Soils and Crops

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NEGLECT IN THE SUMMER CUTS WINTER EGG PROFITS.

Hot days and sultry nights bring their own problem to the poultryman, whether he be operating on a commercial scale or managing a farm flock. The birds require different care and different feeding during the hot days. The old hens must be kept on the job and the young stock will have to be given every encouragement if they are to do their best next fall and winter when prices begin to come up. Much has been said of winter care, but winter care is much more difficult if your stock goes into winter quarters weakened by summer neglect.

THE TIME TO CULL.

This is the time of year to get rid of the cull hen. Culling can be done at any time, but the amateur will find less trouble at this time of year. The spirit of spring, with its flush season for eggs has passed rapdily into summer slumps. Summer slumps may be caused by two factors: First, poor feeding, and secondly, the inability of the individual hen to stand the strain. In other words, the constitutionally weak, the mentally disinclined, and physically unfit, should be doomed to slaughter. Time and space will not permit an extensive article at this time on culling. A few of the high points might be enumerated. The big beefy hen with the chuckle head, yellow shanks, new plumage and a mass of hard fat stored in the egg sack region should be given carfare to market. Small, undersized, crow-headed, round-bodied types showing lack of vitality and vigor should also be let go. Keep an eye on the busy, industrious biddy who sings all day and wears no yellow pigment in her shanks. She is a most docile and friendly individual, always looking for something to eat. Her plumage may be dry and hard, and possibly broken, but she will be out-doing her more "dressed up" sister of leisure. Note when you handle her, the spread in the egg sack region, indicating ovarian activity. The deep, long ribs, the long, broad, level back, the clean-cut head, and the hard, close plumage. These are all earmarks of heavy production and "laying type."

LAYING-HOUSE CONDITIONS.

Conditions in the laying-house are apt to become very bad in summer. A hot, stuffy house, odoriferous with the gases from heated manure, and in every chink and crack a nest of mites is not at all conducive to health and production.

It may be difficult to ventilate some houses properly to maintain a sweet-smelling condition, but frequent cleaning will aid greatly in maintaining a healthy atmosphere. In most houses adequate summer ventilation can be secured by keeping all windows wide open and if windows are opened under the dropping board on the north side will aid materially in keeping the house cool and provide air circulation. Care must be taken to have all openings covered with wire netting to protect against skunks, weasels, etc. This precaution will also aid materially in preventing infestations of mites by keeping the sparrows out. Sparrows usually harbor and carry mites and if allowed to frequent the poultry house and build nests they are sure to be a source of vermin. They also devlop a mania for visiting mash hoppers and feed bins. In this way they will materially reduce profits and are very apt to be carriers of disease organisms from infected flocks and yards.

Mites and lice reduce the vitality of stock and interfere with production. These two common pests vary in their habits and must be dealt with accordingly. Mites live in cracks and crevices, about the nests, roosts and dropping boards, attacking the hen during the night while she is on the roost or during the day while she is on the nest. Mites may be detected by the characteristic "pepper and salt" appearance on the roosts and about the cracks and chinks. This is caused by excreta from the parasites. They are described as both gray and red mites. In reality, however, the gray mite is usually the same animal before breakfast. After his meal of good hen's blood he takes on a reddened appearance due to the blood in the body. A characteristic odor accompanies bad infestation and one can soon learn to recognize them and detect their presence in that way. Using louse killer on the birds will have but little effect on mites. They can be readily controlled, however, by using a good insecticide on the roosts, nests, dropping board, etc. The writer has found waste oil from the crank case of the automobile or tractor to be a very efficient and inexpensive mite control. Everyone has some at hand or can secure it from a local garage for a small sum. The roosts, nests and dropping boards should be thoroughly painted with this oil. Kerosene will have a killing effect but evaporates very quickly and has to be applied more often. There are on the market many wood preservers, coal tar by-products and other patent preparations which may be used with equal satisfaction.

Body lice can best be controlled by treating with sodium floride. This is most easily applied dry. There are two common methods of using it in the powder form.

The Pinch Method—The bird is held by the legs and pinches of the powder dusted into the feathers about the vent, in the loose fluff feathers and along the body feathers extending from the thigh forward.

The Shaker Method—This is similar to the pinch method except that a can having a perforated top is used in place of using pinches. This requires much more material and consequently it is frequently diluted with some fine substance such as flour or flowers of sulphur.

Dip Method—In addition to using the sodium floride as above, it is sometimes used as a dip. This requires more labor but is a thorough method of cleaning up a flock. A warm sunny days should be chosen and the work done during midday to give the birds a chance to get dried off before going to roost. This practice is rapidly becoming more common among poultrymen as they are overcoming a fear of wetting the birds.

