Soils and Crops

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Poultry Farm Tests.

For breeding purposes, two-year-old hens have been found best, although strong chicks have been produced from well-developed yearlings. Pullets ranging from six to nine months old are more or less a risk. While their eggs may hatch well, there is not the vitality in the young that is found in those from hardy, vigorous two-year-old hens. This has been demonstrated by a series of trials, and is a strong testimonial to the policy of keeping a hen, regardless of her age, as long as she is hardy, vigorous and yields a profit.

Tests in mating show that for strong, livable chicks, the best matings are those of six vigorous females and an active male. When hens are used, the male should be a cockerel; if matured pullets, use a cock. Where male birds are alternated in a pen, tests show that ten females is about the proper number. Good fertility has been obtained in larger matings, and without alternating the males, but the chicks were not in as good condition.

For years it has been our practice to make all nests of tobacco stems in preference to straw or any other material, and as a result there has been practically no trouble with vermin either on hens or chicks. Tobacco stems are used in both the laying and incubating nests. As tobacco stems are not always available, tests were made by using hay as a substitute, and thickly sprinkling a good insect-powder on it. When hens were set the nests thus made were treated the same, before the eggs were put in. In these tests zenoleum, a coal-tar product, was used on account of its strength. The result was practically the same as with tobacco stems.

With the aid of trapnests the nature of the different hens has been noted during the past year. The observations prove that Nature never exactly duplicates anything. There are no two hens that are exactly alike in all respects, although some come very close to it. But this is more exemplified by the nature of the hens themselves. Some of the hens quit laying as they began molting while others continued laying, more or less, during the molting period, and kept in excellent health and vigor. While shedding the feathers some of the hens had a ragged and dejected appearance; others in the same flock molted so gradually that the change was hardly noticed, and kept in the best of health during the entire period. Some hens were really savage when broody, while others were exceedingly good-natured. Some would sit carefully and always had a clean-looking nest, while others were sure to break some of the eggs and befoul the nest. Some hens were naturally tame, while others in the same flock are wild and nervous.

The trapnest has proved that the nest-egg theory is all wrong. Nest eggs have no influence whatever in coaxing a hen to lay. In our trapnests there is nothing but tobacco stems, and yet right in these nests the pullets start to lay and keep it up in fine shape during the year. Occasionally a hen will frequent the nest, but not lay. I noticed one hen get in the trapnest and remain there for an hour or more almost every day, and yet she did not lay. The hen was killed and on being opened up was found to have considerable fat accumulated around the egg organs. As a rule, every similar hen was found to be unusually heavy.

Tests made the past season in alternating male birds for fertility, resulted as follows: From January 1 to May 1, four males were assigned to three pens. That is, cock No. 1 started in pen No. 1; cock No. 2 in pen No. 2; cock No. 3 in pen No. 3, and cock No. 4 was placed in a cage in another building. The next week cock No. 1 was put in a cage, cock No. 2 was advanced to pen No. 1, cock No. 3 went to pen No. 2, and the cock that originally was in a cage was placed in pen No. 3, and so on each week. After the first of May only three males were allowed for every three pens, but each week they were moved to different pens. For instance, cock No. 1 went to pen No. 3, cock No. 2 went to pen No. 1, and cock No. 3 to pen No. 2. These changes avoided favoritism and there was better fertility.

After testing various methods for breaking up broodiness, the following was found to be the most humane and satisfactory: Once a week all broodies found on the nests at night were carried to a house and run, in which there were no nests nor any other fowls. Here they were kept for a week, by which time they got over their broodiness and went to laying again. Once in a great while there would be a stubborn hen and she would have to remain in this pen for another week, but such cases were rare.

Tests made to find out what effect different kinds of feed would have on the color of the yolk of eggs show quite conclusively that in the majority of cases the color is decided by the quality of the food given, but that there are individual hens that will continue to produce either white or yellow yolks regardless of the feed. Pale yolks predominate when hens are fed on milk, wheat, oats, bran and middlings, and yellow yolks when the stock is liberally fed on yellow corn.

