desired. According to Dominion Experimental Farm bulletin No. 91, goslings require warmth and rest the first day. On the second day they should be placed where they will have free access to a plot of tender grass, should be supplied with all the succulent green food they will eat, together with mash feed three times a day. If they are to be marketed as green geese it is advisable to feed mash heavily from the start. If they are to be kept as stock, use more hard grain, and when the goslings are strong enough, let them have the freedom of range on the pasture lands, and they will require only a light feed of mash in the morning and grain at night.

For fattening ducklings and goslings, feed a mash moistened to a creamy state, consisting of 1 part bran, 2 parts shorts, 5 parts corn chop, 10 per cent. beef scrap, about 5 per cent. sand, reducing the green food to about half the quantity previously fed. Give plenty of water at feeding time. When geese have been on pasture all summer and are penned in

## Fresh air and BOVRIL

—or, as the Report of the Ministry of Health of Great Britain said: "a sanitary environment and sound nutrition"—are the great safeguards of Health.

## Home Education

"The Child's First School is the Family"—Froebel.

### An Old Fashioned Quality—Respect—By Carrie A. Ritter

"Mother had a hen-party yesterday," gleefully exclaims a young girl of sweet sixteen. "Mother had seven old hens here and you ought to have heard them cackle and seen them eat ice cream."

Many people might call this a cute up-to-date speech, but the mother of this same girl complains, "Mary is not respectful to me. She thinks I'm old, too, and I'll not be fifty-six until September. I don't see why she talks so about my age."

Casually observing these cases we wonder how much of this is training or rather lack of it. We notice the same attitude in the parents not infrequently in speaking of, or to, elderly relatives. Children are often allowed to be saucy to their grandparents or to their elders.

So it comes to us that the atmosphere in which a child is reared is responsible for his respect or disrespect for those older or in authority. Sometimes it is not the words so much as the tone in which the parent speaks of an elderly person that conveys disrespect.

There has always seemed to me to be a natural bond between children and very elderly persons. The little ones, who are full of life and energy, can tell delightfully. I know of a case in which a grandmother and her only granddaughter are chums. They camped together for a month when the rest of the family did not care to go. "Grandma had the time of her life," explained the girl, "only we did eat such a lot, both of us, it kept her busy."

### The Granary Converted Into An Elevator.

The average farm granary with bins eight feet or more in height, with a store-away attic, is usually not economic. A granary elevated on piers four feet or more and the bins extended to the eaves doubles the carrying contents at small cost. An elevator shaft with cups is a comparatively cheap equipment. A four to six-horse power gasoline engine is used for driving the belt to elevate the grain. Grain arriving at the elevator can be scooped into the grain dump at a rapid rate.

Reloading grain from bins by gravity into the alleyway in bags or bushels, leaves only a few hundred bushels to be scooped out of the bottom. Reloading can also be accomplished through the elevator's operation and spouted into the grain tank. The examination of any grain elevator in your market town will give the basic ideas for remodeling a granary into a farm elevator for storage. A grain tank and the elevator reduce the bags necessary on the farm to the minimum. These fixtures are permanent, while bags are in a constant condition of deterioration.

A roof over the end of the granary elevator used for the dump for unloading, makes a good place for a grain tank to stand when not in use. A four-foot alleyway running through the building at right angles to the dump gives access to all the four bins. This economy of space necessitates an outside stairway. All the windows of the granary are removed except in the alleyway.

Grain which may be wet and inclined to heat can be changed to other bins through the elevator with comparative ease and given quite a good aeration.—J. McBride.

### When Calves Can be Slaughtered for Food.

N. E. Ontario county—What is the age at which calves may be slaughtered? Regulations adopted under the Meat and Canned Foods Act provide that no animal under three weeks of age may be slaughtered for food.

### Baby Chicks and Ducklings

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## THE BROODING OF YOUNG CHICKS

The essential factors in successful brooding of young chicks, whether natural or artificial, are healthy, vigorous chicks, proper temperature, sanitation and plenty of room.

