

How to Raise the Chicks

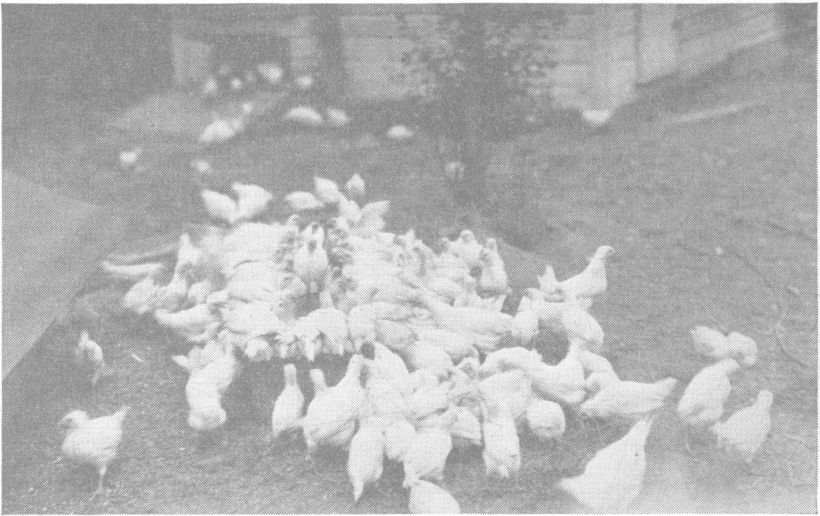


Fig. 1.—Milk "cafeteria" on range

By

G. S. VICKERS

Poultry Specialist, The Ohio State University

How to Raise the Chicks

By G S VICKERS
Specialist in Poultry Husbandry

Proper brooding of the chicks is a prerequisite to a profitable poultry business. It has been definitely proved that chicks improperly brooded never produce as many eggs and never are as vigorous and healthy as the same quality of chicks properly brooded. It behooves the owner, therefore, to do a good job of brooding if he expects to get the maximum results from the birds when mature. If the optimum results are to be obtained during the brooding period certain practices must be followed. These practices in Ohio are known as "Ohio's Big Ten Rules for Raising Chicks."

Ohio's "Big Ten" Rules

1. Hatch Early:

Early hatched chicks grow better, fewer of them die, the broilers bring more by being sold earlier on a higher market than late hatched chicks, and the pullets mature in time to lay high priced fall and winter eggs.

It is preferable that no chicks be started after May 15 and certainly not later than June 1. The heavy breeds, such as Rocks, Reds, and Wyandottes, should be hatched in March and April; the light breeds, such as Leghorns and Anconas, in April and the first half of May, if the best results from the mature stock are to be expected.

All chicks that are to be brooded together should be hatched or secured at the same time, because chicks of different ages never do so well. Getting all the chicks at the same time reduces the labor and the more tedious part of brooding.

2. Prepare the Brooder House and Move It to Clean Ground:

The brooder house should be thoroughly scrubbed and sprayed with some good, strong coal-tar disinfectant, or whitewashed. This removes all filth and dirt, and destroys all disease germs, lice, and mites. The brooder stove should be overhauled, cleaned, and started a day or so ahead of time to see that everything is in good running order.

The floor may be covered with from $\frac{1}{2}$ to 1 inch of coarse sand, and on top of this sand should be placed some litter of finely cut straw, clover, or alfalfa leaves. Many omit the sand and just use the litter. Care should be taken that this litter is not moldy, or serious losses will result.

Chicks should be on clean ground which is free from intestinal worms and disease germs. It is always more desirable that the brooder house be moved to clean ground where there is a good sod of clover, alfalfa, or bluegrass, and where chickens were not raised the previous year. If this is impossible, the bare spots should be limed, turned over, and sowed to some crop.

The treatment of diseases in young chicks is not successful; this problem must be met by prevention rather than by cure. The question of disease- and worm-free ground on which to rear young stock is one of the real problems the poultryman has to meet.



Fig. 2.—Wire netting will keep the chicks near the source of heat

3. Provide Sufficient Brooder House Space and Large Enough Stove:

Overcrowding is partly responsible for many chick troubles such as crowding, toe picking, tail picking, etc. Provide at least 1 square foot of floor space for each four chicks. This means that a 10- by 12-foot house will accommodate about 500 chicks, but 400 will be better. For 500 chicks, a 12- by 14-foot house is more desirable.

