

It may sound like a good idea, but is it really?

*By the Technical Team, Ziggity Systems, Inc.,
101 Industrial Parkway East, Middlebury, Indiana 46540, USA*

Every decision you make has consequences attached. Some are expected and beneficial; others are unintended and damaging. For poultry farmers, the unintended consequences of decisions can cause considerable harm to the bottom line of the operation. In this article, we will examine five situations where failure to fully analyze the options can cause serious financial harm.

Can chemical additives improve results?

A growing body of evidence suggests that adding acidifiers, chlorine or iodine to the drinking water can improve bird performance. Research suggests that lowering the pH and adding chlorine destroys harmful bacteria both in the watering lines and in the birds' crops. Some poultry farmers also have had success at decreasing ammonia levels by putting acidifiers on the litter. The acids attack the bacteria that facilitate the breakdown of uric acid.

Interventions in the water and litter to reduce bacteria challenges and improve bird performance seem like eminently good ideas. The problem, however, is that many of these chemicals are inherently corrosive. Too high a level of these chemicals in the watering lines have the potential of damaging drinker components, such as stainless steel balls, seats and trigger and metering pins in nipple-type drinkers. And, acid in the litter can cause damage to other metal components in the poultry house, such as brooder stove canopies and watering system support pipes. So, an attempt at improving production can result in extensive equipment damage requiring early replacement. The key is to either use levels or concentrations of these chemicals that do not harm equipment, or avoid using corrosive chemicals all together. All too often, a producer will

approach the use of chemicals with the philosophy that if a little is good, more must be better. That kind of thinking is ripe for unintended consequences.

Ziggity recommends that producers use chemical additives only after very careful consideration. Know what the pH of your water is and how the chemical additives will affect that level. Determine whether any gains in production will provide sufficient income to make up for damage done to the watering system. And probably most importantly, consider upgrading the equipment, keeping biofilm out of the watering lines and managing the drinkers so that the litter remains dry and friable. These actions can make the need for corrosive chemicals unnecessary.

Pricing vs. performance?

Frequently, manufacturers offer distributors incentives to sell poultry house equipment as a package. The distributor usually offers poultry farmers a discount if they purchase the package. However, accepting the package can mean accepting some inferior components.

To illustrate: a Canadian producer built two poultry houses. Each is two stories, 46 by 200 feet. Equipment costs include a feeding system, watering system and ventilation system with controls.

The cost of the installed equipment package for Barn A was \$69,920 and included a \$3,680 discount for a pre-packaged group of equipment, including the manufacturer's feed system and watering system.

The cost of the installed equipment for Barn B was \$73,600 and included feed, ventilation and watering equipment specifically selected for their performance.

Birds in House B outperformed birds in House A each growout. On average, the producer reaped \$1,550 more revenue in each flock. Based on this example, the time required to recover the higher initial investment cost is just over two flocks. All subsequent flocks in Barn B are simply increasing the producer's return on investment.

Does increasing pressure increase consumption?

Broilers drink approximately 1.6 to 1.8 lbs. (0.7 to 0.8 kg.) of water for every 1 lbs. (0.45 kg.) of feed they consume. However, birds can drink only so fast and only so much. Producers cannot force them to drink more. A common myth in the poultry industry says that increasing the pressure in an enclosed watering system increases the amount of water the birds consume.

Running a watering system with too much pressure delivers more water than the birds can consume such that the excess water spills onto the litter. Wet litter results in elevated ammonia levels which can harm the health of the birds and contribute to poor flock performance.

Virtually all manufacturers of nipple-type drinkers without catch cups recommend minimum pressure settings for day-old chicks. Some manufacturers recommend settings as low as 2.5 cm (1 inch) of column height pressure. Manufacturers differ on pressure settings after the first week.

Ziggity recommends that producers determine the correct pressure setting by examining litter conditions. For wet litter, reduce pressure until it starts to dry. Only then, increase pressure. Producers should strive for friable litter.

How well is your well?

Many farmers have no idea what quality of water comes from their wells. They test the well after opening it and then assume the water quality remains constant.

Groundwater changes over time and that means the quality of water in the well changes. Water quality issues become more significant when you consider that about half of all poultry farms rely on the same well to supply water to their families and to their flocks. Well contamination by pathogens or chemicals can severely limit flock performance and present a real threat to a family's health.

Ziggity recommends that producers test their wells regularly — usually once a year. Also, consider testing the well any time the taste, color or odor of the water changes, or if unexplained illnesses occur in the family. If drought conditions prevail, pay closer attention to the well. The extreme demands for water brought on by drought can affect the aquifer.

How high do you set the drinker line?

Producers should make sure they have the drinkers at the right height for the birds. Drinkers set too low result in water spills. Drinkers placed too high inhibit birds from getting all the water they need.

Producers need to pay special attention during the first few days of a new flock. If the chicks do not drink or cannot find the water, they will rapidly dehydrate. On the first day, place the chicks close to the drinkers. For nipple-type systems, the end of the trigger should be just slightly higher than the chicks' eye level. Also, provide sufficient candlepower, enough to attract chicks to the metal pins.

As the birds find the drinkers, raise the lines slightly, encouraging the chicks to stretch their necks. By the second or third day, drinker height should encourage the chicks to peck at about a 45-degree angle.

As the birds age, continue to raise the drinkers. By four weeks, the drinker height should require the birds to peck at about a 50- to 55-degree angle. (Imagine drawing a line from the bird's feet to its beak.) Drinkers that are too high force the birds to elevate their breasts and stretch their necks, leading to inadequate consumption. Some producers will keep the drinkers so high the birds must jump to activate the trigger pin. This only leads to water spillage.

Conclusion

Poultry farmers operate on very tight margins. Any number of events, many of them unforeseeable, can result in poor performance. For that reason, poultry farmers need to pay close attention to the decisions they can control. You should not be a victim of unintended consequences.

Ziggity Systems, Inc. is the only manufacturer 100 percent focused on poultry watering for improved performance. For more information, write Ziggity Systems, Inc. at 101 Industrial Parkway, P.O. Box 1169, Middlebury, Indiana 46540-1169 USA, call +1 574.825.5849, fax +1 574.825.7674, or visit its Web site at www.ziggity.com