ESSENTIALS OF POULTRY HYGIENE
HEAVY LOSS THROUGH NEGLECT

BY L. STEVENSON, O.A.C.

To determine more accurately the effect of cleanliness, test pens were maintained under farm conditions at a certain experiment station. One pen was given the least possible care, which meant very little more than feed and water. Another pen was given sufficient care to maintain thoroughly clean and sanitary quarters. The pen receiving minimum care had a loss of 42 per cent. of the birds during the 12 months that the experiment was run, against a loss of but 7 per cent. for the pen that was kept in a sanitary condition by simple clean-up methods. The value of the birds lost by neglect in the pen that was allowed to become unsanitary would have paid the labor required to keep the pen clean many times. It represented a loss of $132 on a pen that contained 100 birds at the beginning of the experiment, all of which could have been saved by 15 minutes labor per day being devoted to keeping the pen clean.

WHY WE CLEAN.

The object of cleaning is not merely to remove all visible forms of filth, but also to remove the invisible forms of life, known as disease-producing bacteria. Many poultry keepers consider the manure as so much lifeless refuse, but the pathologist knows that this is not true. In a state of health the bowel discharges from poultry contain an enormous number of organisms which are so small as to be only visible under the high power microscope. The amount of feces that would adhere to the point of a pin would contain millions of bacteria; such might be harmless or dangerous. The diarrhoeal discharges from sick birds may contain disease-producing bacteria, and thus become a serious menace to the other birds in the pen or yard. Other members of the flock will carry the infection on their feet to the feed and water pans, and soon the entire flock will be suffering from the same disease. A hen is not particular about what she steps in or on what she may feed. Dirty feet in the feed trough, or water pan, or the picking up of grain from contaminated ground is all all the same to the hen; she is not a clean feeder.

HARMFUL PARASITES.

Besides the harmful bacteria in the bowel excreta there may be the eggs of tapeworm or round worm. These worms become so numerous as to cause the death of the bird. The eggs are produced in great numbers and passed out with the excreta, and as in the case of bacteria find their way to the feed trough or water pan by way of the feet of the fowl, eventually entering the intestinal tract on food or with drink.

External parasites being present in large numbers is generally due to neglect of the flock's living quarters. Large numbers of skin parasites, as lice, mites and ticks, will so lower the vitality of a bird that it becomes unthrifty, profitless or an easy victim to pathogenic bacteria.

The cleaning of poultry houses should consist of the removal of manure and refuse, the use of insecticides to destroy the lice and mites and the use of disinfectants to destroy bacteria. Scrape and sand the roosts daily. Clean the house thoroughly once every three weeks, change the litter and nests, spray well with a good disinfectant, dig and lime the yard. A hen infected internally or externally with parasites will lose you money; better clean up or give up and cash in the whole outfit before further loss overtakes you. Neglected live stock is never profitable.

Improved Yellow Corn.

Three varieties of sweet corn, Pickaninny, Bantam and Early Malcolm, produced by the Horticultural Division of the Experimental Farms, give great promise, particularly for the cooler parts of the country. Pickaninny is rather dwarf in habit, bearing its ears close to the ground. When ready for use the kernels are white with a slight purplish tinge, broad, moderately deep, very tender and extremely sweet. As the corn matures the kernels change to a purplish black, in which condition they are still tender and sweet. Banting, also dwarf in habit, was produced from a cross between Pickaninny and Howe's Alberta Flint. Its habit of growth is much like Pickaninny. The kernels when ready for cooking have an attractive golden-yellow color, broad, moderately deep, quite sweet and tender. Early Malcolm grows to a height of about five and a half feet, bears medium to large ears usually bearing twelve rows of kernels, which are very sweet. This is proving a very desirable table corn. The Report of the Dominion Horticulturist for 1925 shows illustrations of the cobs of these varieties in full size.

Sometimes the blunter the statement the sharper the point.

Selection of Eggs.

Select for color, size and shape, the kind of eggs you want for market. Continuous selection, year after year, will give results. Do not select dirty eggs, nor do not handle eggs unless your hands are clean. The shell is porous, hence there is possible contamination.

Eggs deteriorate in hatching quality with age. When you hold eggs for hatching keep them in a cool place about fifty to sixty deg. F. Be sure the place is clean and not musty. Eggs for hatching should be kept not longer than ten days.

The eggs from late hatched pullets, or immature birds, seldom hatch as well as eggs from mature birds. Our best hatching eggs have been produced from early hatched pullets that laid well in the early winter and then went through a partial moult. The pullets hatched in early February have, the following spring, produced remarkably good eggs for hatching. Heavy breed pullets hatched in May have produced the poorest hatching eggs.

