

Soils and Crops

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Layers May Be Show Birds.

Some people have the erroneous idea that a well-bred or prize-winning fowl is not a good laying one, but they may be if properly bred. For instance, I had a pullet a few years ago from which my present strain originated. This pullet commenced to lay early and I wished to show her at our Barred Plymouth Rock Exhibition. She laid in the crate both going to and coming from the show, as well as in the coop while at the show, and kept it up after returning home, besides winning first in her class and special for best color Barred Plymouth Rock female in the show. This in spite of the fact that changing living quarters usually stops her laying.

Nature itself is one of our greatest allies in producing a heavy egg-laying strain in poultry when aided with a little common sense in mating. Take, for instance, a cock with great milk-producing traits will not produce, under normal conditions, any more calves in a given time than one that gives very little milk. With poultry this is different.

Nature has so arranged it that the chicken comes from the egg and we should naturally expect to get the most chicks from the hen that lays the most eggs, while a poor layer will leave fewer of her kind and blood in the flock and by careful selection made from these heavy-laying birds we can very easily build up a heavy-laying flock.

In making my selections for breeders I also take particular care to use only early-maturing birds that are sturdy, vigorous, active and healthy. I cull my flock early, selling for market all that are slow maturing and have other defects, retaining as breeders only the most desirable specimens.

However, just because a bird is bred to lay will not make her lay any more than a cow will make a record for milk production if she is neglected. They both require proper feed and care and one of the most important is something we all must have near at hand and that is pure fresh water.

In breeding for exhibition Barred Plymouth Rocks, we have to make two different matings. These we call the light color and the dark color mating, and while they are both Barred Plymouth Rocks they are bred as separate as though they were different breeds.

I am mentioning this because I have found from my own experience that the light color mating lay the best and I would suggest that all breeders of one large flock for market purposes only, use the light color mating. They dress nicer also, and have richer yellow shanks and skin.

Twenty Points on Hogs and Bacon Markets.
Here are twenty points which outline the present position and the main requirements of the markets for Canadian hogs:

1. Select bacon hogs must weigh between 160 and 210 lbs., at the packing plants (170-220 lbs. on the farm).
2. Very little more than one-half of the hogs now being marketed within the weight-limit to yield exportable "Wiltshire sides".
3. There is only a very limited market for the fat, lard-type of hog in

Canada; that limit seems about reached.

4. But there is an almost unlimited market for bacon in Great Britain, provided it is that which the British consumer desires.

5. Great Britain imports normally about 600,000,000 lbs. of bacon every year, roughly 12,000,000 lbs. a week.

6. In 1913, the year before the war, imports from Canada were under 24,000,000 lbs., just two weeks' share of the normal import.

7. A "Wiltshire side" is a trade term for the shape of the cut. It is one-half of the carcass without head and feet.

8. These sides are only given a light pickle in Canada. The smoking and curing for retail are done by English curers.

9. Domestic taste shows a tendency to prefer lean, streaky bacon very similar to the prevailing taste in Great Britain. This is due probably to our increase of city dwellers.

10. One type of hog will therefore cater to both the domestic and export trades. This must be the bacon-type acclaimed as best at the Ottawa conference.

11. The standard then set requires jowl and shoulder light and smooth, back and neck to tail evenly fleshed, side long, medium depth dropping straight from back, ham full, good general finish, no excess fat.

12. In the United States hog feeding conditions and market demand for hams differ radically from those in Canada and comparisons cannot properly be made.

13. As Canadian packers can find only a limited market for lard-types, they cannot indefinitely take them off the hands of farmers who misguidedly continue to produce such hogs.

14. Canadian hog production on a scale to hold the British export trade cannot be successfully done by dribbles, with a glut at one season, nor in the free-and-easy supply of many varying types of carcasses.

15. There must be uniformity in East and West, and both must furnish exactly what the British consumer wants if Canadian farmers are to get the premium which packers agree to pay after May 1st.

16. In the common interest the breeding of fads must be discouraged. Their carcasses do not yield the right conformation for "Wiltshire sides".

17. Conformation or shape is as important as weight. Two sides from differing breeds may apparently have the proper length over all but if the shoulder of one is too thick, the belly too thin, or the back too fat it will reduce the value of the parts from which the high-priced, well-balanced lean-and-fat cuts are taken.

18. Farmer-producers are most likely to get the right bacon types among well selected Yorkshires, Tamworths or the bacon sub-section of the Berkshire breed.