It was noticed that eggs with pale yolks were more likely to have less consistency than those with yellow yolks. That is, the pale yolks flattened out when the eggs were broken and the whites of the same eggs seemed to be thinner. Yellow yolks usually stand up round and full when the egg is broken.

Bumblefoot (swellings on the feet of fowls) is generally due to treading on sharp objects, rough ground, etc. It is not contagious, and for years it has been advocated that the pus in the bruise should be removed. This is quite a task and not always successful. During the past year a number of cases developed. Believing that the matter will right itself without treatment, nothing was done, but a careful watch was made of the condition. After the swelling reached a certain stage it began to dry up and kept on growing smaller until all the trouble vanished. Further observations will be made should any new cases develop.

A method of feeding has been tried out which proved very satisfactory. Instead of feeding mash in the morning (allowing an iron spoonful to every two fowls in the pen), nothing at noon, and a full feed (a handful to each fowl) at night, the order was changed as follows: In the morning, grain (scratch feed) was thrown among straw—a handful for every five fowls in the pen; at noon the mash was given, allowing an iron spoonful for every three fowls in pen; and in the evening, an hour before dusk, a handful of grain is given to each fowl in the pen.

Egging Them on To Buy

BY ERNEST L. THURSTON.

John Bartley was developing a poultry and small fruit farm. He had an idea that he could build up a select list of customers in a nearby city. He decided to make his experiment with eggs.

As soon as his White Leghorn flock was big enough and was laying, he made his appearance, one day, in a good residence district. He had with him a crate of eggs of good size, clean, attractive and, above all, genuinely fresh. At each house he left a single egg. Attached to it by a sticker was a little card giving his name, R.R. address and his telephone number. The card also stated:

This Is a Genuine Fresh Egg

Poach, boil, or fry it for to-morrow's breakfast

Then write or phone me an order for a regular delivery of "eggs of the same quality."

City delivery by truck on Fridays

Parcel-post delivery on receipt of orders

My price is the regular retail price for gilt-edge product. This week, 85c doz.

Accompanying this "sample" were an order card to be filled out, and an envelope.

The single distribution of sample eggs brought Bartley enough orders for a real start, and the growth of business quickly took care of all his eggs.

But the eggs simply opened the doors to other products. Whenever Bartley had poultry to sell, or garden produce ready, an order card announced the fact to his egg customers. The goods ordered were delivered on the next weekly trip, or shipped by post or express, if desired. He could market at a moderate retail price and yet realize more than was possible under regular marketing machinery. Satisfied regular customers, of course, brought others.

Bartley found that there was a market for hampers of mixed vegetables, proportioned for family use and sold at a fixed price. He made up a dollar basket which, one week might contain lettuce, beans, tomatoes and corn. With the change of season and of crops, necessarily the contents changed.

Having only one truck delivery day, and using parcel-post and express as supplemental delivery agencies, his own working time on his farm was not so seriously interrupted. On truck orders he required payment on delivery, and on mail orders, so far as possible, in advance, until reliability was established. Where it seemed advisable he required temporary deposits to cover the cost of hampers and of shipping crates. In many cases he persuaded his customers to buy their own containers.

After a time he felt it safe to extend to monthly settlements with some of his established customers. In submitting the periodic statements, however, he always enclosed a self-addressed, stamped envelope.

"Make it as convenient as possible for a customer to pay and he is likely to settle with you first," says Bartley.

Every shadow in life is evidence of a sun somewhere.

THE CHILDREN'S HOUR

What Can One Fellow Do?

"Paul, why didn't you speak out? You do not think Sunday baseball is a good thing, yet you let your club vote for adopting it without saying a single word." Paul's mother looked at him reproachfully after he had told of the action of the club.

"Mother, what good would it have done? What could one fellow do? All the others wanted it, so I just kept still. Of course, I won't go and play in the Sunday games, but I didn't see any use in saying anything. They wouldn't change for one fellow. There's fourteen in our club, you know."