Eggs from birds out of condition, whether from feeding, housing, or management, produce eggs difficult to hatch. It is also true that the hatching power of eggs in a day or two will vary, the cause of which at times is difficult to locate.

HOW TO PAINT YOUR FURNITURE
SANDPAPER EACH COAT FOR BEST RESULT

BY FRANCES W. HENRY.

Painted furniture is one of the most interesting of the modern decorative revivals. The old solid wooden chairs and tables of our grandmother's day when treated with present-day paints are far more beautiful than when in their original dress, for the very reason that paint can now be bought in a far greater variety of colors and tints. When these pieces have been restored, we can the better appreciate the sturdy character of our ancestors and the utility value of the furniture and furnishings handed down by them.

There is much need of more color in the modern home. When selecting the pieces to be repainted, keep in mind the fitness, usefulness and comfort of the several pieces. Also remember that simplicity should be the keynote. For this work do not select ornate or richly upholstered pieces. Carelessness in this and the selection of the wrong color will spoil the entire appearance of the room. In the selection, decoration and arranging of the pieces let the dominant note be livability, plus convenience and charm.

METHODS EMPLOYED.

As to the methods to be employed by the amateur decorator, man or woman, first repair the pieces with prepared glue, brads and screws as skilfully as you know how. Or in the event that the job is beyond you, have some local craftsman do it for you. Clean off the old finish by applying liquid paint or varnish remover according to the printed directions on the can. Then wash the surface well with turpentine. When thoroughly dry, sand the entire surface smooth with No. 1 sandpaper and dust it off well. Now apply a coat of the intended color over the entire surface with a flat two-inch brush. Allow this to dry for at least thirty-six hours and then sand the painted surface lightly with No. 0 sandpaper. This is done to remove all air and dust balls.

You are now ready to stop up all holes and splintered places, nail and screw holes. Do not use putty for this purpose, as painters usually do, for it shrinks in drying and frequently falls out. In its stead fill all such places with common sealing wax, applied by heating an old knife over a tallow candle. Smooth the wax level with the surrounding surface. Apply your second coat over the entire surface and as many more coats as necessary.

Always allow at least thirty-six hours between coats for drying. In order to obtain a perfectly smooth finished job, always sand each coat lightly with No. 0 sandpaper before applying another coat.

HOW TO APPLY THE DECORATIONS.

This can be done with artists' paint by free-hand drawing, by the use of stencils or by applying the transfer designs. If you cannot get these materials locally send to some artists' supply house or to any of the large mail-order houses. The easiest to apply are the transfer designs. Printed instructions for applying are furnished free with the designs. After the designs are applied and allowed to harden for at least twenty-four hours, coat the entire surface of the work and the designs with one or more coats of white transparent varnish so that the designs will have protection from wear and cannot easily be rubbed off. A breakfast set of four chairs and table painted in gray with the turned member on the legs and with the edges of the seats and the edges of the table leaves trimmed in robin's-egg blue is a color combination that is very pleasing. When walls are of gray and woodwork in a deeper shade, hall tables and settees in almost every color—jade, old blue, mulberry or Chinese red—create a note of cheer and sparkle to breakfast nook, library or living room. Gate-leg tables with flower designs of mulberry color and a border line in dull yellow—end tables with jade green legs, console tables in gray, red or mulberry are beautiful for any hall. Drop-leaf tables—sturdy chairs, can be painted in color to suit any taste or decorative plan.

A CORNER FOR YOUNG CANADA

LET'S BUILD BIRD HOUSES.

If you want to make friends with the birds and bring them close to your home, where you can have a heap of fun watching them build their nests and feed their young, better get out your tool kit and construct some nesting boxes. By putting out a few properly made boxes for such birds as the wren, bluebird, flicker and red-headed woodpecker, you can induce these birds to make their homes right in your yard. Their antics during the nesting season will be just like a three-ring circus.

There are dozens of kinds of birds that can be secured as tenants in your nesting boxes. Each species prefers a box most nearly approximating its natural home in the woods. How large and in what proportions these nesting boxes should be is given in the following paragraphs, which should be your guide when you begin work:

Floor Cavity, inches: House wren, 4 by 4; bluebird, 5 by 5; flicker, 7 by 7; red-headed woodpecker, 6 by 6; chickadee, 4 by 4; nuthatch, 4 by 4; purple martin, 6 by 6.