Beach and Freehorn give the following directions for making the dip: "The solution should be prepared in a wooden container, avoiding contact with galvanized iron. The ordinary wooden wash tub is excellent for this purpose. One ounce of commercial sodium floride, or two-thirds of an ounce of the chemically pure salts should be dissolved in each gallon of tepid water. The best method for dipping the birds is to hold them with the left hand by both wings. They are then placed feet foremost in the warm dip and submerged until only the head remains above the surface. They should be held in this position for twenty or twenty-five seconds, while the feathers are ruffled to permit penetration of the liquid. Just before removal the head should be ducked under the surface. Hold the birds above the tub for a few minutes to allow them to drain. One hundred birds will use up approximately five gallons of dip on which basis material should be available at the start of the operation to keep the dip replenished.

SUMMER FEEDING.

During the long warm days our ration can be changed quite materially from the one used during the short cold ways of winter. The hen no longer requires an abundance of heating food. There must be supplied in quantities sufficient, however, to maintain body weight. She does require, however, a liberal feed of mash and animal protein to keep up production.

If the houses are warm, put the mash hoppers out in the shade where the hens will consume more. The standard mash mixture is used for summer feeding, consisting of equal parts ground oats, ground corn, bran, middlings, and meat scrap. Sour milk or buttermilk may be used to replace about one-half of the meat scrap. The birds make excellent use of such dairy by-products.

The grain mixture may be slightly changed, reducing the quantity of corn in favor of a little more wheat. The quantity can be materially reduced. We usually recommend feeding about seven pounds per day to one hundred hens at this time of year. This will tend to increase the amount of mash consumed. A moist mash fed at noon will also tend to increase mash consumption and aid in holding production up.

Do not forget green feed. So often when the hens are out we neglect the green feed. If they have access to a good alfalfa pasture or some green annuals as rape or oats, they will fare very well. However, during midsummer the green supply from grass runs low and it will pay you to find some supplementary greens. Sprouted oats are excellent and can easily be grown in summer. Rape makes a good summer feed, but must be fed in small quantities as it is very apt to cause "green" or "dark" yolks. Chinese cabbage sown about August 1 makes excellent greens for fall feeding. Give hens in confinement a feed of greens the first thing in the morning and again in the forenoon, and also in the afternoon during the hot weather. They enjoy salads for summer rations just as much as we do.

During midsummer the water supply becomes warm and stale. You will be repaid for the trouble of frequently changing the water. Keep the pans clean, and particularly when milk is being fed. Foul drinking dishes are not conducive to good health and the birds will drink more water if it is clean and cool. Remember, eggs are 65.9 per cent. water.

The old straw stack moved back to the field and spread evenly will pay bountifully for your pains.

The new dairy building provided by the Province of Ontario at the Agricultural College, Guelph, is being fully equipped for experimental work. Not only will scientific investigation be undertaken in connection with cheese and butter making, but attention will be given to powdered milk and ice cream production, as these industries are growing in importance and proving remunerative to Ontario dairymen.

THE SUNDAY SCHOOL LESSON

AUGUST 26

Barnabas the Great-Hearted. Acts 4: 36, 37; 9: 26-30; 11: 19-30; 12: 25; 13: 1 to 15; 12: 35-41; Gal. 2: 13. Golden Text—He was a good man, and full of the Holy Ghost and of faith.—Acts 11: 24.

LESSON SETTING—This week we study the life of another of the great characters of the early church. Barnabas is translated to mean "The son of consolation." Moffat translates it "The son of encouragement." The life of Barnabas fulfils both translations. He had a discerning mind and a warm heart.

I. BARNABAS OFFERS A GREAT GIFT, ACTS 4: 36, 37.

Vs. 36, 37. *And Joses . . Barnabas.* The early church was a sharing church. No one said that aught that he possessed was his own. So much did this spirit prevail that many sold their possessions and laid the price at the apostles' feet. It is to be noted: (1) That this action was voluntary; (2) That it was not a fund for equal distribution among all, but only for the relief of the needy; (3) That it did not necessarily involve the sale of absolutely all personal possessions; (4) That the practice did not extend beyond Jerusalem; (5) That it was evidently an emergency measure. The case of Barnabas is quoted as an illustration of this spirit, and as a contrast to the dishonest action of Ananias and Sapphira. *A Levite.* From Num. 18: 20 and Deut. 10: 9 we learn that the Levites were not allowed to hold land. God was their portion. But evidently this law did not apply to Levites living outside of Israel. *Cyprus;* an island in the eastern part of the Mediterranean sea, where many Jews lived. *Having land;* literally, "having a field." *At the apostles' feet;* signifying that the money was at their disposal.

