

WHEN YOU CAN'T BE ON THE LEVEL

How proper watering system setup and management can overcome the challenges of sloped floors.

Sloped floors in poultry houses present challenges for nipple-type watering systems. But these challenges can be overcome through proper setup, special equipment and effective management.

Level houses are ideal for nipple-type drinkers. In level houses, water pressure is the same throughout the system, so all drinkers discharge the same amount of water when activated. This is not the case in sloped houses. Drinker discharge progressively increases with the increased water pressure as you move downhill from the regulator. As a result, producers cannot obtain uniform water discharge rates throughout the house.

Why should this be a problem? Drinkers are designed to produce optimal results within a certain pressure range. If the pressure is higher than recommended, results suffer. For example, a Ziggity broiler drinker requires a regulator pressure setting for day-old chicks of 1 to 2 inches/2.5 to 5 cm. At this pressure setting, day old chicks can easily consume all the water discharged from the drinker. At a 4 inch/10 cm setting, drinker discharge will be more than twice the amount discharged at 1 inch/2.5 cm. This amount is far greater than can be consumed by a day old. Oversupply results in spillage, creating wet litter, ammonia release and an overall unhealthy environment. This affects birds adversely, increases medication costs and generally impairs flock performance.

The solution is to make certain all drinkers in a sloped house operate within a tolerable pressure range so drinker discharge does not lead to the problems described above. Traditionally, some producers used slope regulators installed in the line to provide pressure control. This is an

effective solution, but it has two drawbacks. First, every regulator needs to be adjusted manually whenever a pressure increase is made during the production cycle. This adds considerable labor time. Second, the cost of installing additional slope regulators is substantial.

A new solution that eliminates the two drawbacks described above is the Slope Neutralizer. For starters, a Slope Neutralizer costs considerably less than a slope regulator. When properly installed and managed, it has the following benefits:

1. Reduces built-up slope pressure by a set amount.

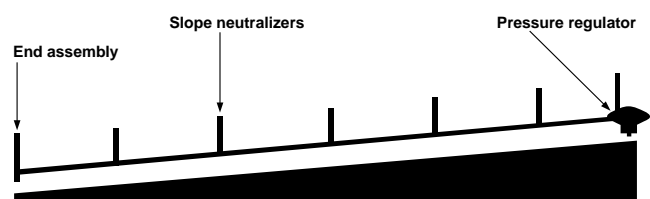


FIGURE 1

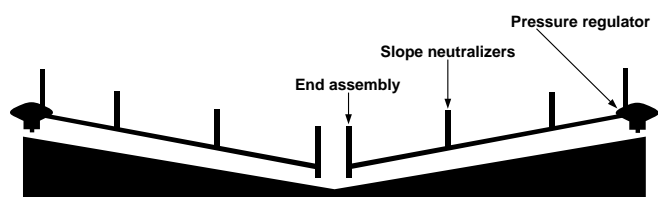


FIGURE 2

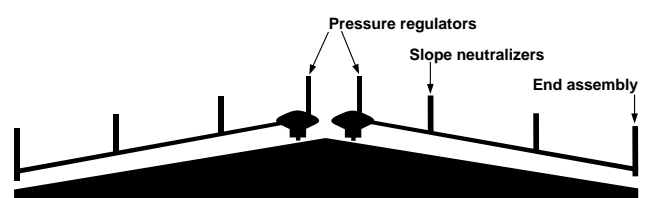


FIGURE 3

2. Requires no pressure adjustment. When water pressure settings at the regulator are changed, the Slope Neutralizer automatically increases or decreases its outgoing pressure by the same amount.
3. Maintains pressure setting even when birds are not drinking from the system. Eliminates pressure creep commonly experienced with other units on the market.
4. Allows high pressure flush through.

Regulators must be mounted on the high end of the line, whether that is at one end (Figure 1), at both ends (Figure 2) or in the middle of the house (Figure 3). Water should only flow downhill; never try to push water uphill. It is also important to mount Slope Neutralizers at appropriate points in the line. A Slope Neutralizer with a 4 inch/10 cm pressure reduction must be mounted where 4 inches/10 cm of fall (from the regulator or another Slope Neutralizer) is present in the line. Mounting the units either too far uphill or downhill from the appropriate point will diminish their effectiveness. The manufacturer provides detailed

PONDER POINT What is Flow Rate Anyway? Thoughts on "Dynamic Flow."

There's a lot of talk about flow rates for poultry drinkers. But the traditional method of measuring and stating flow rates bears no resemblance to real world conditions. Since birds do not push or lift the drinker's trigger pin for long periods of time the way we get beverages from a soda fountain, it's irrelevant to test flow rates of nipple drinkers by holding them open (static flow rate).

In real life, birds peck at the trigger pin with short, quick jabs. Water is delivered in varying amounts depending on how the bird activates the trigger, regardless of the water pressure. A light tap, for instance, will release less water than an aggressive knock.

This gives rise to the concept of "dynamic flow." The flow actually changes with different drinking actions. There is no such thing as a constant flow in real poultry operations. Therefore, it's not useful to measure and compare static flow rates when looking at pressure settings and drinker types.

Instead, to manage the proper pressure settings for your watering system, look at bird performance and moisture content of the litter. If your bird performance is satisfactory and your litter remains dry, it should mean the right amount of water is being released at the drinkers. Let results be your management guide, not an arbitrary reference to drinker flow rate (see Management Topic on page 8).



Holding the drinker open is not a useful way to measure flow rate.

instructions to ensure proper mounting locations for all Slope Neutralizer models.

Even with proper setup and placement of Slope Neutralizers, it is still important to maintain regulator pressure settings at the low end of the range in all sloped houses. This will ensure the best chance for minimizing damp litter and afford your birds a more productive environment.

For more information on Slope Neutralizers, circle 01 on reply card.



Ziggity Galvanized Support Pipe Designed to Withstand Corrosion from Ammonia

Corrosion caused by ammonia release in poultry operations is curtailed with the new galvanized support pipe offered by Ziggity Systems for its watering systems. Ziggity ammonia tests have shown this pipe to be far more resistant to white rust than other common kinds of support pipes produced in North America.

Years of unsatisfactory performance from such pipes led Ziggity to find a manufacturer of galvanized support pipe that could withstand severe ammonia release as well other corrosive elements. A triple coating process provides such protection. Included are a layer of zinc, a conversion coating and a clear polymeric coating. All tubing is welded before it is coated, so even the welds are protected and none of the coating is harmed in the welding process. Strength and durability are assured without compromising the pipe's workability. An advantage of galvanized pipe versus a powder coated pipe is that it has the conductivity required to create a ground for anti-roost applications.

Swaged pipe ends afford quick and easy installation. Ziggity galvanized pipes are available in 10 ft. (3.05 mm) by 105 in. (26.67 mm) outside diameter sections.



Guidelines, Management Tool Help Make Proper System Adjustments

All Ziggity watering systems come with Management Guidelines for adjusting drinker height and water pressure for various ages of birds. In addition, producers using Ziggity Drinkers and E-Z Activator Drinkers can benefit by the Ziggity Drinker Management Tool. This fold-up measuring tool provides a simple visual guide for establishing proper system water column pressure and drinker height from the floor, based on bird age.

For more information, please circle 02 on the reply card.