"What can one fellow do?" repeated his mother. "Well, I'll tell you what one fellow did. A little party of English missionaries, three of them, I think, were sitting outside their huts in Africa one hot afternoon. Something stirred in the jungle, and then out into the clearing before the village there crept a line of eighty wretched black people chained together. They were people captured in raids in the interior, and were now being driven by Mohammedan slave traders to the coast, where they would be sold, put on a slave ship, and carried away, never again to see their native village or any of their loved ones. It was a piteous sight. They were weary, faint, sick, yet forced to march on. Many white people of different countries had seen such a sight, and their hearts had grown hot with indignation and pity. But they had said, 'What can one man do against this great entrenched evil?' So they had kept still while the slaves had gone on.

"Not so this little missionary group. One man said, 'We cannot let this thing go on.'

"The others quickly agreed with him. So the three unarmed men went to the slave traders, and in the name of England, they bade them set the slaves free. The traders knew enough of England to realize her power. They did not know how much authority the missionaries might have. So they scattered quickly into the jungle, their guilty consciences perhaps hurrying them on. The eighty slaves were free. They fell on their knees weeping with joy.

"That is what one man did. Two others were ready to help him as soon as he had taken a stand, but so small was the number against a great evil that you can yet call it a one-man job. Every great reform, every great work had its beginning in the mind of one man. Don't be afraid to tackle a job because you are just one, if you are sure the thing ought to be done. Perhaps if you had spoken out, half a dozen other boys might have stood with you. They were like you, they hated to say anything."

"Mother, don't say another word. I'm going to ask the fellows to reconsider the vote at to-morrow's meeting. And I'll say what I think about it. It may not do any good, but at least I won't shirk because I think I'm alone."

"That's what I like to hear my son say," said his mother.

Noticing Things.

A city salesman on his way home about 2.30 one morning, not long ago, noticed an automobile driven past him three times within one block. There are plenty of cars cruising about down-town streets even at that hour, and most persons wouldn't have remarked the repassing car. The salesman did, though, and told a policeman, who caught the drivers of the car in the act of making off with a fine limousine that was parked in an alley about two blocks down the street.

The young man's habit of noticing the things he looked at saved someone about five thousand perfectly good dollars.

The Bible (wise old book) says something about those who having eyes see not, and those who having ears hear not; and it is safe to say that not a day passes in the life of any individual without its opportunities to save time, trouble, or money by seeing what we look at and hearing what we hear.

John Hays Hammond, Jr., tells the story of a mining engineer who was offered a worked-out gold mine for a few hundred dollars. He looked it over and bought it, very, very reasonably. Then men who sold it laughed at him for buying it. It wasn't much of a gold mine. But it proved to be one of the richest lead mines in the world, and put its purchaser in the way of becoming a multimillionaire.

The privilege of seeing and hearing is one of nature's free gifts to the vast majority of human beings. They cost nothing. That is one reason they are not made better use of. If we had to pay our eyes and ears over the counter two or three times a year, like our shoes, and pay taxes on them, we'd probably think more of them. And if the railroads could afford to pay a young lawyer $2,500 a word for the sign "Stop, Look, and Listen" at grade crossings, it ought to be worth at least $12,500 of any man's money to have this newspaper write this mental grade crossing sign for him:

"See, Hear, Think, and Act."

Take it on credit, if you like, and use the money for we know you will have the price some day, if you use the sign.

Saving Hand-Work on the Seed Crop.

So far as available farm help is concerned, we seem to be just as hard up in this community as during wartime. There seems to be plenty of hands loafing around the local towns but these will not work—and, if they would come out in the country, their skill would probably show to best advantage with the table fork. So we have to use every means possible to save hand-labor. Our method of handling the mammoth clover seed crop, may be of interest, and helpful to some.