Where considerable early brooding is done and the chicks cannot be gotten out on the ground, some people provide one room for the stove and another room, usually called a cool room, for the chicks to run in during the day.

A stove of sufficient size comfortably to handle the number of chicks being brooded should be provided. Most stoves are over-rated as to capacity and, consequently, it is usually advisable to buy the larger sizes. This is particularly true if much brooding is done during early spring when the weather is often very cold. The larger sizes have greater fuel capacity and hold fires through the night much better than the smaller ones.

4. Do Not Feed Too Soon and Give Proper Care to Young Chicks:

It is safer to give nothing to eat or drink for at least 36 to 48 hours after the hatch is completed, and some prefer to wait 72 hours. If the chicks are hatched at home, it is a good plan to leave them in the incubator until time to feed. If chicks are purchased, it is all right to leave them in the chick boxes until feeding time. Care should be taken to see that they are not set next to a stove or radiator where they will get overheated.

In removing the chicks to the brooder house, see that they do not get chilled. When the chicks are put in the house the temperature should be about 100 degrees Fahrenheit, 1 foot from the stove and about 2 inches above the floor. The corners in the house should be filled with wire or straw, or blocked or rounded off so that the chicks cannot crowd in these corners. Crowding is responsible for many deaths.

If the weather is cold and trouble is experienced in keeping the chicks warm, a wire netting enclosure (see Fig. 2) arranged about 2 feet around the outside of the hover will often be helpful during the cold nights to confine them close to the heat. This enclosure can be of $\frac{1}{2}$ -inch mesh hardware cloth, 1 foot wide and of sufficient length to suit individual needs.

The temperature of the house should be regulated according to the actions of the chicks and the weather. See to it that there is sufficient heat around the stove to keep them warm, with enough room in the house for them to get away from the heat if they so desire. Ordinarily, the temperature can be reduced about 5 degrees a week, and after eight or nine weeks no artificial heat should be needed except for very early chicks.

5. Feed a Wholesome, Well Balanced, Complete Ration—the Ohio Ration:

We have learned from experience and by experiment that chicks must have a balanced and complete ration if the best growth and the best results from mature stock are to be obtained. This means that in addition to the proper amounts of carbohydrates, fats, and pro-

teins, a complete ration must contain the proper amounts and kinds of vitamins and minerals which are absolutely necessary for a normal development.

Vast numbers of chicks die, or are permanently injured, every year in Ohio because of faulty nutrition. This is particularly true when chicks are brooded early and must be confined indoors for long periods. A pullet once stunted, because of improper feed, will never produce as well as she would have done had she received proper feed. Since profits in the poultry business depend very largely on egg yields, proper feeding is of great importance.

The "Ohio Ration," and instructions for feeding it, follow:

THE OHIO RATION

<i>Scratch Grain</i>	<i>Mash</i>
First Six Weeks	First Week
Fine cracked corn..... 200 lbs.	Bran or standard middlings
Cracked wheat..... 100 lbs.	Second Week to Maturity
Pinhead or rolled oats.... 100 lbs.	Yellow cornmeal..... 200 lbs.
	Bran 100 lbs.
Six Weeks to Maturity	Standard middlings..... 100 lbs.
Cracked corn..... 300 lbs.	Fine limestone or pearl grit
Whole wheat..... 100 lbs.	or fine oyster shells.... 25 lbs.
Milk to drink at all times.	Raw granulated bone..... 25 lbs.
Green feed every day.	Salt 5 lbs.
	Meatscraps or tankage... 100 lbs.
	(When milk is available it can replace the meat scraps pound for pound)

If limestone or oyster shell and bone are not put in the mash they should be available at all times in hoppers.

Scratch Grain.—For the first ten days the grain should be fed four or five times daily. Some prefer to feed on sheets of paper for the first couple of feedings; others feed in the litter from the first. After ten days the number of grain feedings can be decreased until the chicks are out on range, when the grain can be hopper-fed (see Fig. 4). If the grain is not hopper-fed after the first few weeks, it should be hand-fed twice daily.

Mash.—Bran or middlings should be available during the first week in shallow pans or hoppers. After the first week, the mash as given above should be available at all times. The change should be made gradually. If the weather is such that the chicks must be confined for several weeks, 1 quart of cod-liver oil should be mixed with each 100 pounds of mash to prevent leg weakness until such time as the chicks can get outdoors. A moist mash mixed with infertile eggs from the incubator will also prevent leg weakness.

