

BROILER PRODUCTION

Organic Brooder Management

Karma Glos, Kingbird Farm

As spring rolls into central New York my thoughts turn to two warm places, the greenhouse and the brooder. It is time to ready these spaces for tiny seedlings and chicks that will grow and prosper in the coming months. Both of these structures are designed with light, warmth, and safety in mind. They both must be sealed against the elements and yet full of fresh air and sunshine. Chicks thrive in a naturally lit environment.

The Chicks

I open the poultry catalogs each winter with several categories of fowl to order: broilers, production layers, heirloom layers, ducks, turkeys, and miscellaneous rare breeds. The broiler chicks (800) come from Timothy Shell's pastured breeding flock and come popping out of the boxes with great spunk. The "practical" production layers of which I purchase 100 replacement chicks every spring and fall are typically Rhode Island Reds from Reich's Hatchery. I add an additional 50 heirloom layers (Delawares, Dominiques, or Wyandottes) from Privett Hatchery. Meat ducks (50 Pekins) and turkeys (50 Large Whites) also come from Reichs. The 100 rare breed chicks I purchase annually for resale to collectors and small flock owners arrive from Privett early in the spring so they are well grown in time for April farmers' market. These 1,150 chicks (excluding the turkeys and ducks that are brooded elsewhere) are all easily brooded in our small brooder house.

Most chicks we order, with the exception of Shell's broilers and the turkeys, are readily available and can be ordered nearly any time. If broiler chicks are ordered from large hatcheries like Reichs, there really isn't much of a rush either. There is however only a small window for hatching turkeys and if you need them on a certain date (especially a later date in July) order them as early as you can. I like to have all my ordering done in February so I know when chicks are coming and can schedule brooder availability and processing dates.



Rosie with turkey chick.

All hatcheries require ordering a minimum of 25 chicks. There are four sections in a standard shipping box; each section holds 25 chicks. This number is necessary for the chicks to maintain body heat during shipment. Chicks from Pennsylvania hatcheries usually come by ground and those farther are shipped next day air. In my area chicks arrive by truck at my local post office who then calls me when they arrive. If you are planning to receive hundreds or thousands of chicks at your post office it behooves you to make it easy on the staff. Arrive promptly when they call (chicks can be noisy in a small post office) and take them some eggs. While still at the post office inspect the chicks and check for any dead. If you need to make a claim for dead chicks it needs to be done at the post office. When counting dead remember the hatchery usually adds an additional two or three chicks per box. No matter how far away our chicks have come, we very rarely have any death in shipment. The system works very well.

The Structure

Prior to any chicks arriving the brooder house must be prepared for the season. My brooder is in use nearly year round and must be refitted for the chicks. The last batch of birds using the brooder in fall is replacement layers (100). These pullets spend all winter in the brooder on a deep pack accumulated throughout the season. They are ready to begin laying in early March and are then moved into the chicken greenhouse with the mature layers. This gives me a chance to renovate and repair the brooder before the broiler

and layer chicks arrive the first week of April.

The design of our brooder is very simple with a few key elements that make it work so well for us. The structure is 10' x 12' with a 12' front and a metal shed roof. The floor and walls up to 3+' are rough cut poplar. From the low wall to the shed roof it is clear plastic to allow as much light as possible. The entire brooder is lined with 1" chicken wire and the floor is covered with hardware cloth. Attached to the rear of the building is a 10' x 12' plywood deck covered by an old Salatin style pasture pen. This "poultry patio" is accessed by the chicks through a small door in the brooder wall.

Many of the elements of this brooder were designed with the chicks in mind. We wanted to prepare them for their lives out on pasture. The plastic walls allow abundant natural light and the "poultry patio" gives them a chance to adapt to weather and foraging within the safety of the brooder environment. We can begin the transition to a pasture-based life by regulating their day with natural light and feeding them grasses and other plants on the patio. This method has reduced our pasture mortality to almost zero.

