

Filtration for SDI Systems

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Worldwide, the major cause of microirrigation system failure is clogging.

All SDI systems require filtration. The filtration system is probably the most important single component of the SDI system. Its operation and maintenance must be well understood by the irrigator to help ensure the longevity of the SDI system.

Clogging can be caused by physical, chemical, or biological materials:

- **Physical clogging:** Silt, sand, organic and inorganic debris
- **Chemical clogging:** Chemical reactions can cause precipitates. Improper chemical additives to the irrigation water.
- **Biological clogging:** Slimes, bacteria, aquatic life, algae

Periodic or continuous chemical water treatment may also be required in addition to the filtration system to prevent clogging.

There are many different types of filtration systems. The type is dictated by the water source and also by emitter size. The dripline manufacturer will specify the required filtration (equivalent mesh size) for the selected dripline emitter size.

If an irrigation well is pumping sand, a cyclonic sand separator or other sand separation technology should be installed ahead of the primary filtration system.

Concluding Statement

Don't cut corners on selection, management, and maintenance of the filtration system. It is your most important tool in achieving a long SDI system life.

For more information, please pick up a copy of
"Filtration and Maintenance Considerations for SDI"
or visit the SDI website at
<http://www.ksre.ksu.edu/sdi/>
and look under K-State Reports