As soon as the chicks are 4 or 5 weeks of age the dry mash may be fed in open hoppers (see Fig. 4). These should be large enough to allow a number of chicks to eat at the same time, and deep enough to prevent the mash being scratched out and wasted.

6. Feed Large Amounts of Milk:

Practical poultrymen and investigators are agreed that milk is one of the necessary constituents of a ration if the best results are to be obtained. Experiments have shown that milk is the best source of protein yet discovered. Milk not only results in better growth but reduces mortality. It should be fed for at least the

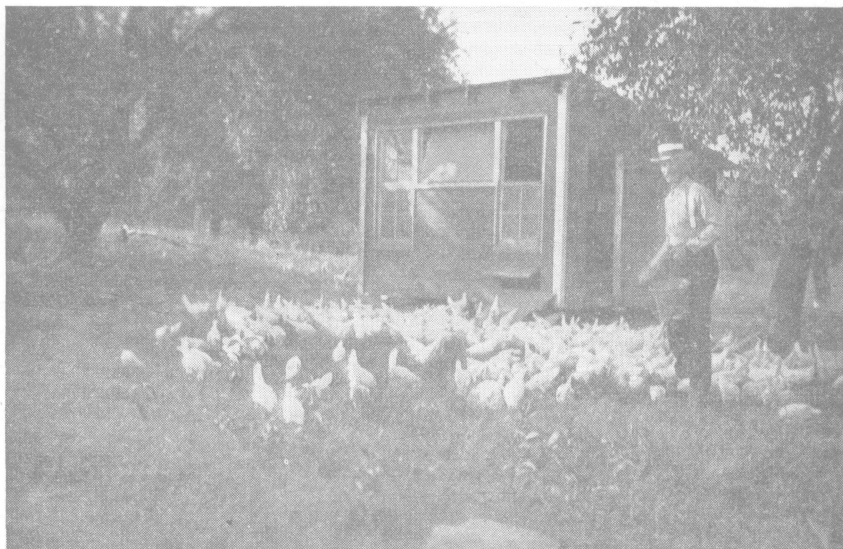


Fig. 3.—A sod orchard furnishes shade and range

first eight weeks, or until the broilers are sold, and it is preferable that it be fed all summer.

Skimmilk and buttermilk are equally effective and are the forms available to most farmers. If sufficient milk is available nothing else should be given to drink. Milk should be the first thing that the chicks receive when put in the brooder. Milk is a safe feed in that it is very seldom that too much of it can be given when fed in liquid form.

When skimmilk or buttermilk is not available, semi-solid buttermilk or some form of powdered milk in the mash should be given. When used in the mash, it is generally used in combination with

meat scraps or tankage, usually replacing part of the meat scraps or tankage pound for pound. Galvanized containers should not be used in feeding milk, due to the possibility of poisoning.

7. Provide Green Feed Liberally at All Times:

An abundance of green feed should be given at all times. It is necessary for the best growth, supplies some of the necessary vitamins, keeps the digestive system in good order, and is an important factor in the prevention of nutritional troubles such as canker, or nutritional roup. When it is necessary to confine chicks, they should by all means have liberal amounts of green feed. Clover, alfalfa, bluegrass, dandelions, rape, and lettuce are excellent green feeds. Of the root crops, carrots seem to be the best from a vitamin standpoint.

As soon as the chicks are allowed outdoors, they should have a good range of bluegrass, alfalfa, or clover (see Fig. 3). Nothing aids more in developing strong, vigorous pullets than a good range free from disease.

8. Get Chicks Outdoors as Soon as Weather Permits:

Chicks will do much better when outdoors. Provided the weather permits, they should be out, for at least part of the day, after the first week or ten days. Sometimes the weather is such that they must be confined for three or four weeks.

Getting them out in the direct rays of the sun will prevent leg weakness. They should be confined to a small yard for the first few days until they learn to know where the source of heat is, and after this should be allowed free range. While they are still young, it is desirable to keep them confined in the morning until the grass is dried off.

9. Rear Young Stock away from Old Stock:

The chicks should be moved far enough away from the old birds that they will not mix, or else they should be yarded separately. The former is much more desirable. If running on the same range the old birds may be a source of infection for such diseases as coccidiosis, tuberculosis, cholera, etc.

