

# DANGER SIGNALS IN THE POULTRY FLOCK

BY RALSTON R. HANNAS.

A certain number of hens will die in spite of everything that can be done; some diseases or troubles will occur that cannot be discovered until too late. This normal mortality amounts to about 12 per cent. of the entire flock in a year.

On many farms, however, the percentage of mortality is much higher than this.

Let us see how this loss runs into money, taking a normal mortality of 12 per cent. in a flock of 500 birds. This means a loss of sixty birds in a year—worth at least two dollars each when they start laying. Often they are worth more, pedigreed birds much more. This means that \$120 has been lost in stock.

But these birds would have laid eggs had they lived. Let us suppose that they would have laid ten dozen eggs apiece had they lived the entire year. However, as some died early and some late in the year, we may safely call the lost production five dozen per bird.

At an average price of thirty-five cents per dozen—which is low for some sections—the loss in eggs is 300 dozen, or \$105. This makes the total loss \$225, or forty-five cents per bird on the basis of 500 birds.

A higher death rate cuts deeper into profits.

There is a further loss to consider in flocks when the rate of mortality is above normal. This is because a disease or a combination of diseases may be present which may not cause many more deaths but which may so affect the birds as to lower production materially. This is especially true of chicken pox, which causes an annual loss of \$2,000,000 in one state alone, due largely to loss in egg production.

There are various danger signals which show that the flock is not in such good condition as it might be and that trouble threatens.

First of all is underweight. If birds die, their condition of flesh should be noted particularly. When found to be very thin or emaciated, the remainder of the flock should be gone over, or at least part of it, to see if this emaciated condition was the result of the disease or trouble that affected the birds that died, or is an indication of the condition of the flock as a whole.

Handing a number of the birds, noting especially the condition of the flesh on the breastbone, will give a good idea of their health, for if a bird is out of condition in this respect she is also out of condition in other respects.

This condition may be remedied by heavy feeding of grain. It is unwise to feed so much grain that there will be a great deal left over on the floor after each feeding. If, however, the birds will not eat more grain than they have been accustomed to getting and we wish to induce a greater consumption, a wet mash will be given, corn meal and semisolid buttermilk.

A dull and listless appearance is another indication that something is wrong. This will generally accompany underweight, though not always. Here again the trouble may be in the feeding. If the birds are in good flesh, overfeeding may be the trouble. The quality of the feed may not be what it ought to be—for instance, if there are a good many hulls in the droppings, this may indicate that the ground oats may contain too many hulls and a good deal of food is passing through the intestines together with the hulls.

WHEN A TONIC HELPS.

This latter trouble can easily be remedied by getting finer ground oats if possible, or eliminating them entirely, substituting rolled oats in their place. In this case, probably not the same quantity of rolled oats need be used as of ground oats—perhaps one-half, perhaps two-thirds.

A dose of Epsom salts, followed by the use of a wet mash for a couple of weeks, will help to bring the birds around again. It may be advisable to give a tonic in the mash also, if the birds are in good condition of flesh, otherwise wait until they put on more flesh before giving the tonic.

A good tonic is this one recommended by Pearl, to be given at the rate of two tablespoonfuls to ten quarts of mash:

One pound of powdered gentian, one-half pound of pulverized iron sulfate, one-quarter pound pulverized ginger, one-quarter pound pulverized saltpeter.

Of course a number of mortalities at one time indicates that something is wrong somewhere. But don't wait until the deaths occur to diagnose the trouble. Try to forestall it.

Frequently during the cold and raw days of late fall and winter, the birds will stand around all hunched up and many will stay on the roosts, giving every indication of being cold. In this case there is something wrong in the house. It may be too shallow for winter use; the ventilation may be poor; windows near the floor may be open too far, causing drafts; the length of the pen may be too great without sufficient break or partition in it, causing drafts.

Make the house warm and comfortable. Perhaps all windows near the floor should be kept closed all winter. Perhaps it will be necessary to keep the muslin curtains down all day during the cold weather, or they may be raised just during the middle of the day. If the pen is more than twenty

feet long, it may be advisable to build a solid partition from front to back every twenty feet, breaking up drafts. It may be necessary to plug up cracks in the side or rear walls of the house, or repair leaky roofs.

Birds will not lay if they are cold, and if they are not living under poor conditions colds and lowered vitality may result.