We take the grain binder, put the canvasses on as for cutting grain, take off the chain that drives the packers and take off one of the packers. The other packer will then drop down out of the way. Take off, also, the trip that regulates size of bundles. This leaves nothing in the way to stop or shell the seed. The clover will run off in a fine windrow which will not be in the way of the horses or binder on the next round. We find that by cutting in the forenoon, or afternoon, too, when the clover is not bone dry, we shell less seed than by any other method. The binder cuts faster than the mower. The saving in hand-labor comes in the bunching. For this we take one horse on a dump rake, drive him between two windrows, and rake up two rows at once in as neat piles as possible—doing this, of course, when the seed is a little damp. Then to turn the seed so as to dry the under side we take the rake and go over the seed just the opposite way and tip the piles over. This makes the piles more compact, as well as turning another side to the sun, and thus the seed is ready to be loaded for hulling without touching it with a fork.—C. S. Langdon.

Greenhouse Insects.

All plants whether grown indoors or out are subject to the attack of destructive insects. From Bulletin No. 7, dealing, as the title implies, with "Insects Affecting Greenhouse Plants," prepared by the Dominion Entomologist, Ottawa, and the entomologist in charge of Fruit Insect Investigations at Vineland, Ont., we learn that the crops commercially cultivated under glass in Canada cover a space of six million square feet of glass and in 1920 were estimated to be of upwards of three million dollars in value. In dealing with pests of this kind, growers are advised to notice how the insects feed, as by that way the proper remedy to apply can be ascertained. Insects are divided into two classes by the nature of their attacking facilities. One class such as caterpillars bite and chew their food, and the other by means of their beaks, such as the aphids, the true bugs, the scale insects, etc., suck up their food. If the insect bites, a stomach poison such as a solution of arsenate of lead is usually applicable, but for sucking insects contact insecticides are recommended, such for instance as preparations containing tobacco. How deadly and populous these insects may become is exemplified by the fact that an expert declares if the progeny of a single rose aphid were allowed to survive in three months, it would equal in weight seven times the teeming population of China. Consultation of the bulletin referred to will impart a vast amount of minute information on the subject dealt with.

Advanced Poultry Records.

So far as egg production is concerned, British Columbia ranks as the banner poultry province, according to Report No. 2 of the Record of Performance conducted by the Poultry division of the Dominion Live Stock branch. The University of British Columbia makes the best showing of any institution or breeder. In that province last year 100 Leghorns, 25 Plymouth Rocks and 47 Wyandottes qualified for advanced certificates that are granted for birds that lay over 225 eggs in the 52 weeks. The highest Leghorn record was 297, laid by a bird owned by the Old People's Home, Vancouver. The Plymouth Rock record was 281, laid by a bird owned at Courtenay. The Wyandotte record was 293, laid by a bird owned at Langley Prairie. Ontario had 44 Leghorns, 11 Plymouth Rocks, and 18 Wyandottes in the advanced class, the best records being: Leghorns, 282, laid by a bird owned at Richmond Hill; Plymouth Rocks, 277, laid by a bird owned at Kitchener, and Wyandottes, 254, laid by a bird owned at Stony Creek.

Canadian Cattle Prices in Britain.

While Irish bacon still retains its position in the British market Irish cattle do not seem to be doing so well, probably owing to the disturbed state of the country. The Dominion Live Stock branch reported Irish beeves selling at from 159 shillings to 167 shillings the long hundredweight, Danish at from 148 to 152 shillings, Canadian at from 136 to 140 shillings and United States at from 115 to 120 shillings. On the other hand Canadian cattle commanded as high as 14c a pound, live weight, and Irish at from 10½ to 12½c. Prime Scotch ranged at from 16½ to 17½c.

Regarding wool the Live Stock branch reports said the spring rise was being maintained and that a keen interest was being shown in Western products.

Says Sam: Nature never intended an eight-hour day for farmers, but she sure'y insists on an eight-hour night.

