

PHEASANT CULTURE.

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(Continued from last week.)

Feeding the Young

We come now to by far the most important of all pheasant culture—the feeding of the young. We have before us many methods of feeding young pheasants, but we will give as a sample of one of the old methods the bill of fare laid down by George Horne, an English gentleman of large experience in raising pheasants, who is also the author of a most excellent book on pheasants entitled "Pheasant Keeping for Amateurs."

"Rice well boiled (not sticky), chopped onions and their tops, crushed hemp, a little pepper, baked breadcrumbs, well ground. Sprinkle the food with a little iron tonic, and let the whole be mixed till quite dry. Never let it get sour or be left from day to day; only put enough the last thing at night for early breakfast. Do not forget the younger the birds, the more custard."

Another way young pheasants are raised in the Old Country is by hanging sheep's pluck, beef's liver, dead rabbit, or, in fact, flesh of any kind, up in the sun until it becomes full of maggots. The flesh is then shaken, and as the maggots fall to the ground the young birds eat them. This food, combined with ant eggs, onions and lettuce, has proved fairly successful in raising young pheasants. We tried it, but the smell of the decaying meats was so disagreeable that we were forced to abandon it. Being firmly convinced that there is no food for young pheasants equal to the larvae of flies, we next partly filled some barrels with sawdust and sunk them in the earth. The tops of the barrels were covered with wire mosquito netting, and in the centre we made a quarter-inch hole, putting over the hole a bulbous fly-trap. We got from our butcher some sheep's plucks, liver, etc., as required each day, from the day we commenced to set pheasants' eggs. After first being hung up until well fly-blown, we put a pluck or a liver into a barrel. We arranged it in this way so that a batch of flies would hatch each day as a daily supply for the young pheasants. The flies first turn into small maggots, which in warm weather soon grow full size, and then change into the pupa state, which looks like very small black beans. They remain in this state for some days, and then from the pupa emerges a full sized fly, which sees the light at the top of the barrel and crawls up, passes through the small hole and into the common bulbous fly-trap on top. We have had these fly-traps from one barrel almost filled with flies four or five times a day. We just pass the fly-catcher full of flies over hot steam, which kills them. The fly-catcher is made to part in the middle, and we turn out the flies, and the young birds will have a scramble. They enjoy them very much. There is but very little smell from the barrels, it kept covered with cloth over the fly screen excepting the hole through which the flies get into the trap. In this way we raised every young pheasant except one, which met with an accident. The birds were strong, fat and rapidly feathered, and at six weeks old were just twice the size of some pheasants of the same age that we had raised for us by an Englishman and after the old English plan. Forty per cent. of the

birds raised according to the old way of raising pheasants die. There is one thing that must not be lost sight of. It is the fact that flies lay their eggs and then die; and if their increase is not provided for, the whole neighborhood would become exhausted of them. To keep up a good supply of breeding flies, we let go a trap full alive about every second day.

Scientific Method.

Our investigations in Ornithology and especially the study of the twenty or more varieties of birds commonly called pheasants, has forced upon us the absolute necessity of further investigating the most natural food for those birds. This leads us to leave Ornithology for a time and wade into Entomology, to study the particular kinds of flies and their culture that produce the larvæ which is so very essential to the lives of young pheasants.

The first we will describe is the most common and is called the Blue Bottle Fly (*Lucilia Caesar*). The females hibernate in sheltered places and emerge with the warm weather to deposit their eggs (fly blows) on animal matter. These soon become maggots, and during a period of only about 15 days in warm weather, from the time the eggs were deposited on the flesh, it will have changed into a maggot, then pupa, from which emerges a full grown fly. Single females of the blue-bottle kind have laid 74,143,223 eggs. Mr. Kirkland, of the Board of Agriculture of Massachusetts, has estimated the product of one female fly for ten generations, and states that, roughly speaking, this product would make a belt of flies two hundred miles wide around the entire globe, so great is the reproductive powers of this insect when not destroyed by its enemies.

The Flesh Fly (*Sarcophaga Carnaria*). The peculiarity of this fly is that the females after being fertilized, retain the eggs until they have hatched. They deposit large numbers of living larvæ on exposed meat. They are not so plentiful as the blue bottle, but they are more desirable for pheasant food, as their maggots are larger. It is therefore advisable to favor the production of the flesh fly. This may be accomplished by allowing occasionally a few quarts of maggots to pupate, and as the pupa of the flesh fly is much larger than that of the blue bottle, they may easily be separated by a sieve that will allow the pupa of the blue bottle to pass through but will retain the other. Allow the flesh flies to hatch out and go at liberty for breeding flies. In this way a fine supply of the most desirable breeding flies can be obtained.

There is another fly which breeds in animal matter and furnishes some food for young pheasants. It is called the Blue-Tailed Fly (*Calliphora Vomitoria*). It is not of sufficient importance to further describe it.