Often in winter, especially in early winter, before the birds have found their laying stride, they will be in excellent condition and will look as though they ought to be laying at 50 per cent. rate, when, as a matter of fact, they will be laying only at 10 or 12 per cent. rate. It is at this stage that they need a slight toning up.

This may take the form of a wet mash containing milk, fed once a day, just about what they will clean up in about fifteen or twenty minutes; or they may be given alone; or a tonic, such as I have suggested, may be given for ten days.

The wet mash, however, is the best method, as more of the dry mash is consumed by this method. The dry mash, of course, is kept before them all the time in addition to giving them the wet mash.

It is likely that many of us fail to recognize the danger signal that lies behind many of the so-called normal deaths. Inspection of a number of the birds still living may show that a majority are in poorer condition than was supposed. It may show that the individual or individuals that died were weak ones and that the flock as a whole is in good condition. But it is worth while to make this examination and either learn the worst or be reassured.

## Do Not Pick Fruit Too Soon.

The best date for picking fruit varies greatly with the fruit, with one's distance from the market and with the type of trade to which one caters. But there are some fairly important advantages in leaving the fruit on the trees just as long as possible. The three most important advantages are that the fruit usually increases very decidedly in color, in quality and in size.

The last of these three, size, we rarely hear mentioned in discussions on this subject, and yet it is decidedly worthy of consideration. With early fruits in particular, where one is in a hurry to get the stuff on the market to catch the high price which is apt to prevail the first few days of the season, the temptation is very strong to pick early. Yet it is quite possible that in this single item of increase in size we might, by deferring our picking, gain in the added quarts or bushels far more than we lost in the decline in price.

I recall the case of an apple grower in the Annapolis Valley, Nova Scotia, who one season picked some of his Gravensteins for an early shipment to the English markets. He went over all his trees, selecting the largest and best-developed specimens. He thought he was doing quite a stroke of business in thus getting on the market early when the price was high.

There happened to be a half barrel of these early picked apples left over in the packing house, and when, later on, the balance of the Gravensteins were harvested at the normal time, he was surprised to find that his early stuff, though it looked fairly good at the time it was harvested, did not average more than half the size of the fully matured apples.

In other words, he had cut that part of his crop in two by picking early. And though he gained considerably in price, he did not by any means double the price.

If we add to this gain in quantity the fact that we are almost certain to get better color, and with most fruits improvement in quality, the case is fairly strong for deferring the harvest somewhat.

On the other hand, we must not overlook the probable losses from drops, if we delay too long, nor the certainty that if left till it is over-ripe the fruit will arrive on the market in bad condition.—F. S.

## Banding the Tree.

In Pamphlet No. 47 of the Dominion Dept. of Agriculture, Mr. J. J. de Grysse of the Entomological Branch deals with the banding of trees to prevent insects crawling up. The simplest method, he says, is the application of some sticky substance in bands about four inches wide around the trunks at a height of 6 or 7 feet from the ground. The most commonly used preparation is known as tree-tanglefoot and can be bought in seed stores.

A home-made material can be prepared by mixing resin and castor oil. In warm weather the proportions should be five pounds of resin and three pints of castor oil, but in cool weather five pints of the oil should be used. The resin and oil are together slowly heated until the resin is melted. The mixture is then stirred and allowed to cool, when it is ready for smearing on the bands. The bands should be renewed or thoroughly combed whenever their effectiveness is lessened by clogging with dust, sand or the bodies of insects.

For forming flesh, it takes seven pounds of skim-milk to equal one pound of lean beef.

## Sanitary Aspects of Farm Water Supply.

It is a well-known fact that with the introduction of public water supplies in cities and towns which had previously been dependent on domestic wells, the death rate from typhoid fever, the most serious of water-borne diseases, has decreased to a remarkable extent.

In our country districts, however, where the scattered population makes the establishment of a public water supply system impossible, the farmer is forced to depend upon his own domestic source, which is, in most cases, the shallow well. That such a well can be a source of positive danger from typhoid, dysentery, diarrhoea and other disorders has been amply proven, but still many farmers do not realize fully the importance of a pure unpoisoned water supply, or the danger to their families and their stock lurking in contaminated water.

The location of the farm well is frequently faulty and denotes a lack of knowledge of the danger to health from water when there is any chance of drainage or leakage from such sources of pollution as barnyards, cesspools, privy, manured fields, sink drains, etc. Not only should the well be placed at a reasonable distance from such sources of filth (say 40-50 yards), but also, if possible, on higher ground. The more porous the ground, the greater should be the distance from any contaminating source.