One of the hardest troubles to combat in young stock is intestinal worms and few old flocks are absolutely free from worms. This means that, if they range together, the young birds are sure to become infested, and the damage to young stock is worse than to old birds. Since treatment of diseases and control of worms are not very satisfactory, prevention is the best solution.

When the young and old birds run together the young ones never get their share of feed. The old birds chase them away from the feed hoppers, run over them, and thereby prevent normal growth. Since the pullet crop is the larger money maker every year, it should not be injured or ruined by running the old stock with the young.

10. Separate Cockerels from Pullets as Soon as Possible:

The cockerels should be separated from the pullets at not later than 8 or 10 weeks of age. At this time, they should be large enough to be sold as broilers. This not only gets them on the mar-

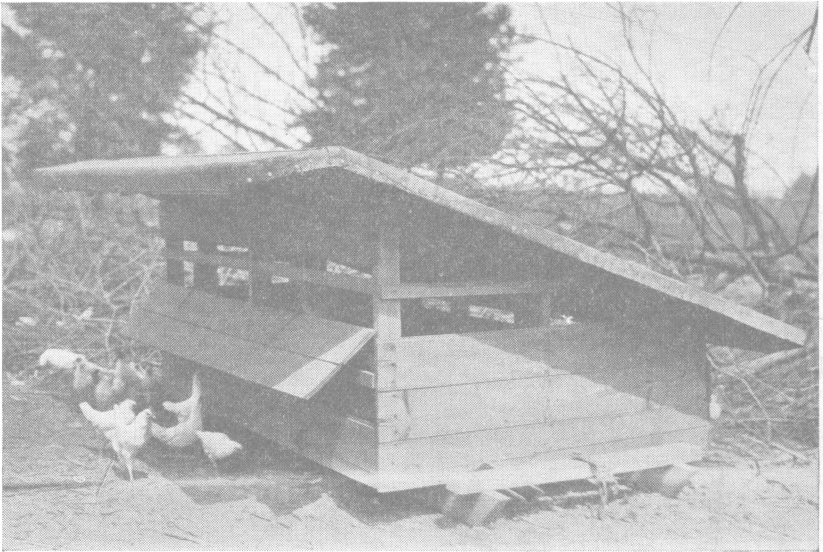


Fig. 4—A labor-saving grain and mash hopper for feeding pullets on range

ket as soon as possible (which is desirable because the price of broilers is usually going down as spring progresses), but it also allows the pullets more room, and they are the real money crop. The brooder house has become crowded by this time, and something must be done to relieve the congestion. Disposition of the cockerels is the logical solution.

If breeders are to be saved, about twice as many of the most promising cockerels as will be needed should be selected. These may be allowed to run with the pullets.

Baby Chick Troubles and Their Control

During the spring of 1924, about 300 farmers in Ohio kept accurate records on the rearing of their chicks. These 300 farmers started out their brooding operations with 136,949 chicks and at 10 weeks had only 109,021, or a loss of 20.3 per cent. This loss represented an actual cash loss, much of which might have been prevented. The deaths, amounting to a loss of 20 chicks out of each 100, were due to many causes, the most important of which will be discussed here.

Weak Chicks

A great many chicks are weak to begin with, and when this is the case losses are to be expected. There are no cures for weak chicks. The only thing to be done is to care for and feed them in the very best manner. This is a trouble that should have been handled prior to the time the chicks were hatched.

The only prevention is to select good breeding stock and give it the very best of care during the winter prior to the hatching season. Weak chicks not only die in large numbers but the few that live never amount to anything

Diarrhea

There are two kinds of diarrhea, and this fact causes much confusion among poultry raisers. The two general kinds are bacillary white diarrhea and diarrhea from all other causes.

Bacillary White Diarrhea.—This is an infectious disease caused by germs or bacilli, and is generally believed to be transmitted to the chicks through the eggs from infected hens. It is also claimed that chicks free from the disease will contract it by running with infected chicks.

The method of control most generally recommended is to remove the infected hens from the breeding flock. Such hens can be determined by means of a blood test. Disinfectant is sometimes given in the drinking water, but with questionable results.