Depth of Cavity, inches: House wren, 6 to 8; bluebird, 7 or 8; flicker, 16 to 18; red-headed woodpecker, 11 to 15; chickadee, 7 to 10; nuthatch, 8 to 10; purple martin, 6.

Entrance Above Floor, inches: House wren, 1 to 5; bluebird, 6; flicker, 15 or 16; red-headed woodpecker, 11 or 12; chickadee, 7 or 8; nuthatch, 7 or 8; purple martin, 11.

Diameter of Entrance, inches: House wren, ⅞, bluebird, 1½; flicker, 2½; red-headed woodpecker, 2; chickadee, 1⅛; nuthatch, 1½; purple martin, 2½.

Height Above Ground, feet: House wren, 5 to 10; bluebird, 5 to 10; flicker, 6 to 20; red-headed woodpecker, 10 to 20; chickadee, 6 to 15; nuthatch 12 to 20; purple martin, 15 to 20.

Of all the desirable birds the wren is our favorite. He is peppy, sings all the time and adds a lot of life to our yard. If there is any chance to get a family of wrens, better make at least three houses, as these birds have a habit of starting housekeeping in one box, where they make a dummy nest, and then moving on to another. Thus two or three boxes are necessary to keep your birds satisfied.

BUNGALOWS FOR WRENS.

Use most any kind of material in making your wren boxes. The birds apparently do not care what kind of lumber is selected, nor do they pay much attention to the shape of the shelter. Miniature log cabins, little chalets, cylindrical, rectangular and other shaped boxes seem to look alike to these birds, and you'll find that they are usually the first to occupy your boxes.

Although it isn't absolutely necessary to make a box 4x4x6 inches with a hinged top, if you can find a small pair of hinges around the workshop by all means use them. Or, better yet, hinge part of the front so that you can take a peek at the young birds during the nesting season. The first two boxes which we made at home were the simplest shelters that can be made. Just four weathered, half-inch boards were used, a flat top nailed to the box, a hole the size of a quarter cut in the front, and the entire outfit nailed to a tree near a dining-room window. It was taken within a week by a pair of wrens. No perch is necessary, but if you want to you can nail a small perch at the entrance.

Bluebirds make lovely bird neighbors. They are beautiful to watch, their song is pleasing, and they eat no fruit. A more helpful bird to the farmer would be hard to find. By all means try to attract one or more pairs of bluebirds into your orchard, where they will wage a continual war on insects. The common starch box with its sliding cover makes a dandy bluebird home. If one is not available you can make a simple shelter eight inches high, with a floor space five inches square. Either a sloping cover or a flat roof will do. If you use unweathered new lumber, be sure and paint the box a dark green or brown. Place the finished box from six to eight feet above the ground on an exposed limb of a tree in the orchard, on a post in the garden, or on a pergola.

PLEASING THE WOODPECKERS.

In making a home for a flicker or a woodpecker, there is one important thing to keep in mind regarding the interior of the finished box. Be sure and leave two inches of sawdust in the bottom of the cavity for nesting material. Otherwise Mr. Woodpecker will do to your newly-made box what he did to my first one. He began hammering away and cutting chips and sawdust out of the nesting box in order to get nesting material. As you can imagine, this didn't help the box any. Another thing, the inside of the woodpecker home should be of rough, unplaned lumber—if it is wood with the bark on so much the better—in order that the young birds may be able to climb up to the entrance hole.

Although homemade boxes are easily constructed and get birds, nothing equals a natural cavity found in the woods. Here's a little hide-and-go-seek game for you, one that you can play early in the spring. Take a hike through the woods and see if your eyes are sharp enough to locate some old woodpecker nests in dead limbs and stumps.

Take a saw with you on the hike, as the idea is to cut off the limbs containing these old nesting sites and transplant them in your yard. Saw the limb containing the cavity into two parts, as you will want to make one cut a few inches below the entrance hole. When you get home you can hinge the two parts together after cleaning the cavity and putting fresh sawdust in it.—Bob Becker.

Choosing the Litter.

Hay chaff is a very common litter for chicks, but it is dusty. The dust is bad for the chicks' eyes and makes the air impure for breathing.

Cut straw is also used. It is not dusty, but the sharp pieces may cause eye trouble. Otherwise it is good. Peat litter is used in some places with good results.

Alfalfa leaves make excellent litter. Don't include the fine chaff or dust—just use the leaves. Buckwheat hulls also make excellent litter; they are not dusty, are very absorbent and clean.

First Care of Chicks.

The first care the chicks receive is important. A brooder of some sort should be ready and there should be heat in it before the chicks arrive from the hatchery—a temperature of 100 degrees. This is gradually reduced each week until it reaches about 85 degrees. The length of time it will take to reach this temperature depends upon season and weather.