Even when the well is removed from any source of pollution, the ground water should be made to filter through at least 12 to 15 feet of soil before entering the well. Soil tends to remove germs and impurities from surface washings. The water, however, should be made to really filter through the soil by insuring that the sides of the well, for a depth of 12 to 15 feet are tight and impervious to water. The top, naturally, should be so constructed that no contamination can possibly enter.

Water may be seriously polluted without showing this by its taste or appearance. A bright, sparkling water is by no means a guarantee of a pure supply. When however, water from a well becomes cloudy or turbid after a heavy rain there is evidently some defect for this condition indicates that surface washings are entering without proper filtration.

The Division of Bacteriology and Chemistry at the Central Experimental Farm will analyze water samples submitted by farmers living within a reasonable distance. Application for instructions as to taking the sample should first be made.

## Worms in Hogs.

N. D., Bruce County, writes: "My hogs are evidently suffering from worms. Can you suggest a remedy?"

Ans.—For this purpose, after experimenting, the Dominion Animal Husbandman recommends oil of chenopodium because, he says, of its penetrating character and destructive properties with regard to parasitic infestations in the intestines and lungs. For an adult the dose is one-half ounce, or a tablespoonful, mixed with the feed. Because of the objectionable odor of the oil the pig should be starved before administering. The dose for young pigs five weeks old is half a teaspoonful. They too must be made hungry. Sows should be treated three weeks before farrowing and again three days before, with the tablespoonful dose.

Ground pumice-stone mixed to a thick paste in sweet-oil is an old reliable polish for the horns and hoofs of show cattle.

## THE AFTER-SCHOOL LUNCH

BY MARION BROWNFIELD.

"I want some meat, I want some meat!" came the wild Indian tones of a boy as he rushed into the living room after school, much to the discomfort of his mother who was entertaining a caller.

"You can't have it," she retorted.

"But I'm hungry," persisted the boy.

"Well, then, go and get some crackers," said his mother, glad of the excuse to send him off.

All children are beset with an after-school hunger that is perfectly natural. The problem is how to give them something wholesome that will not interfere with the regular meals.

Another time this same boy with both hands full of cake passed through the room where his sister was practicing her piano lesson.

"Why, Ted!" she exclaimed half enviously, "you know you can't have that cake. Mother made it for supper."

But Ted, delighted with his prize, rushed out before her protests should interfere with his enjoyment of the cake.

Raids on the ice box, cupboard and jam jar are all the results of thoughtlessness of either Mother or the children. The child who knows he can always have something to eat after school does not resort to such lawless measures.

One clever mother has solved the problem. She does not insist that these between-meal snacks shall be bread and butter or an apple; she has a little system of surprises. In a certain place in the kitchen there are three paper plates awaiting the three children each afternoon. Often there is fruit there: a bunch of grapes, an orange, a banana or some figs. Frequently there are a couple of crackers. Sometimes these are spread with peanut butter if they are plain crackers. Perhaps they will be of different kinds; there may be a fig bar and a graham cracker. Perhaps there will be an apple, and a walnut to crack. Even left-overs are enjoyed as a surprise; bread pudding, an ear of corn, a tomato or scraps made into an interesting sandwich sometimes greets the youngsters. As a real treat, the left-over may be cake! Because it is understood that the luncheon must be eaten "as is" with no requests for more until meal time, the plan relieves the mother of a great deal of teasing and it also prevents the temptation to dip into food prepared for a coming meal.

## Rhubarb for Winter.

After the holidays we begin to long for rhubarb. We can have it easily if we have an old clump we may dig and store. It should be left out until it has had at least one good freeze, for this will make it grow off promptly when taken inside. Stored on the floor of the cave or cellar or set in a box first, it matters not, just so the roots are in moist soil. The light is not material, for it must be cut off by covering if the cellar is not naturally dark. A cme made of building paper is good for this, leaving but a small hole at the tip but providing for the entrance of air below. This draws the stalks upward. Grown in the dark there will be but little leaf growth while the stems will be tender and long. Try a clump. It will bear stalks for a long time, but the roots are of little value for planting out again.—L. H. C.

## A FORGET-ME-NOT SUPPER

BY EFFIE MAURINE PAIGE.

