

# Investment Insight

## Recent Research Results

### What's ahead:

## New saturated buffer designs as an edge-of-field practice

### Researchers:

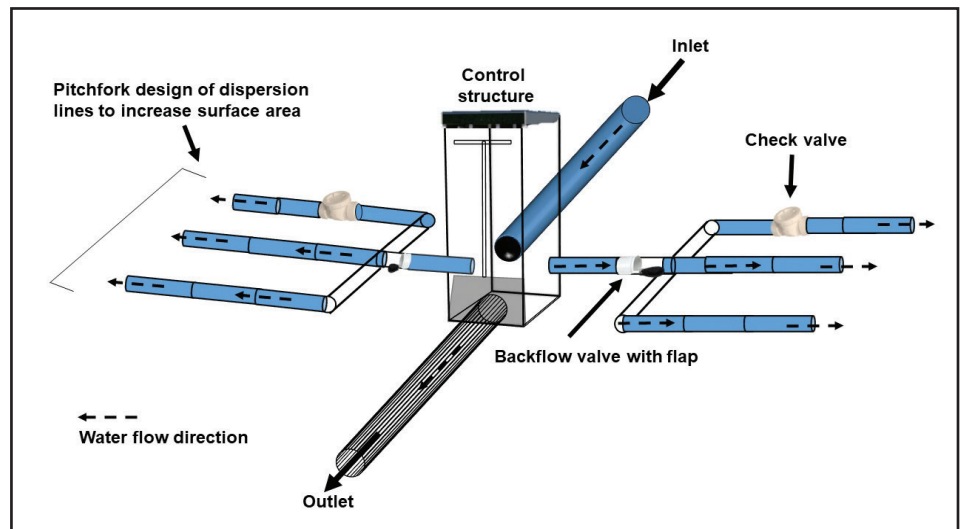
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Building upon past research, Dr. Schoonover and his team are demonstrating an alternative design of saturated buffers that address commonly encountered issues with the Best Management Practices (BMP) of saturated buffers. The benefits and limitations of standard and two-stage saturated buffer designs in southern Illinois have already been established. This new research will look at the alternative designs, as well as installation requirements and effectiveness under various field and climatic conditions. The research is taking place in Moultrie County.

In collaboration with Southern Illinois University Carbondale (SIUC), Illinois Farm Bureau, USDA-Natural Resource Conservation Service (USDA-NRCS), and the Illinois Chapter of the Land Improvement Contractors of America, the team will install a newly-designed saturated buffer system. The new design includes three retrofits to existing designs:

1. a multi-pipe (i.e., pitchfork de-

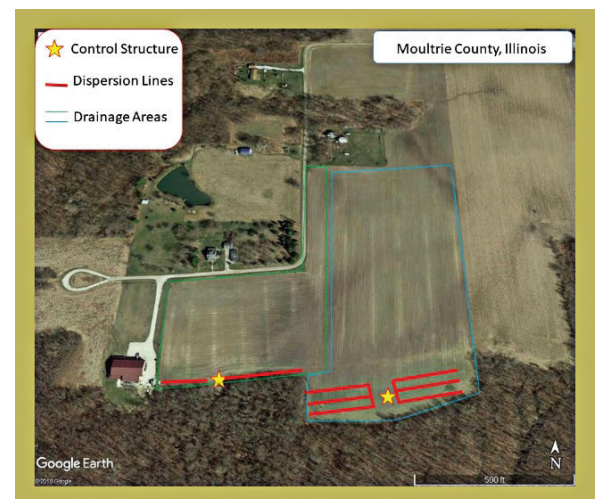


sign) drainage network for the saturating lines to treat more tile water by dispersing it over a greater area in the buffer;

2. one-way backflow valves in the lateral lines leaving each side of the control structure to prevent backflow of groundwater into the control structure; and

3. integrated shut off valves into the tile lines closest to the edge of the row crop field so they can be manually shut off, allowing the area to dry, prior to field operations.

The same new design will be installed in the same field with a standard saturated buffer to allow for side-by-side comparisons



between the two systems under the same farm management, soil conditions, and climatic variables.