II. BARNABAS ENCOURAGES A GREAT WORK, ACTS 11: 19-24.

V. 19. *They which were scattered abroad . . Phenice.* The death of Stephen was followed by violent persecution, in which Saul was the leader. But the dispersion of the Christians only means the dispersion of the gospel. Every Christian was a witness in these days. Phenice was a strip of country north of Palestine and bordering on the Mediterranean sea. Tyre and Sidon were in this district. Jesus made one visit to the locality, Matt. 15: 21-27, *Antioch;* still farther north on the same coast. It was the capital of the province of Syria. Paul's three missionary journeys had their beginning here. *Preaching to none but unto the Jews;* partly because the refugees would naturally live among their own countrymen, but principally because the world-wide significance of the gospel only dawned through the gradual turn of events, and the leading of the spirit.

Vs. 20-22. *Some . . spake unto the Grecians;* not Greek-speaking Jews, but Greeks who were Gentiles and pagans. These preachers of the word, having lived in Cyprus or Cyrene in Africa were naturally more in touch with the Gentile world and were not possessed by the strong prejudices of those Jews who had been brought up in Palestine. *The hand of the Lord was with them.* God blessed their preaching. *The tidings . . came unto the ears of the church . . in Jerusalem.* The news of this great response of the Gentiles to the gospel came to Jerusalem, which was naturally the religious centre of the new faith. The question of the Gentile convert to the Jew and the Jewish law had not yet become an acute one, although we find that Peter's action in eating bread with Cornelius and his friends, after having bajtized them, gave rise to serious debate, Acts 11: 1-18. Peter defended himself by telling of his vision in Joppa. *Sent forth Barnabas.* The church in Jerusalem sent Barnabas to look into the movement and give it direction. It was a wise selection they made.

Vs. 23, 24. *When . . he came . . was glad.* When he saw the reality of the faith of the new converts, he knew that the spirit of God was at work and rejoiced at it. *Exhorted them all.* Barnabas knew well the great temptations to which Gentile converts would be exposed. It would require grace to hold to the new faith. *He was a good man.* The character of Barnabas is described in the same words as that of Stephen. The words of Barnabas had weight, as coming from a representative of the mother Church in Jerusalem, but his real power came through his character and his spirit-filled life. *Much people was added.* A new impetus was given to the work of grace.

III. BARNABAS BRINGS A HELPER, ACTS 11: 25-30.

Vs. 25-28. *Then departed Barnabas to Tarsus;* whither Saul had gone for safety from Jerusalem. *Brought him unto Antioch.* Barnabas sees that Antioch is a great field for Saul. *A whole year;* during which the friendship between Barnabas and Saul would grow. *Called Christians first in Antioch;* doubtless a nickname given by the heathen population. *Agabus . . great dearth.* He foretells famine. History confirms this prophecy. This same prophet foretells the imprisonment of Paul in Jerusalem, Acts 21: 11.

Vs. 29, 30. *The disciples . . determined . . to send relief;* a proof of the fine spirit of the church in Antioch. The action was unanimous. The burden was fairly divided—every man according to his ability. The action was unselfish—"unto the brethren in Judea." The action was timely, being done at once. The action was completed—"which also they did." *By the hands of Barnabas and Saul.* It was the visible fruits of their ministry.

APPLICATION.

The Golden Text gives a brief characterization of Barnabas, which is very interesting, because it is very Christian. There are many ideals set before men in the world's literature, and some of them are in direct contradiction to the Christian standard. Barnabas may almost be taken as the Christian ideal, "a good man, and full of the Holy Spirit and of faith." There is usually much restraint in the sacred writers, no fulsome eulogy. The facts are stated, and speak for themselves. Luke, however, sometimes seems to take us right into the confidence of the disciples, and lets us know what he and they thought of some of their great-hearted comrades. We are thankful for as much as we know about Barnabas.

In the Acts after the Day of Pentecost Paul is a dominating figure. His missionary journeys and his experiences take all the latter part of the Acts, and his Epistles constitute a large part of the New Testament. But in Barnabas we have a man without whom we might never have had Paul. Barnabas is notable for that, as well as for his own admirable Christian graces. Much of the character of Barnabas as exemplified, is disclosed in his relations with Paul.

Moralists have spoken of the great, valuable things of the spirit as the True, the Beautiful, and the Good. Some are apostles of one, others of another aspect of the perfect life. Not exclusively, however. Ruskin, as an art critic, continually wrote not only of the beautiful, but also of the true and the morally good. Stephen, whose life we considered last Sunday was perhaps the apostle of the truth—read the sixty verses of the seventh of Acts—and Barnabas was preeminent in the impression he made as to his goodness.

What is goodness? One answer that at any rate gives something of the truth is that goodness is something of absolute moral worth that commands our conscience and reason. A good man is one who is not unworthy of Jeremy Taylor's fine phrasing, "a mind apt to noble choices, and a heart capable of a mighty love." Such was Barnabas.