19. Other breeds are unsuitable and the average farmer cannot afford to breed them.

20. The two inter-linked and essential halves of the livestock industry are:

1. Production and marketing of farm animals;
2. Manufacture and marketing of meat.

Use a Strong Dormant Spray.

The dormant spray is a spray applied some time after the leaves have fallen in the fall and some time before growth begins in the spring. In other words while the trees are dormant it may be applied any time during the dormant period. Late fall is a very good time for application as we avoid the usual spring rush. Early spring will do as well, or we may apply the spray during the winter if a warm spell insures the spray against freezing upon the tree before it dries. The general practice is to apply it during early spring.

The dormant spray is a contact spray, that is, it kills by coming into contact with the insect or fungus. It is not intended for biting, but for sucking insects. The San Jose scale is the most prevalent and the most injurious of this class of orchard pest.

If it is present in small numbers, you may recognize it by small, reddish, discolored spots on the tender bark. If present in large numbers, the bark has a crusty appearance. If uncontrolled, San Jose scale will kill the largest tree in from two to four years. It will wipe out the current and gooseberry patch in a short time. Its presence causes the fruit to become knobby, unshapen, rusty and practically worthless. It attacks trees of all kinds and is sure death if left alone. Only the dormant spray will control it, as we dare not use summer sprays strong enough to kill scale effectively.

The aphid is controlled by the dormant spray. Aphid eggs are laid in great quantities on the twigs and the young lice hatch out just as the buds open. Aphid is the cause of the dwarfed, misshapen apples so often found. They cause the young leaves to curl and eventually die. If the dormant spray is applied in sufficient strength it kills the eggs.

The dormant spray kills the fungus which is responsible for apple blotch. Summer sprays are almost wholly poison sprays intended for biting insects. They are of some aid in controlling fungus but cannot wholly control it because we dare not make them sufficiently strong.

To sum up, then: The dormant spray controls San Jose scale, oyster shell scale, all the scales of minor importance, aphid, pear psylla, apple blotch and various other fungus growths which disfigure fruit. In one sense it may be called life insurance as the trees will become worthless if it is not applied. It also controls anthracnose on raspberries and blackcaps. It must be applied during the dormant period as it is used in strength sufficient to burn foliage.

Commercial lime-sulphur is generally used for this spray. It should be used strong for dormant spraying.

Observation and actual practice have convinced the writer that a weak solution for this dormant spray is time and money thrown away. Use one part lime-sulphur solution to about eight parts water. Remember that the San Jose scale is literally a hardened proponent. He carries protective armor on his back. The spray must be strong enough to penetrate this armor. Aphid eggs are protected by a comparatively hard and varnish-like case. To clean them up use spray strong.

The fungicide are very tenacious of life. Kill them with a strong solution. Miscellaneous oils are also used for this spray with good results, especially on apple and pear trees.

One or two cautions: do not use lime-sulphur solution for any sprays on grape vines. Grapes do not need a dormant spray and lime-sulphur in summer spray for grapes is injurious. Do not attempt to use a dormant spray solution after growth starts.

Prevent Smut by Formalin Treatment.

Oats were free from smut last year on some farms. On other farms they contained as much as one-third smut. The difference was not in the land or, altogether, in the seed, but in the farmer. Those who carefully treated their seed oats with formalin escaped this severe loss. Smut is more or less common in practically all untreated oats, and many farmers who know about the treatment simply neglect to treat the seed. Those who have been persuaded to apply the treatment express surprise at its simplicity and ease and are convinced that a gain of from one dollar to five dollars per acre has been made. The treatment for an acre requires only a few cents worth of formalin, a bucket of water and a few minutes work.

The following method is recommended: Mix one pint of formalin with 40 pails of water. Place the grain to be treated in a heap on a clean canvas or floor. Sprinkle the formalin solution over the grain, then shovel the grain over into another pile so to mix it thoroughly, then sprinkle and shovel again. Repeat this until every grain is moistened by the solution; then cover the pile with sacking and leave for three or four hours. At the end of this time, spread the grain out thinly to dry; shovelling it over three or four times will hasten the drying. Forty gallons of the formalin solution is sufficient to sprinkle between thirty and forty bushels of grain.

Never expose wet grain to a temperature below freezing. If the grain is sown while moist, it will not run as freely as dry grain; for this reason open up the drill somewhat or the stand will be too thin.

Meat and Canned Foods Inspection.