Clay Soils and Their Management

Of all the various types of soil to be found, none when properly handled are more productive than the heavy clay. The very fineness of these soils gives them a large water-holding capacity, which will adapt them to the production of small grain and grasses.

The management of these soils presents special problems for consideration. Their fineness gives them a tendency to bake and to require more than the usual amount of labor in cultivation. The lack of sufficient surface or underdrainage, makes them cold and wet in the spring, and when there is a lack of vegetable or organic matter, they are hard to work and less productive.

The methods of treatment here discussed are based on the results of field demonstrations and observations made on the Dominion Illustration Stations in Quebec, New Brunswick and Nova Scotia. One of the great drawbacks with this type of soil is the fineness of the soil particles. To offset this condition, the farm practice should be so arranged that the operations will systematically open up and make these soils more porous. Special attention must be given to the time and type of plowing and cultivation. Heavy clay soils should be fall plowed when the moisture content is right. If worked when wet, they are apt to puddle and bake. While it is necessary to plow these soils deeply, the depth should be lowered gradually. The early working of these soils, in the spring, is most important. This cultivation should commence as soon as the proper moisture condition is reached, but never when the soil is at all sticky. By passing some wide implement over the land, such as a drag harrow, the surface soil will be loosened and crumbled sufficiently to prevent it from baking into clods. This will check evaporation and maintain the proper moisture condition for a longer period.

Clay soils are generally wet and cold because the water in them is constantly evaporating, and evaporation is a cooling process. It is the coldness of a poorly drained soil as well as the excess water that it contains that is responsible for the unsatisfactory growth of crops from them. Drainage carries off this surplus water by permitting the excess water to leave, and when there is a lack of vegetable or organic matter, for this purpose the drain should be taken that the floor upon which the animals rest and the gutters behind are sound and liquid tight. Sufficient litter or bedding material should be used to take up all free liquid. Straw, dry sawdust, fine shavings, peat moss, muck and peat where air dried, all make good absorbing bedding. "Haul the manure to the fields day by day from fall-to-spring," is sound advice.

Farmyard Manure.

Manure improves the physical character of both heavy and light soils and therefore is of considerable value to all farmers. At the same time no farm product is more variable, the composition and value depending upon many factors. Among these are the kind, age, function and food of the animal producing it, the quantity and care taken in its production and preservation. Experiments made by the chemistry division of the Dominion Experimental Farms show that the liquid part is much richer in those desirable and valuable elements, nitrogen and potash, than the solid excreta, weight for weight and, second, that more than one-half of the nitrogen and at least three-fourths of the potash excreted by the cow are to be found in the urine. Hence the importance of a concrete or impervious flooring to cowsheds or stables and ready means for removal.

Pure-Bred Lambs the Most Valuable.

Good pure-bred ram lambs are in constant demand, and should, as the Dominion Animal Husbandman advises, be kept for breeding. Inferior pure-bred rams and all grade ram lambs should be castrated early and finished for the block. The principal markets discriminate against unaltered ram lambs and against unlocked lambs. The wise feeder realizes that greater and cheaper gains follow these simple operations. The well-bred lamb showing plenty of constitution and thrift and weighing from 60 to 80 pounds is the best stocker lamb to put into winter quarters. Lambs weighing from 80 to 100 pounds may be put with profit in the feeding lot for a short finish, especially if good fall pastures are available, but the finished heavy lamb, running from 90 to 110 pounds, should never be purchased for feeding purposes.

Sheep Notes

When lambs which should be thrifty do not thrive, scour badly and gradually die, they are probably suffering from worms. For this the use of copper sulphate has proven very effective. Before treating, the sheep should be shut away from food for twenty-four hours. Then give doses of one ounce of copper sulphate dissolved in two quarts of water as follows: For a three-months-old lamb, two-thirds of a fluid ounce; for a six-months-old lamb, one and one-half fluid ounces; for a mature sheep, three and one-half fluid ounces.