There must be a good-bye party of some sort for the girl who is going away to college so why not have a forget-me-not porch supper? With a few changes here and there in the plans the party may also serve a last bit of entertaining for a summer guest at the farm or a "good-bye" to the girl who is leaving home to seek employment in another place.

The guests may be boys and girls from the neighborhood or just a dozen girls, dearest and closest. If a large affair, of both boys and girls, serve the supper at a long table on the veranda; if for a few, make it a buffet supper, the meal being served on a large plate all together, for the first course, with either a hot coffee or chocolate to accompany it.

Set several small tables about the veranda, convenient for service during the meal, on which to set extra dishes, one's cup, seasonings, salad dressings and the coffee accompaniments, sugar and cream. Use small attractive cloths for these tables such as are suitable for a tea table.

The large supper table requires more decoration, and this should be of fruits, autumn leaves, asters or other fall flowers—perhaps set in a nest of school books piled to form a basket.

An excellent caramel custard, an inexpensive dessert yet luxurious in appearance, is made as follows:

Homemade Decorations.

On the little tables, for the less formal service, set only a very flat bowl in which a few artificial forget-me-nots are placed. These, being out of season, will have to be made or bought. They are not hard to make. For those who have any gift at all for painting, it is an easy and inexpensive thing to paint place cards on stiff cards, the tops being a spray of forget-me-nots festooned an inch square snapshot of the girl who is going away and wishes not to be forgotten by her friends.

These may serve both as place card and favor if made into bookmarks with ribbon ends. When using the small tables pass them as favors. A nice little way to start the party is for the hostess, or the girl who is being honored, to bring a basket of hunches of artificial forget-me-nots to the porch, pinning one on each guest, the flowers carrying the desired message.

For the first course of the supper, however served, try this: Chicken in cases, nutted potatoes, combination tomato salad, hot rolls, sweet pickles, coffee or chocolate.

Eat leisurely, starting favorite songs now and then. Take away the plates and cups and all the accessories.

includes one coupon good for five cents in the purchase of any pattern.

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## Rotation in the Greenhouse Advisable.

In the greenhouse as well as in the garden, says the Dominion Entomologist, it has frequently been found advisable to adopt a system of rotation of crops. The common white fly, which deposits its eggs on the underside of tender leaves, for instance, is very injurious to tomato, primrose and certain other plants. If preventive locations are used for such crops the control of the insect will be easier.

Relative to control of the insect the Entomologist says hydrocyanic gas is the remedy commonly adopted by florists. For tight greenhouses the initial dose should be one-eighth of an ounce of sodium cyanide for each 1000 cubic feet of space. The strength to be used depends upon the tightness of the greenhouse. It should be noted that hydrocyanic gas is one of the most deadly poisons known, and the greatest care should be exercised in its use to see that none of it is breathed into the lungs. Detailed instructions for its use are given in Bulletin No. 7 of the Dept. of Agriculture, entitled "Insects Affecting Greenhouse Plants."

Wash oil soap of the strength of one-half ounce to a gallon of water is also useful for destruction of the white fly. The spray should be directed to the underside of the leaves. Ivory soap to the strength of one pound to six gallons of water has been found effective. Several applications a week or so apart may be necessary.

Sow purebred wheat, thoroughly cleaned, in a seedbed well prepared, and you will raise good quality of wheat. By thoroughly cleaning I do not mean to take your seed to an elevator and just run it over the cleaner, but cleaning of a good cleaner and using the correct screens with plenty of wind. Possibly you can clean it with once over, but I would sooner run it over two or more times until I know that I have taken out all the light grains and inferior stuff common to wheat, or any grain or seed I am sowing.—A. W.

A silver coin is usually in currency for about twenty-seven years.

PLAIN AND GAY LITTLE FROCKS.

The little tot's garments are always adorable, and the group pictured here are no exception. If the occasion is to be gay, the frock worn in View B would meet all requirements. Three quarter-inch tucks are placed at the bottom, and two rows of lace insertion are set into the front of the yoke. The armholes are trimmed with matching lace, and dainty ribbon is tied in bows on the shoulders. Bordered material in a graduated dot design makes the dainty little frock in View A, with the yoke and short sleeves of plain material. Very practical is the frock in View C. The tucks have been omitted from the skirt, the sleeves are long and gathered into a band, and the high neck is trimmed with a narrow lace edging.

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