The inspection of meat and canned food products carried on by the Dominion Department of Agriculture is a matter closely related to the health and physical well-being of the people of Canada. The Veterinary Director General has at his command for this work a small army of trained inspectors who are constantly on the alert to detect disease and to safeguard the consumer. Every abattoir and recognized slaughter house is inspected and the meat that goes out is approved. The canning factories and their products also come under careful supervision, and certificates are given guaranteeing that the products are wholesome in every respect. Every animal intended for slaughter is inspected and passed upon. The Meat and Canned Foods Act provides that no animal that has carcasses or portions of an inspected establishment shall be removed unless permission in writing be granted by the inspector. Animals that are found to be ever so slightly affected by disease are rejected. Not only the animals but the carcasses after death have to be passed as sound. If the inspection warrants, the meat is marked "Canada Approved," and then may either be exported or sold for home consumption.

Sausages, canned meats, and portions intended for cure, may be inspected only from carcasses or portions thereof that have been so marked. There are at present in Canada upwards of fifty inspected establishments, and from 82 plants that are valued to the branch, the output was put at \$175,133,000. In all, upwards of three hundred men are engaged in the work of inspection, all being veterinary graduates and well posted on the duties they have to perform.

Harvesting the Farm Ice Supply

A Community Job—By Earle W. Gage

When Jack Frost snaps away in January and February, it's a sign for the farmer to prepare for next summer's heat, and the ice season is at hand. There is no crop that the farmer harvests to-day that is produced so cheaply and brings higher returns than the ice crop. It takes no fertility from the soil, and instead of depleting the pocketbook, enriches the farmer and his family in making country life more comfortable and the farm products more valuable.

Co-operation in the ice harvest work is more important perhaps than the common community co-operation at threshing and laying time. It is best that the ice be cut and hauled in one direction the cross-lines should be made. Care should be taken to have the farmer harvests to-day that is produced so cheaply and brings higher returns than the ice crop. It takes no fertility from the soil, and instead of depleting the pocketbook, enriches the farmer and his family in making country life more comfortable and the farm products more valuable.

The size of the cakes cut depends on the thickness of the ice, as well as upon the tools available for harvesting, but in any case it is important to have all the cakes of the same size. In order to simplify the handling and packing, many farmers, especially those who harvest a comparatively small quantity of ice, cut the cakes twenty-two inches square, a size that is easily handled with a limited amount of equipment.

After the field has been marked off, a strip of ice, one block in width and extending from the loading-way to the main channel, is cut through and forced under the surface of the surrounding ice. This strip should be saved somewhat wedge-shaped, wider at the bottom than at the top, which allows it to be forced down under the field with ease. The operation is known as "sinking the header" and it opens up a small channel the width of the proposed cakes. The channel is widened by cutting another strip to enable the long strips or floats of ice to be floated from the main channel to the bank or loading-way.

The strips of ice are then pushed with an ice hook along the channel to the bank, where they are saved or chopped into cakes. The narrow channel, cut at right angles to the main channel, has the advantage of allowing the operator to get closer to the cakes and to handle them more easily. At the end of the narrow channel there should be an inclined track or loading-way in which the cakes are drawn either by hand or by a horse. This track may lead directly into the ice house or to a platform from which the cakes are loaded upon a wagon or sleigh.

The cakes should not be cut completely through, but should be grooved two or three inches with the plow, and after being floated up the channel chopped through with a special tool before being put on the loading-way. This practice saves time and labor.

With regard to the cost of harvesting ice, the location of the source of supply is, of course, the deciding factor. When the pond, creek, river, lake or other body of water is located near the farm, the cost of gathering should be very small—almost negligible—the cost increasing as the distance grows greater. Investigations of the Department of Agriculture show that ice has been cut at a price as low as one cent for a cake of two hundred and twenty pounds, making the ice cost, exclusive of hauling and packing, nine cents a ton. The usual price, however, was found to average about two cents a cake, or eighteen cents per ton. To find the total cost of storing ice, the charge for hauling and packing must be added; this brought the average to about a dollar a ton.

Loss of ice by melting depends partly upon the manner of packing. The cakes should be placed close together so that the mass will be as tight and solid as possible, thus preventing the cracks and openings that will allow air to circulate. Perfectly cut rectangular cakes can be closely packed, which put home the great need of having the cakes cut in regular size.

In beginning, a layer of dry sawdust about a foot thick should be placed in the bottom of the ice house, the depth of the sawdust being a few inches less in the centre than at the outer edge, so that the cakes will have a tendency to slide toward the walls. The sides of the mass of packed ice should be smooth. Any projecting pieces should be trimmed off before the mass is covered with insulation. If sawdust or mill shavings are used a space of at least two inches must be left between the sides of the ice stack and the walls of the building. This space should be filled with dry sawdust or shavings as the packing in the centre proceeds.