Ordinary Diarrhea.—This trouble is often mistaken for bacillary white diarrhea. It is difficult to distinguish between them due to the fact that a laboratory test is necessary to determine whether the diarrhea is caused by germs or by other causes. Ordinary diarrhea may be caused by overheating, chilling, improper feeding, and spoiled feed.

1. *Overheating*.—The brooder stove may get so hot that the temperature is too high even in the coolest places in the brooder house, this being particularly true when brooder houses are very small. The overheating throws the chicks off feed, causing digestive troubles and a resulting “pasted up” condition. A high mortality is usually the result, and those surviving have a weakened vitality.

2. *Chilling*.—Chilling may be caused by the fire going out or by stoves too small to generate sufficient heat in real cold weather to keep the chicks from chilling. The results of chilling may be a “pasted up” condition as in overheating, or pneumonia, which is an inflammation and congestion of the lungs, indicated by hard breathing and gasping for breath. Both of these conditions may result. Proper sized stoves, carefully attended to, is the only prevention.

3. *Improper Feeding*.—Feeding too soon may result in trouble. The chick absorbs the yolk of the egg into its body just before hatching, and this yolk serves as food for the first day or so. To feed before 48 hours may result in the inability of the chick to utilize both feed and yolk, and diarrhea may result.

4. *Spoiled Feed*.—Feeding of anything the least bit tainted will surely cause diarrhea. Dealers quite often hold chick feed from one season to the next in a damp place, with the result that the feed is musty. Prevention is obviously the easier and cheaper policy. All feed should be carefully examined.

After chicks once have the diarrhea they should be given a dose of Epsom salts at the rate of 1 pound to 4 gallons of water or milk. This should be kept before the chicks until afternoon, when fresh water or milk should be given.

Milk kept before the chicks at all times will help prevent diarrhea and appears to be the best treatment for the bacillary form. Care should be taken not to use galvanized containers for milk because of the danger of poisoning. After treatment with Epsom salts milk will help to build up strength and vitality.

Crowding

Crowding is responsible for a great many deaths in the rearing of chicks. Crowding, after once started, frequently becomes a habit and every precaution should be taken to prevent it getting to the habit stage.

Reasons for Crowding.—Crowding is caused by chilling, overheating, and fright.

1. *Chilling*.—If the brooder house is cold the chicks naturally huddle together, usually in the corners, to keep as warm as possible. If it is cold enough a large number may be tramped to death.

2. *Overheating*.—If the brooder house is too hot the chicks will all crowd to the coolest corners. The results will be the same as in chilling.

3. *Fright*.—Sudden noises, running in the brooder house, slamming doors, etc., all cause fright and the chicks huddle together for protection. After a few times of being frightened they huddle together at the slightest pretence.

Suggestions for Preventing Crowding.—Crowding at night usually causes the chicks to become too warm, and when they go out in the cold in the morning chilling may be the result. Continual crowding will surely result in some stunted chicks and the vitality of the entire flock will be lowered. The following suggestions will help to keep crowding to the minimum.

1. Don't brood too many chicks together without proper stove capacity and without brooder house of sufficient size. See that the stove is of sufficient size properly to heat the house during the coldest weather and see that the house is large enough for the chicks to get away from the heat if the stove gets too hot. A check in the stove pipe will help to keep the fire down in windy weather.

2. Don't shake the fire too much at night and don't start a fresh fire at night and then go away and leave it. See that there is a good bed of coals at night before retiring. Burn only the best grade of coal. Order early if necessary to get a good grade.

3. If the weather is cold and windy when the chicks are first put in the brooder it may be advisable to confine the chicks near the stove by placing a piece of fine mesh chicken wire or hardware cloth, one or two feet high, around the outside of the hover. This should be placed at least two feet away from the hover in order to prevent overheating.

In the coldest of weather, with small stoves, it may be necessary to place sacks over the wire to keep it warm enough. As the chicks get older this circle around the hover should be gradually enlarged or when the weather gets milder it can be removed. Some use building paper in place of wire.

4. Round off all corners with wire, straw, boards, or heavy paper, to stop crowding in the corners.

5. If they get to crowding at dusk it may be necessary to be on hand until they are spread out for the night. Some darken the

windows and get them spread out and then leave the windows covered all night. Shadows from the moon often cause crowding. Some leave a small 10-watt electric light bulb burn all night to prevent crowding.