We prepare the interior of the brooder to accommodate 200-300 chicks for two to three weeks. First the previous year's pack must be removed and shoveled into the pig pens for further mixing and composting. Next the brooder is aired out and checked for holes. During the winter, under deep pack, the rats can spend a lot of time figuring out how to gain entry. Any holes are covered with hardware cloth and torn plastic is replaced. The patio is also shoveled out and allowed to dry. We do not wash, sanitize, or sterilize the brooder.

Once the brooder is sealed up again we start a new pack with 6-8 inches of hardwood shavings which we buy in bulk from the local sawmill. We do not use sawdust (too dusty), cedar, walnut, or cherry shavings (risk of poisoning). Two 250-watt red heat lamps are suspended from the ceiling on the side of the brooder away from the door. Directly inside the door are two or three low 3' trough feeders and two one-gallon plastic drinkers placed on boards for stability on the shavings. As the chicks grow larger, feeders will be added and a Plasson Bell Drinker with a

five-gallon bucket will be suspended from the ceiling. When the chicks first arrive we offer them chick grit and feed on old egg flats for easy access and later keep grit supplied in a metal feeder on the wall.

The Amenities

No matter how large your brooder is, it is vital to have it ready and waiting when the chicks arrive. Right after I hang up the phone with the post office I turn on the heat lamps and prepare warm water with molasses and apple cider vinegar. Warm water is particularly helpful to chicks that arrive in March. To each gallon of warm water I add 1 tsp. of organic blackstrap molasses for energy and 1 tbsp. of organic apple cider vinegar to increase the acidity of the chick's gut and help prevent coccidiosis. Needless to say, I do not add any coccidiostats. Using this water mix and a deep litter I have only had one brief bout of coccidiosis in layer chicks that resulted in the loss of only ten chicks out of 200.

When I place chicks in the brooder I make sure to dip their beaks in the warm water. It's like priming them. Typically they will then huddle up under the lamps for a while before venturing out to peck feed and grit out of the egg flats. Within a few hours they are well distributed among the heat, feed, and water locations. I am careful to observe them several times during the first day to make sure there is no piling up, over-heating, or other problems.

The chicks are confined to the brooder for the first week. After this, if the weather is mild, we begin allowing them onto the patio. They have already been receiving chickweed, plantain, and clipped grass in the brooder and now it is time to begin foraging through chunks of sod and bunches of plants (clover, chickweed, dandelion, and vetch) on the sunny patio. At this time we may also begin turning off the heat lamps if it warms up during the day and eventually at night as well. After another week or two, depending on the weather, we gather them up in crates and move them out to pasture.

Feed Stuffs

The feed chicks (especially broilers) receive in the brooder is critical to their start in life. It must fulfill all their nutritional requirements and support their immune systems. Our feed is a custom-ground certified organic grower mixed with select supple-

ments and locally grown grains whenever possible. It is ground, mixed, and delivered bulk by Lakeview Organic Feeds in Penn Yan, New York. Originally it was based on Joel Salatin's recipe, but grain availability and certification regulations have forced us to adapt it. Previous NOFA-NY standards did not allow for the use of crab or fish meal which supplied essential amino acids for quickly growing broilers. Chickens are not vegetarians and growing chicks cannot find enough animal protein on pasture to fulfill their needs. Without access to any animal proteins we were forced to add a synthetic amino acid (dl-methionine) to our grower feed in order to keep broilers and turkeys from falling apart. With the new national standard we will be allowed to utilize fish and crab meal to complete our ration in the coming year.

Pests and Predators

Protection of very young chicks in the brooder is critical but difficult. For many years we did not have predator problems in our brooders. Perhaps an occasional mouse or circling hawks, but no predation. That all changed last year when the rats moved in. They have found fabulous refuge under our barn's cement slab and a cornucopia of organic chicken feed to pilfer. All year we battled them with traps, cats, dogs, chicken wire, pitchforks, and even approved bait (Quintox). But nowhere was the war harder fought than in the brooder. Rats love to snack on baby chicks. They flay the little chicks expertly or simply eat their heads and leave the rest. I have no tolerance for this.