In packing small quantities of ice it is a common custom to pour water over the stack or mass of packed ice and allow it to freeze solid before putting the insulation in place. If the weather is severe the mass of ice will freeze into a solid block, thus greatly increasing the keeping qualities.

There are few farms which would not be improved with a stretch of new fencing. Get the posts out of the swamp this winter.

If refitting the plow, be sure and use plenty of water. Mouldy silage results from corn being too dry when ensiled.

INVESTING OUR TALENTS

A certain farmer not yet out of his thirties has decided to sell his farm, to retire from active work, and to live on his income. Through a fortunate real estate deal and good farming methods he has laid by a sufficient competence which, if properly invested, will, under normal conditions, provide an adequate income to shelter, clothe and feed him during the remainder of his days.

This is an extreme case. But is it not a fact that a majority of us begin to side-track our talents soon after we enter the years of responsibility? The little incentive we once had for investigation, the hope we entertained in our school days for becoming a reasonably good public speaker, the ability to impart our knowledge to others, our youthful ambition to become an organizer of men or things in order to do more than the ordinary routine work of life, these and a hundred other things many of us have thoughtlessly dropped off on the side-tracks of life and forgotten them. Without doubt there is a general tendency on the part of the majority of us to slip into some narrow groove of life's activities and stick there to the end.

But the great aim of life is not merely to reach out and lay hold of enough capital to keep ourselves and those immediately dependent upon us from starving and discomfort. We have by no means played our part in the great drama when we have attained that desirable income. Our lives had rather be dedicated to a service that extends beyond the satisfaction of our physical necessities. Happy and useful is the man who maps out a constructive and worth-while program which will demand the full and constant use of every talent he possesses. Only such a man can know the supreme joy of living. In our thirties we are only approaching the years when our ability to serve is at its greatest.

The Dairy

A few dairymen are now crowding their milk cows to fullest capacity. Care is being taken in the balancing of rations, not so much to save feed as it is to enable the animals to turn out the largest volume of butter-fat. Silage, legume hay, corn, oats, bran, and a little oil meal, or other concentrates, are being used in carefully determined proportions to require no handicap of the animals in production work.

The reason why these men are crowding their herds is plain. Prices received for dairy products are relatively much higher than can be secured for the feeds used. It is the old proposition of manufacturing with materials at low cost and a good market for the output. The results in this case, particularly where good cows are being kept, are in sharp contrast to the comparatively dull times and these dairy feeders are pushing the animals to the limit in order to "make hay while the sun shines."

Results from Cow-Testing Work.

Among the interesting things in connection with cow-testing work is the helping members to formulate better rations, plan better methods, and get better stock, in all three of which we have been able to render service.

We have assisted in getting better sires. We have helped men to official testing and induced three men to apply for federal and state aid in T. B. eradication.

The one place where the greatest service has been rendered, however, has been in the feed room. With ever changing markets it is not always easy for the farmers to keep posted on the best combinations of feed to get the best results. We have a case in mind that we will relate for the benefit of others.

A member had a herd of very good Holsteins, and from the history it seemed as though they should be doing better as they were very good types and at first glance would seem to be quite well fed; but a closer examination showed the ration low in both protein and carbohydrates. The feed was corn silage, corn fodder, oat straw, bran, ground oats, and cottonseed meal. We got them to change the ration by adding corn meal, oil meal, and clover hay. On our next visit we found two fresh cows so when we footed up the sheets we deducted this from the total and still had 2,098 pounds more milk which, at the then market price of \$3.18, meant an increase of \$66.71.

This is perhaps an exceptional case, yet in the course of a year's work we will find many. I sometimes wonder what we would find in a survey of one hundred farms taken at random, as to the matter of rations. Would we find an average feed return of \$5.06 as we did in this association for the month of October?—S. P.

Sunlight is the best protection against tuberculosis. Remember this when building either for yourself or your live stock.

Good silage is satisfactory succulent feed for sheep. It should be fed in conjunction with legume hay and some concentrates.

Poultry

Everybody who has a few good fowls in his breeding pens can profit by showing them. Whether you sold them yourself or bought them off some other breeder, you will never know just how good they are in comparison with your neighbors' fowls unless you show them.

If you purchased your exhibition stock, depending entirely on the past records of the birds or the say-so of the man selling them, it will pay you to make a careful study point by point in comparing your birds with the ones shown against you. Ask the judge to show you the strong and weak points in your birds, and he will usually give you a lot of valuable pointers.