6. Never run up to the brooder house and throw the door open. This frightens them and repeated frightening usually result in the crowding habit. Have the children be careful around the chicks. Never let the chickens be chased when young.

7. Late in the season when the stoves are out it may be necessary to start them again during the cold evenings to prevent crowding.

8. Get the chicks to roosting at the earliest possible moment. Place roosts close to the floor at three or four weeks of age and as they get to roosting gradually raise the roosts higher above the floor. It may be necessary to construct roosts with wire netting under the perches to prevent the chicks from falling off the roosts and crowding in the corners.

Leg Weakness

Leg weakness is caused probably by a number of factors either acting alone or in combination. Among them are the improper assimilation or digestion of mineral matter, and a lack of vitamin D in the ration. This results in soft and undeveloped bones which are unable to support the body of the chick, and "leg weakness" follows.

Experiments have proved that sunlight, shining directly on the body of the chick, will result in the proper digestion and assimilation of the mineral matter. Sun shining through window glass is of no value in promoting mineral assimilation. It is, therefore, advisable to get the chicks outdoors in the sunshine as quickly as possible in order to prevent leg weakness.

When the weather is so bad that chicks cannot be allowed out within two weeks, other preventive measures should be taken. The following substitutes can be used and will prevent leg weakness.

1. *Cod Liver Oil*.—To each 100 pounds of mash add 1 quart of cod liver oil. This will be 2 percent by weight. As soon as the chicks are out in the sunshine the cod liver oil may be discontinued.

2. *Eggs*.—The feeding of eggs will also prevent leg weakness, the yolk being the part which supplies the necessary vitamin. Infertile eggs or 7-day dead germs from the incubator can be used for

this purpose. For each 30 chicks in the flock 1 egg should be given each day. The eggs may be fed raw, mixed in a mash, or they may be beaten up and mixed in the milk. If white diarrhea is suspected of being present in the flock, the eggs should be hard-boiled before being fed. This is a good way of utilizing the incubator eggs which might otherwise go to waste. The eggs may be discontinued as soon as the chicks are out in the sunshine, but if they are available they make good feed and should be utilized.

Cannibalism

This trouble usually starts when chicks are confined to the brooder house for some time due to bad weather conditions. It is largely habit and must never be allowed to get a good start. There are many things which start this trouble, among them being: (1) injury to the chick, so that blood starts and the other chicks start picking the injured place; (2) a chick standing in the sun so that the toe nails shine and make attractive objects at which to pick, which may result in the toes being picked until the blood starts; (3) growing feathers in which blood shows through the quills, which make an object for picking; (4) lack of exercise or lack of anything else to do but pick at one another.

The parts most generally picked are the toes, tails, and wings. When chicks once get a taste of blood from an injured or picked chick they never stop until the chick is killed and eaten, hence the need to stop the trouble at the beginning. Since it is largely habit the following preventive measures should be taken:

1. Don't crowd too many chicks in a small space.
2. Provide a balanced ration so that the chicks do not crave animal protein.
3. Keep the chicks busy. Hang up green feed, chunks of sod, or other material for them to pick at. It is natural for a chick to pick.
4. Get the chicks outdoors as quickly as possible, so they can run around instead of fight and pick one another.
5. If the habit gets started hang up pieces of raw meat for them to pick.
6. Separate the picked ones and paint the injured parts with tar, or some other sticky, distasteful material.

Coccidiosis

Coccidiosis causes the death of thousands of chicks in Ohio every spring and summer. It occurs usually between the ages of

2 and 10 weeks. It is caused by the presence in the intestines of large numbers of minute coccidia which poison the chick. The disease is highly infectious.

The symptoms are rather difficult definitely to diagnose and a microscopic examination is the only sure way to make a definite diagnosis. The infected chicks act droopy, become thin and emaciated. The wings sag, and in some infections the droppings are bloody. On post mortem the caeca, or blind intestines, are usually full of hard, white, cheesy material, sometimes mixed with blood.

Treatment is not satisfactory. The disease should be prevented by rearing on clean, new ground where there is a good sod. After the disease appears feed very heavy on milk. Give Epsom salts every few days, 1 pound to 4 gallons of water or milk. When liquid milk is not available use powdered milk in the mash, this powdered milk to constitute 40 percent of the mash until disease disappears, when the regular ration can again be fed.