We lined the brooder with chicken wire, so they ate through the floor. We put bait behind the wire and they ignored it (why eat it with so much yummy chicken feed around!). We installed high decibel alarms, so they got earplugs (we think). They found every crack and crevice we failed to seal and slipped in every night to gorge. They particularly like the tiny Silkie chicks. Once broiler chicks were a week old the rats pretty much stopped bothering them, but before that age, the chicks were in danger. We continue to fight battles, and the war is far from over, but we keep the wily rodents to a dull roar. We've even considered raising a brooder cat this spring.

Deep Thought on Deep Litter

One of the biggest differences between our brooder management and that of conventional operations is the deep litter pack. We do not remove litter at any time during the brooding season.



Brooder with "Poultry Patio"



After each batch of chicks we add 6-8 inches of fresh shavings on top of the pack. This is continued throughout the season until the last batch of layer chicks takes over occupancy. These birds remain on that pack all winter while it composts. The litter, which is now compacted down to approximately foot, heats up and warms the brooder all winter. The young hens love to dig holes in the pack and dust in the warmth.

Leaving this pack intact jump-starts the composting process and warms the birds at the same time. In addition, we believe this pack provides an incubator for good bacteria and a mild immune booster for the chicks. Each batch of chicks is lightly exposed to the bugs of the last batch, giving them natural immunity and vigor. In our 6 years of using this method we have not had any major illness. We get a little pasted vent early on which we think is due to the chicks not drinking enough water when its cold. Last year we had our first small case of coccidiosis when a new batch of Rhode Island Reds arrived in the brooder already containing two week old Dominique chicks. The Reds immediately came down with coccidiosis and started dropping. I continued to add vinegar to their water and let the illness take its course. Five Reds died within the first couple of days and then five more subsequently. The older Dominiques never showed any signs of sickness. Had I treated with coccidiostats I would have still lost that many and I wouldn't have strengthened the immunity of the other chicks. Our brooder losses usually occur within the first day (just weak chicks) or from rats.

Closing Thought

In conclusion, I believe good organic brooder management is based on the principles of natural light, wholesome feed, outdoor access, and greens to eat. If the brooder is a warm, bright, good smelling environment where you might like to curl up for a nap, then its right for your chicks too.

HATCHERIES

Timothy Shell, Pastured Peepers, 407 Mt. Solon Rd., Mt. Solon, VA 22843 (540) 885-4965 tshell@firstva.com

Reich Poultry Farms, Inc., 1625 River Road, PO Box 100, Marietta, PA 17547 (717) 426-8061

Privett Hatchery, PO Box 176, Portales, NM 88130 1-800-634-4390

CERTIFIED ORGANIC & TRANSITIONAL FEED

Lakeview Organic Grain, 119 Hamilton Place, Penn Yan, NY 14527 (315) 531-1038

Kreamer Feed, Inc., PO Box 38, Route 522, Kreamer, PA 17833 (507) 374-8148

BROODER EQUIPMENT

Brower, Attn: Keith Perron, Highway 16 West, PO Box 2000 Houghton, IA 52631 (319) 469-4141

We can try to address your questions in future columns. Contact Karma Glos at Kingbird Farm, 9398 West Creek Road, Berkshire, NY 13736, 607-657-2860 <karma@kingbirdfarm.com>

Reprinted from Organic Farms, Folks and Foods, the quarterly newsletter of the Northeast Organic Farming Association of New York, Inc., (©2002 by NOFA-NY), an organization dedicated to the creation of a sustainable regional food system which is ecologically sound and economically viable. For permission to reproduce more copies contact NOFA-NY at: 518-534-5495. Please include this message in any reprints.