His noble choices and his mighty love are set forth by Luke in the Acts.

Live Stock Markets.

An important paragraph in the review of the present situation of the cattle trade by the Markets Intelligence Service of the Dominion Live Stock Branch reads: "The strongest demand on the market is for neat weight stock of good killing quality, and this condition may be depended upon to continue during hot weather. Heavy supplies of soggy grassers will break the market. Caution in liquidation with particular attention to season conditions, is strongly advised. Midsummer demand is mostly for small meats, but, in view of scarcity, a good outlet overseas and strengthening United States markets on choice and good heavyweights, such cattle may be depended upon to strike good levels. The excellent condition of pastures, the good prospects for grain, hay, and fodder crops should suggest a policy of operation in which full finish and a judicious carry-over are the main issues. There is nothing in the general situation to negative the belief that the beef market is well on the road to recovery. The usual autumn depression is of course inevitable, but the degree of it depends entirely on the general policy pursued. Those who take note as to seasonal conditions of markets will probably benefit."

Relative to hog prospects the reviewer has this to say: "Our latest cable advices from Great Britain are in more optimistic tone than early in the month (June), and hopes are entertained of a sharp reaction to prices. Producers are advised to get their hogs in good finish and to sell subject to official grading, which will give them the benefit on select stock. The majority of the Canadian packers are now purchasing on the basis of the new standards, and producers should see to it that their hogs are so bought at country points."

As to sheep, a short supply led to the market holding up well, and on Eastern markets at the end of June the average price was well above that for the corresponding month last year. Western prices, however, were not as strong, but supplies were generally so meagre as to prohibit the establishing of a market. Heavy sheep were somewhat hard to move. Choice lambs weighing not above 75 lbs. are the choice of the market and good prices are forthcoming for such stock. From eighteen to twenty dollars per hundred pounds was no uncommon price for choice lambs during June. Light stock is always preferred, especially in hot weather.

Simple Canning Recipes.

At this season of the year when there is a demand for information as to canning, drying and storing processes for fruits and vegetables, the booklet of recipes issued by the Dominion Fruit Branch will be useful to many. The recipes are not only simple and practical, but their reliability has been tested by leading authorities. The booklet is available, free of charge, to those who apply to the Publications Branch of the Department of Agriculture, Ottawa.

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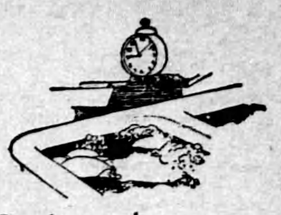
Use enough to get a big lasting suds



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COMMON SENSE ABOUT GERMS

A reader of a thoughtful turn, would like a little light upon the germ theory of disease. If germs are so very deadly, and if they multiply so fast, how is the human race saved from extermination, she asks. She would also like to know what common sense tells us to do about germs.

The fact of the matter is that disease germs, dangerous though they are, do not have everything their own way. They are not very long lived. They cannot exist unless they find suitable soil. They must have proper degrees of temperature and moisture. They are blasted by the breezes of the atmosphere and withered by the bright rays of the sun. If every single disease germ proved fatal to every person attacked the result would be a speedy end to the human race. But disease germs must attack in force to be effective, they must find a non-resistant soil, and even then the human body will generally destroy them after a resistance that we speak of as an "illness."

I think it is safe to make the broad statement that germs from the body of a person in health will do no harm to other persons. It is true that even a healthy person carries constantly germs that are capable, under certain conditions, of creating disease, but while the body is in health they lack virulence.

There is one great exception, and that is in the bodies of persons who are "disease carriers." These "carriers" are those who had had a disease, such as typhoid fever or diphtheria, have recovered from it so that they are immune to its germs, but for some reason still harbor the live germs in their bodies, and are capable of passing them on to other persons in such a way as to transmit the disease.

I do not think that harmful carriers are so very numerous, but there are enough so that I feel sure that all persons employed in dairies, in bakeries, in restaurants, or in the production or preparation of any food supplies should be regidly questioned as to their previous illnesses and a physical examination made to determine their safety to the public.

Just as the human body in health is perfectly safe to others, the same body in contagious illness is actively dangerous to others. The germs that rest in the mouth and throat harmlessly during health become active for evil when health has given way to illness. Most of the spread of contagious disease comes from a well person coming in contact with one who is ill with the disease.

I will sum the matter up by saying: Don't bother about germs so long as you are in good health. In case of illness quarantine yourself until you know that you cannot spread contagion. Avoid actual contact with persons who show symptoms of contagious disease. That's all you can do. Don't worry.—Dr. C. H. Lerrigo.

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