Sore Eyes

One form of eye trouble is similar to eye roup in mature birds. In this form the eye becomes swollen and contains a large lump of white, cheesy material, which should be removed and the eye washed out with a good disinfectant. The trouble is caused by a lack of sufficient green feed in the ration and can be prevented and cured by the liberal use of green feed. Where a good range is lacking, green feed should be supplied.

Another eye trouble is an epidemic in which the eyelids become stuck together, the exact cause of which no one seems to know. This can be helped by washing the eyes with a two percent solution of boric acid. Dusty litter may also cause some trouble and should be guarded against.

Gapes

Gapes are caused by small worms which attach themselves to the lining of the windpipe and cause strangulation by closing the air passages. These parasites are contracted from infested ground and the trouble should be prevented by rearing chicks on ground free from gape worms.

Intestinal Worms

A large number of flocks of young chicks in Ohio become infested with intestinal worms sometime during the spring or summer. The worms prevent a normal growth and development and are

the cause of a great many stunted and runty pullets. More and more trouble from this source is being noticed each year.

The infested birds become thin and emaciated, and walk with an abnormal or stilted gait. In bad cases individuals may lose control of the neck and leg muscles. The only sure way of diagnosing the trouble is to take a suspicious individual, kill it, and slit the intestines from one end to the other. If worms are present they may easily be seen. There are three main types of worms:

1. *Large round worms* which are found in the main part of the intestines. They vary in length from two to four inches and are about as large around as the lead in a pencil.

2. *Small, round, or hair worms*, found only in the caeca or blind intestines. They are about $\frac{1}{2}$ inch in length and as large around as a fine hair. The contents of caeca must be closely observed to see the worms.

3. *Tapeworms* are found in the main part of the intestines. Flat, white, segmented, ribbon shaped worms varying in length from $\frac{1}{4}$ inch to several inches.

Treatments are not entirely satisfactory. Chicks should be reared on fresh ground free from worms. The following treatments are the best known at the present time:

For the round worms, if infestation is but slight, feed 2 pounds of fine tobacco dust, containing at least $1\frac{1}{2}$ percent nicotine to each 100 pounds of mash. If infestation is heavy use the following mixture for each 100 birds: Take 1 pound of tobacco stems or clippings, cover with water and cook for 2 hours. Starve birds for 12 to 15 hours. This can be done by feeding very little or nothing at night. Then feed a moist mash containing the cooked tobacco juice and stems. Follow in 4 hours with a dose of Epsom salts, 1 pound to 4 gallons of water. After this keep 2 percent tobacco dust in the mash. Repeat treatment if necessary.

For individual treatment give each bird one nicotine sulphate capsule.

In treating tapeworms, take a gallon of wheat and oats ($\frac{1}{2}$ gallon of each), cover with water, add 1 large tablespoon of concentrated lye and cook for 2 hours. Starve as described above and feed all of this cooked mixture the birds will eat. Follow with Epsom salts. Repeat treatment if necessary.

For individual treatment give each bird a teaspoonful of turpentine and sweet oil mixed half and half.

Poisoning

Poisoning is caused by feeding spoiled or musty feed. Symptoms may be droopy chicks, diarrhea, or loss of body muscles, and in bad cases rapid death. Give Epsom salts immediately at the rate of 1 pound to 4 gallons of water or milk.

Lice

Lice should be prevented by thoroughly cleaning and spraying the brooding quarters before chicks are put in. If present on chicks apply a drop of lard or vaseline on the head. After the first few days dust with sodium fluoride.

Mites

Mites should be prevented by thoroughly cleaning and spraying the brooding quarters. This is also the only treatment after they are present.

INDEX

Ohio's "Big Ten" Rules for raising chicks:	
1. Hatch early.....	2
2. Prepare brooder house.....	2
3. Provide sufficient space.....	3
4. Do not feed chicks too soon.....	4
5. Feed the Ohio ration.....	4
6. Feed large amounts of milk.....	6
7. Provide green feed liberally.....	7
8. Get chicks outdoors early.....	7
9. Rear young stock separate.....	7
10. Separate the cockerels.....	8
Baby chick troubles and their control:	
Weak chicks	9
Diarrhea	9
Crowding	10
Leg weakness	12
Cannibalism	13
Coccidiosis	13
Sore eyes	14
Gapes	14
Intestinal worms.....	14
Poisoning	16
Lice	16
Mites	16