Where only a limited number of chicks are raised each year, natural brooding has many advantages. The temperature is controlled by the mother hen, and, as she can accommodate but a restricted number of chicks, there is very little danger of overcrowding. A quiet but not clumsy brooding hen should be selected, after making sure, before allowing her any chicks to brood, that she is entirely free from lice.

Artificial methods are advocated wherever large numbers are to be brooded. The coal-burning brooder has reduced cost, and to a large extent lessened the labor required. These brooders are usually operated in a colony house, and, as soon as the chicks cease to need the heat, may be removed and the house still used for accommodating the chicks during the summer.

The first requirement of young chicks is warmth. The temperature should be about 98 or 100 degrees on a level with their backs before they are placed in the brooder zone. This temperature may be lowered gradually from week to week, depending on the season. In the early part of the year the chicks will require brooding at a higher temperature for a longer time than later in the spring. Those hatched between April 1st and May 1st will require brooding for about eight weeks.

It is most important for the first few nights after they are placed in the brooder house to see that the chicks do not get too far away from the source of heat or bunch up in one corner. A good plan is to have some adjustable arrangement made which will permit the chicks to pass no more than two or three feet away from the brooder at first; then, daily, they may be allowed a little further away, until by the end of a week they have the run of the room. Care should be taken not to drive the chicks away from the brooder through too much heat. On the other hand, there must not be so little heat as to induce crowding under. Watch the actions of the chicks as well as the thermometer. When they are most comfortable they flatten out just around the edge of the brooder.

Nothing is so dangerous as overcrowding. The capacity of many brooders is overestimated, and it is better never to use to full capacity in any make.

Sanitation and cleanliness are important points to watch. All brooders and rooms which have been in use before should be thoroughly cleaned and disinfected before being used each year. Clean, fresh litter, free from mould or mustiness, should be used. All water fountains, feed troughs, etc., should be washed with a disinfectant solution every day or two.

Summing up: given good, healthy, well-hatched chicks, the brooding points are a comfortable temperature, perfect cleanliness at all times, no danger of overcrowding, only gradual changes in temperature and feeding methods.

### Poultry Record of Performance.

That the Record of Performance for Pure Bred Poultry, started in 1919, by the Poultry Division of the Dominion Live Stock Branch, is rapidly increasing in popularity is shown by the fact that while in the first year only 67 breeders with 4,436 birds made entry, in the third year, that is 1921-22, 122 breeders with 11,579 birds were represented. In Ontario, in 1919 the breeders making entry numbered 26 with 1,085 birds. In 1921-22 the number of breeders represented was 40 with 5,065 birds, including 2,407 Leghorns, 1,147 Plymouth Rocks, and 1,450 Wyandottes. British Columbia came second with 25 breeders and 1,630 Leghorns, 367 Plymouth Rocks, 398 Wyandottes and 135 Rhode Island Reds. Quebec was third with 18 breeders and 910 Plymouth Rocks, 785 Rhode Island Reds, and 315 Leghorns. Alberta made a big jump in 1921-22 with 16 breeders and 662 birds, including 315 Plymouth Rocks, 137 Wyandottes, 110 Rhode Island Reds and 50 each of Leghorns and other breeds, against one breeder with 45 Wyandottes in 1919-20.

### Use of Yellow in Flower Beds.

The following points should be borne in mind in using yellow in the garden: 1. Use the pale straw and maize tints anywhere, just as you would white. 2. Clear yellow with most blues, using cream white freely in the group; creamy yellow any depth with any blue, white not being necessary. 3. Bright yellow with deep blue and deep violet (not the red-purple). Clear yellow very sparingly with pale blue-violet, and not at all with pink. 4. Remember that yellow "carries" farther than other colors, so it is best to have the other color in a combination in greater quantity than the yellow—"picked out," as the dressmakers would say—with touches of the fairy gold.

A little fore-talk would save much after-tail.