

Sand in your watering system: best to stop it at the source

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Sand in a poultry watering system can be particularly irksome. The sand can cause drinkers to leak, damage the well pump and inhibit the effectiveness of the regulator. And, getting rid of the sand is not a simple process. High-pressure flushing is the usual remedy for removing foreign substances from the water lines. However, while high pressure flushing can remove a majority of the sand, it also can force sand granules into the drinkers throughout the line, causing them to leak.

Sand enters the system from the well. There are a variety of reasons why a well begins to pump sand. Among them is incomplete well development, especially for a new or rehabilitated well. (Well development is the act of cleaning the silt and debris created in the well and surrounding aquifer during the drilling process.) Having the wrong size screen at the aquifer level can result in sand. Or, there might be localized large openings in the screen as a result of corrosion or abrasion.

There is no single solution to remedying a sand pumping well. In most cases, you will need to call in a well professional for help. Among the corrective measures are replacing the screen with one having smaller openings; using one or more of the methods available to redevelop the well; and drilling the well deeper.

One concern is that you do not over pump your well. If you keep the permanent pumping rate lower than the discharge rate used during final development, the well most likely will remain sand free.

Filtration will keep a majority of sand out of the watering system, but you should not use a filter as a substitute for good well design and proper well development. If the well is pumping a large amount of sand, the filter will quickly become clogged and fail.

Also, changing the filter on each house can become a labor-intensive procedure. This past year, Parker-Hannifin Corp. developed a filter especially for poultry applications. This filter is large enough to handle the filtering duties for several houses, thereby saving time and effort for poultry farmers.

Only after the well is no longer pumping sand, it is time to work on the sand already in the watering lines. We cannot emphasize enough the problems that even a small amount of sand can cause. Ziggity drinkers, for example, are designed to operate with very fine tolerances. One or two grains of sand lodged between the ball and its seat or trigger pin will cause a soggy mess below that drinker.

To remedy this situation, Ziggity Systems has established a protocol for cleaning sand from a watering system. This procedure should be done between flocks.

- Disconnect the hoses at every regulator at the end of the hose drop from the ceiling, and run a connecting hose outside well away from the house. Turn on the valve at the ceiling and let the water run for at least 10 minutes for the first regulator. Then place the hose in the bottom of a large bucket and let the water run over the top of the bucket. (Use a white bucket if your sand is dark and a dark bucket if your sand is white.) Do this until you no longer see any sand accumulating in the bottom of the bucket.
- Repeat this procedure for each of the remaining regulators.

- Disconnect the regulator from each line and spray clean the inside of the regulator. Take off the white h valve and spray into all openings to make sure all sand is removed. Do this for each regulator in each house.
- Remove at least the first six sections of drinker pipe on each line and spray and flush each 10-foot section. If you see sand in section seven, continue this procedure until you no longer see sand.
- Next remove the drinkers in each section and either replace the entire drinker or the capsule in each drinker. (The capsule is made up of the cap, the metering pin, the stainless steel ball and the stainless steel seat.) You must do this on each section of drinker line.
- Once you are sure the lines are sand free, complete a standard high-pressure flush for the entire system.
- If your residence is served by the same well that provides your poultry houses, you will have to take remedial steps there, too. These steps will include draining the water heater, clearing faucet bubblers and cleaning showerheads.

As you can see, removing sand from a watering system is complicated and time consuming. The best solution is to make sure your well is not pumping sand and to filter the water before it enters the poultry house.

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.