We have often run across people in the show-room who were there for the first time. They started with a setting of eggs for which they paid a good price and from which they expected a lot of high-class show birds. One should begin the study and culling of these birds when still small chicks, and watch them until ready for the show-room. Fix your ideal in mind and constantly select the ones that have developed the most nearly to that ideal.

We always give first place to the birds nearest standard shape. Some breeders place color first, but it is generally admitted that "color makes the variety while shape makes the breed." Also observe the bird's head points carefully, for nothing catches the judge's eye quicker than a well-shaped head with good eyes, comb and wattles. See that the birds are properly conditioned for the show-room for condition is half the battle. Many an inferior bird in hang-up condition, carefully groomed, has won over birds that have been grossly neglected along these lines.

Go in the show-room determined to

Feeding for Egg Production.

It can be definitely laid down that the egg yield of the average flock of fowls would be increased materially by feeding a larger supply of animal food. So says a circular entitled "Beef Scrap versus Skim-Milk for Egg Production," just issued by the Department of Agriculture, Ottawa, the author of which is the Superintendent of the Dominion Experimental Station at Cap Rouge, Que. The three main supplies of animal food required by laying hens are fresh green cut bones, beef scrap, and skim-milk, and of these the last mentioned has proven the best stimulant to egg production. The milk may be fed sweet or sour, but always the same, as any alteration is liable to lead to bowel trouble. It should also never be allowed to freeze. If milk is not available in sufficient quantity, then either beef scrap or fresh cut green bones can be fed to supply the deficiency. Buttermilk is beneficial. The main point is that, in order that hens may do their best, they must be given animal protein to a liberal extent. These are the conclusions reached after an experiment in fowl feeding conducted at Cap Rouge for five years. For small back yard flocks table scraps have been found satisfactory, but for the average farm flock, where greater outdoor space is to be had, the scraps do not usually contain sufficient meat. In order that the birds may obtain skim-milk in the quantity they need, it is well to put it before them in an open pen. Fish scrap and fish meal can be used to a limited extent. Fresh meat scraps are advisable only in cold weather.

win, but if you can't win keep sweet and try to learn why. Any one can win but it takes a true fancier and sportsman to lose gracefully and profit thereby.

The child instinctively attempts to develop his mind through contact with his environment. He wishes to gain knowledge of it, to come into sympathetic relation with it, and to fulfill a part in it.

Toys and play-materials offer him one means of expression. The child's imagination is very keen, consequently his toys should be wisely selected. They should be simple and very durable. There should be dolls, doll furniture, balls, carts, boats, wagons and other toys which may be useful to him.

"The too finished toy chills the imagination," and the child frequently is seen to find more enjoyment with a crude toy of his own construction. The little girl will turn from an elaborately dressed doll to lavish carresses on a rag doll. One child turned from a large number of valuable Christmas presents to play with his father's bootjack. A little girl given a beautiful doll by her uncle, laid it down and spent the remainder of the day using the box in which it came for a boat. Later she thanked her uncle for the beautiful boat he had sent her.

When the child can use play-materials, he should be given blocks, boards, beads, clay, paper, scissors and crayons, also miscellaneous articles from which he may choose.

When the child may safely be left alone in the nursery or out of doors, he should be free from the continuous presence of an adult. He realizes greater satisfaction if thrown upon his own resources. The child's power of concentration is weak and many parents, instead of sitting quietly by,

The Welfare of the Home

Toys and Play-Materials—By Ellen Creelman

direct the child by continuous remarks about what he is doing. Parents and others may express sympathetic interest when the child appeals to them, may play with him, but not for him. Self-effort is the law of progress. The child's ideas are vague, his facility of expression crude, but he is satisfied with the results he realizes as he outgrows this stage, unless someone invariably destroys his satisfaction by, for instance, building or modeling for him a more perfect form than his. To lose keen delight through his own efforts is an irreparable loss to him.

Order is a natural need of everyone even in childhood. The child, if not carefully guided, acquires habits of disorderliness. He frequently finds himself surrounded by a mass of playthings in an untidy room. His mind becomes tired and confused, and he turns away indifferently without having realized his desires.

Granted children an attractive nursery, no matter how simple, with suitable, but not necessarily an expensive equipment, a few rules necessary for the happiness of all must be enforced.

There must be no intruding upon the rights of others. Individual toys must not be appropriated without permission of the owner. There must be no unnecessary distribution of toys and play materials, but a degree of orderliness during the day, and all toys must be put into their places at night by the children. If these rules are enforced, interest in play, appreciation of confidence, gratitude for their privileges and good will towards one another may be expected. With out this result the desired progress is impossible.

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