
Thoughts on Brooder Safety: When bad things happen to good chicks

Karma Glos

The snowy morning of October 23 started like any other morning as my husband Michael went out to start chores. However, I knew something was amiss when he returned to the house in a short time and asked to speak with me outside. I knew the look on his face; I had seen it before when he found a horse down with colic in the barn. This time it was a fire, a fear of any farmer. Winter barn fires are all too common and we have always been determined to avoid being the victim of such a tragedy. He quickly assured me that the fire was confined to a brooder and had miraculously not spread to the barn. However, the fire had devastated a hoop house brooder located just behind the barn. Two hundred week-old chicks had been living there. These replacement layer chicks were being brooded in the hoop house since the main brooder was still full with our last batch of broilers.

I quickly pulled on my boots and headed out to inspect the damage. One side of the hoop house was melted away and the PVC bows drooped from the heat. The bedding was still smoking and charred

wood hissed with steam as snow fell lightly. We pulled away the metal brooder hoods to reveal piles of singed and blackened chicks. The fire had been quick and hot. The chicks died where they slept. This was the kind of devastation I cannot bear. Losing a structure and equipment is financially hard, but losing all those little lives is far worse. As I sifted through the smoking debris, I heard faint peeping from one side of the brooder. Huddled in a corner were five singed chicks with their eyes closed. I quickly scooped them up and ran to the house to warm them. After dipping each tiny beak in fresh water for a drink I nestled them in a box under the wood stove and returned to the brooder to assess the fire's cause.

From what we could determine the fire was caused by short in the heat lamp cord where it was in contact with a chicken wire covered wooden brace. The lamps themselves were relatively undamaged, but one cord completely melted and the wooden brace below it completely burned away. It is likely that the fire then spread to the dry wood shavings and burned hot under the metal brooder hoods killing all the chicks where they slept. It also spread to the wooden baseboards of the hoop house and a nearby pasture pen. The heat of the fire melted the greenhouse film and caused the PVC hoops to sag. It also melted everything nearby: plastic chick waterers, metal feeders, and a plastic stock tank. But, that's where it stopped. For unknown reasons the fire abruptly stopped after burn-

ing half of the hoop house. Large 4 X 4 baseboards burned halfway and stopped. The bedding burned on 25% of the house floor and stopped. Though it was snowing lightly all night, it was not snowing nearly enough to stop or even hamper a fire that hot. Luck was on our side that night as the fire stopped four feet from the barn and the ground fault interrupters worked, not disrupting power to the rest of the barn. There was no new day for those 195 little chicks, but the rest of the farm was spared any further destruction. The five survivors recuperated in the house over the next two weeks and made a full recovery. They are now nearly full-grown and boss around the new batch of chicks. We are currently developing our own breed of flame retardant chickens.

While we waited for a new batch of layer chicks to arrive (very difficult to find in late October) we carefully reviewed what if anything we could have done to prevent this tragedy. Our infrared brooder lamps (250-watt) were new and I religiously inspect them between batches of chicks. We have had lamp cord shorts before, resulting in tripped breakers and cold chicks, but nothing that caused a spark. The critical spot to check on brooder lamps is the cord connection right at the porcelain socket. If exposed wires jiggle loose and come in contact with something metal (i.e. chicken wire, baling wire, lamp hoods) it can cause a spark. In a dry brooder many things can ignite, including wood, dust, litter, feed, straw, or feathers. Infrared heat lamp bulbs are also incredibly hot and will likely ignite any flammable material they come in contact with (including cold chicks that huddle too closely). The bulbs in our lamps were clearly not to blame for this fire, but in the past we have had them scorch wood that was nearby.

In order to ensure a safer brooder for our next chicks and all those to come, we made a few changes. First we attached permanent, adjustable chains to the ceiling (in our permanent wood brooder) for safely hanging brooder hoods and lamps without contact with any wood. Next we purchased heavy-duty heat lamps; lamps better than we could find at the local feed store, but still relatively cheap. These lamps have a thicker cord and better connection at the socket. We hung these lamps over the

brooder hoods on adjustable chains so the lamps can be raised as the hoods are raised. The chains are attached only to the lamp hook so the cord does not come in contact with anything. If the cord needs to be supported between the lamp and the power outlet, we use plastic cable ties that are strong and cannot cause a spark. Our brooders are designed so the heat lamp hangs over the hood with the bulb casting heat down through a hole in the hood. These hoods are old gas brooders that we use to focus and hold the heat from the electric lamps. The lamps are then plugged into a power strip with a surge protector, which tends to shut off when heat lamps short out or bulbs break. Broken bulbs can also be a fire hazard. They can break from impact, or more commonly from over tightening. The cheap (relatively) bulbs are very fragile and tend to break at the neck when tightened or loosened. To avoid this problem we now use heavy duty Philips heat lamps that are very thick glass with a strong neck. Unfortunately these lamps typically have only 175 watts and we now need to use more bulbs. These bulbs are however incredibly tough and give us more heating options as we add or remove lamps to adjust the heat as chicks grow.

There are, of course, other heating options for brooding chicks. There are warm-room brooders with space-type heaters that heat the entire house, or cool-room brooders which employ a hover or heat lamp to warm just one area while the rest of the house remains cool. Cool-room brooders are most practical for our cold climate since heating the entire brooder can be very expensive. Either method can employ electric or gas to heat the space. I have even heard of wood heated brooders, but that would require a lot of attention to maintain. Gas brooders are more expensive than electric heat lamps, but radiate much more heat and are designed to brood at least 1000 chicks. We currently use four lamps (4 lamps @ \$6 and 4 bulbs @ \$12 plus electricity 25 hours/day) to brood 200 chicks in the winter. Propane brooders can be purchased for \$115-250.00 plus the propane tank and provide far more heat than my four heat lamps. Although investing in the propane brooder makes sense, I just can't get used to the idea of an open flame. We use propane in our greenhouse, but very little is flammable even if it weren't wet all the time, and the greenhouse is far removed from other buildings and livestock. Therefore, we will continue to make the electric heat lamps as efficient and safe as possible until we are ready to make the transition to a gas brooder. The fire has forced us to review our methods and explore alternatives as we continue to grow and improve our practices.

Brooder Supplies

Farmer Boy Ag Supply 1-800-845-3374 www.farmerboyag.com

FarmTek 1-800-327-6835 www.farmtek.com

Brooder Management Information

Brooder Houses & Equipment NebGuide#G80-530-A www.ianr.unl.edu

Success with Baby Chicks Robert Plamondon www.plamondon.com

Karma, Rosie and Michael Glos raise much more than chickens at Kingbird Farm. Contact her at 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.