There is a wide-spread belief that maggots are disgusting, stinking things. Our investigations and study of Entomology proves to us that maggots separated from their usual surroundings are just as clean and odorless as young chickens, goslings, &c. Flies do not lay their eggs on tainted meat when fresh meat can be found, and maggots are clean feeders from choice and

thrive best on fresh meat. This being the case barrels full of the flesh fly maggots may be produced without the slightest odor, and not hundreds but thousands of young pheasants may be raised without difficulty or any great mortality on the following plan. Feed the maggots twice a day on very thinly sliced fresh meat. Learn what they will eat up clearly and feed them no more. The assimilating power of the maggot is so great that it can change every particle of meat to maggot without leaving any residue, consequently there can be no smell. Sheep's plucks, livers, &c., can be purchased at the butcher's for a trifle, and turned into maggots in this way, blood is also a good food for maggots.

To provide for cold and wet weather when flies are not out, place a bushel or two in a refrigerator, at from forty to forty-five degrees. Development is suspended, and they may be kept for weeks. In the case of a scarcity of full grown maggots caused by cold weather, put the undeveloped into an incubator at ninety or ninety-five degrees, and development is hastened.

In breeding maggots care must be taken to keep them covered with woven wire fly netting to protect them from a very large-winged bug, which would otherwise get in and destroy them by the hundreds. After the first thirty days the maggots may be safely withheld, and the wings of the young birds clipped in a way we will later describe, and the birds turned into a field of grass, and fed for a time on scalded grain, then any kind of grain, grass or vegetables, and the danger to life is over. The field should have a fence six or seven feet high—seven feet is better—and care must be taken that no brush or anything else is left so close to it as to enable the birds to jump up, and with a second jump reach the top of the fence, then over. From preference pheasants roost where they can see the sky above them, and if no provision to prevent this were made, they would willingly and very persistently expose themselves to every rain storm. This can easily be avoided by leaving not a vestige of brush or any place to roost, except under sheds covered over on top only with convenient and tempting roosts. The birds when they can find no roosts elsewhere will be forced to go under shelter. They may be left in this field all winter, and their feed after the first few weeks is of little importance. They may be fed a little corn, wheat, etc., until the snow comes, but if they are turned into a good fresh orchard or other field where no pheasants have previously been, they will eat but little grain of any kind until the snow hides the grass from them. Grass is as much the staff of life for the pheasant as bread is for man, and for this reason twelve of them would not eat more grain than one barnyard fowl.

At four months the males and females are better put in separate fields, and if the birds are not pinioned their wings must be attended to every two weeks until they are four and a half months old, at which age they receive the last of their adult pinion feathers, and if well clipped then, will need no more attention until they moult the next fall. In order to clip the wings the bird must be caught, which to a novice is no easy task, be-

sides he is apt to pull their feathers out. We use a common dip net, which was made for catching fish in the rapids. The hoop upon which the net is fastened is about two feet across, and the handle eight feet long. We can pick up any bird we want without the slightest difficulty, and as for young ones, we dip up half a dozen at a time. No pheasantry can afford to be without a net of this kind.

(To be Continued.)

THE CULTIVATION AND GROWING OF CORN.

The Best Methods of Leading Ontario Farmers.

A couple of months ago we sent out a list of questions to a number of leading farmers in the various districts of the province pertaining to the cultivation of the land for spring crops and the best varieties of grain to sow. A lot of valuable information was received, a large share of which was published some weeks ago, and we trust it has been helpful to many farmers. In this list of questions was one referring to the cultivation of the land for corn. Corn is becoming, if not already so, the most important Canadian fodder crop. In many sections where the climate was considered to be too cold, or too much liable to frosts, to admit of corn being grown successfully, farmers are now growing large crops of corn every year. As they become more familiar with the different varieties of corn and the kind of treatment the plant requires, they do not find much difficulty in securing a good crop. The value of corn as a fodder crop cannot be over-estimated. For furnishing an abundance of good, succulent feed for the winter the corn crop and the silo cannot be beaten.

One of our correspondents says that, in order to insure a good crop, corn requires: 1st, a rich, warm soil; 2nd, a thorough cultivation and preparation of the soil before planting; 3rd, good seed; and 4th, a thorough cultivation when the crop is growing. If these are kept in view there need be no fear about securing a good crop during any ordinary year. There are a great many different varieties of corn, and it is difficult to give advice as to the best variety to plant. For silo purposes and for winter's feeding the kind that will be sufficiently matured before the frosts come, that will give the largest number of ears to the stock and that will give the largest total yield per acre, should be selected. Where the season is sufficiently long to admit of the plant being fully matured, the Mammoth Southern Sweet will give good results. But, outside of Essex County it is only in exceptional cases that this variety has a chance to mature before the frosts come. Some varieties that are recommended are the Mammoth Cuban, Salzer's North Dakota, Wisconsin Earliest White Dent, Crompton's Early, Huron Dent, Pearce's Prolific and Thoroughbred White Flint.

The larger number of our correspondents consider fall plowing the best for corn. Manure well during the winter or early spring with fresh manure. From fifteen to twenty and up as high as twenty-five loads of manure per acre is recommended. In the spring the land should be thoroughly cultivated and the seed bed made as fine as possible before the corn is planted. This last point is very