A pan or drinking fountain of milk in some form should be in readiness. Lacking milk, water must be provided. Grit should also be handy for them. Nothing else should be given until the youngsters are at least 60 hours old.

When feeding is started the all-mash system may be followed. If grain is used it may be given as a first feed after the required 60 hours have elapsed.

What the Sun Will Do.

Sunlight helps thicken egg shells. The reasons are these: Egg shells are mainly lime. The hen secretes lime in her body only under stimulus of vitamin D. The ultra-violet rays of sunlight, unstrained by window glass, assure an abundant supply of vitamin D.

I Get Hotbed Materials Ready Early.

I believe in getting ready for a hotbed several weeks before it is actually time to make the bed. One who doesn't prepare in advance may have poor results or fail to start the hotbed at all, because the materials are not ready when it is time to plant.

Two or three weeks before seed-planting time take a quantity of horse manure, as fresh as may be secured, add to it about one-third in bulk of short straw or dry leaves and stack it up in a square, flat pile. If the manure itself contains considerable bedding the straw or leaves will not be necessary. Put a quantity of hot, fermenting manure in the centre of the pile and give the whole a thorough soaking. After four to six days, when the heap is beginning to steam, fork it over, turning it "inside out," and tramping it down as firmly as possible.

To get the very best results the heap should be forked over three or four times at intervals of a little less than a week so that by the time it is ready for the frame the whole mass will be fermenting evenly and be thoroughly hot. A cord of manure will supply heat for four to six standard 3x6-foot sash. The manure should be packed into the frame from 12 to 20 inches deep, according to the severity of the weather and the kind of vegetables to be started. The hardier things, such as cabbage, lettuce, beets and cauliflower, can be started first and there will be usually sufficient heat left when they are taken out to start such tender crops as tomatoes, peppers, eggplants and melons.—F. F. R.

When replacing axe handles, put the axe in the vise and bore a hole through the wood that is left in the axe. Make the hole large enough to cut the embedded portion into two parts. This will loosen it enough to be easily driven out. Some folks set the metal in a bed of coals to char the wood, but this draws the temper. Cut down the new handle to fit, heat the end in an oven to drive off all moisture, then set a large wood-screw in the end and cut off the head, or countersink it. When the wood again takes up moisture it will remain tight.

He—"I suppose you read about that Wrigley prize recently won by a Canadian?"

Dumb Dora—"I'll bet I could have won it. I'm great on the shimmy."

Sunflowers for Silage.

In many regions of Eastern Canada where it is too cool to grow corn successfully the Dept. of Agriculture at Ottawa recommends sunflowers as a substitute for silage purposes. Even in warmer districts where corn grows well sunflowers should be used if the land is a heavy clay, as on such soil they usually give a much larger yield than corn. The preparation of the land for sunflowers is practically the same as for corn. The seeding may be done earlier than corn because the plant can stand a certain degree of frost. The largest yield is obtained from the Mammoth Russian variety, which is well adapted to Eastern Canada. It is seeded at the rate of ten pounds per acre with a grain drill in rows 42 inches apart, the plants being thinned to 6 inches apart in the rows.

How many times have you missed making an entry in the new diary you received the first of the year?

Identifying the Bedroom Curtains.

I made the glass curtains for all the sleeping rooms of the same material, but the windows of each room are of different sizes, so I marked the curtains with colored floss, a few tiny stitches in a corner on the inside of the hem—a different color for each room. This simplifies matters when it comes time to launder the curtains, for with the colored marks I can quickly sort out the various pairs and know where they belong, without going through the tiresome process of measuring them to tell which is which.—Mrs. W. A. C.

Improving the Tomato.

Good progress is being made by the Dominion Horticulturist in developing by breeding and selection improved varieties of the tomato. An effort is being made to secure in early varieties the same excellence as some of the later sorts possess. Selected strains produced from crosses of Alacrity, Bonny Best and Livingston Globe, where used in combination, are showing highly desirable uniformity for earliness, with fine shape and quality of fruit. A feature of interest is that where a late maturing variety like Livingston Globe was crossed with Bonny Best a reduction in the number of days from sowing the seed to readiness for use was recorded. One, a cross between Alacrity and Bonny Best, has given a most promising sort, possessing the earliness of Alacrity with the smoothness and symetrical form of Bonny Best. The quality of the fruit is said to be superior to Alacrity, being less acid.

MUTT AND JEFF—By Bud Fisher.

The Infernal Revenoo Gets Mutt in an Awful Pickle.