The copper sulphate for this purpose should be of a uniform blue color and the weights and measures should be accurate. Have your druggist weigh the blue stone, and also have him graduate the drenching bottle by marking the doses with a file. Do not allow the sheep to have access to water for several hours after dosing.

Spraying for Potato Bugs.

In the control of the Colorado beetle it has been found that Paris green is the poison which will give quickest results, but the disadvantages in its use are that it will not stay in suspension in water very well and may cause damage to foliage of tender plants, even the potato plant when applied too strongly. Calcium arsenate acts less violently and is less dangerous with reference to foliage injury, but it also kills the insects more slowly. Arsenate of lead acts still more slowly, but is very safe for plants which are susceptible to foliage injury.

It doesn't hurt to take advice; one is not obliged to use it.

Spraying Brought Better Potato Yield.

An increased yield of thirty-four bushels of potatoes per acre was obtained on 200 acres by spraying with Bordeaux mixture. Farmers who sprayed their potato plants five times cured an increase of forty-four bushels over the yield from the unsprayed patches. Hoppersburn may not be as harmful to the potato plants this year as it was last, with high temperatures, but good insurance even if it gives the growers only a fraction of this increase.

We seek better farming that we may have better farmers; we aspire to greater material resources that we may add to the abundance of human resources. The final term in the whole country-life enterprise is the farmer himself.

Parents as Educators

Table Talkers—By Lydia Lion Roberts

Meal time, parents and children can be an interesting combination, but will not be unless especially prepared for by the mother. Why not make it one of the pleasantest times of the day and teach the children at the same time to take their part in conversation with sense and dignity? This can best be done by making it the time to tell the pleasant things that each one has seen, heard, done, or read. Enforce a rule that nothing disagreeable shall be talked over at meals,—this is not good for digestion we are told, and as gossip, horrible affairs, nor cross words should be allowed.

Even little children can learn to relate about the picture they liked, the funny story the teacher told, the dog that wagged at them on the way home, and any little detail of cheery, happy days. Daddy could tell of the people he met, of anything he saw made or done in an unusual way, and relate stories of "when I was a boy."

Mother could talk about the people who had telephoned, or been to the door, the books she had read or heard about, the stories of when grandma was a girl.

In the morning no bad news from the paper should mar the meal. The occasion would be a merry one, and everyone would feel better and brighter if we all learned to be the right kind of table talkers. It is never too early to begin with the children. Even a baby will react to smiles or frowns, and good, cheerful talk breeds kind, thoughtful deeds.

Value of Steadfastness

Some time ago I heard one of the great preachers impress the lesson of steadfastness and since then the word "steadfast" has had a prominent place in my mind.

There is great value in that word for it brings to mind the need of aims or purposes in living and working. We must have more than one purpose in life, as living involves many activities. These include a moral purpose, a financial purpose, and an occupational purpose.

Moral steadfastness is obtained by following the great moral laws which we all should know well. A financial steadfastness means a definite plan of handling our financial resources. If we have that, we are not enticed by the glittering offerings of proficient talkers.

In farming, steadfastness means a farm plan, a crop rotation, a definite live stock program or an endeavor to attain a certain standard of perfection in quality for your fruit and other farm products.

Steadfastness means you have decided on the port you want to reach, you've set your rudder and you are sailing directly toward that port.

There is steadfastness in virtue but not in vice; in well-earned prosperity but not in poverty; in good farming but not in careless soil robbing. Steadfastness gets you somewhere; the lack of it gets you nowhere.

The Most Effective Fertilizer.

It is always wise to look to the future, and as barnyard manure is the most effective and cheapest of all fertilizers, this is the time when the live stock is mostly out of doors, to see that arrangements exist at the barn for handling the manure and for applying it to the land in its most serviceable state. The Dominion Chemist points out that except for weight the liquid manure, except in the case of the pig, contains much higher percentages of nitrogen and potash than the solid excrement, and is in an immediately available condition for crop use; hence it is important that it should be retained. For this purpose care should be taken that the floor upon which the animals rest and the gutters behind are sound and liquid tight.