

Fertigation Backflow Prevention

Definition/Purpose

Fertigation Backflow Prevention is a combination of devices (valves, gauges, injectors, drains, etc.) to safeguard water sources from contamination by fertilizers used during the irrigation of agricultural crops. The practice is intended to modify or improve fertilizer injection systems with components necessary to prevent backflow or siphoning of contaminants into the water supply thereby improving and protecting the state's waters.

Policies

1. Other BMPs such as critical area planting, field border, filter strip, grassed waterway and nutrient management may further support this practice.
2. As a minimum, systems will include the following components:
 - a. **Check Valve** installed between the pump discharge and the point of injection.
 - b. **Vacuum Relief Valve** located between the pump and check valve.
 - c. **Automatic Low Pressure Drain** located between the pump and check valves.
3. ACSP funds can be used to fund retrofitting or installing injection equipment, check valves, gauges, drains and vacuum breakers.
4. Items that are unrelated to backflow prevention (e.g., tanks, mixers, or filters) are not eligible for funding.
5. Funding is limited to 75% of actual costs. Receipts are required for reimbursement. Total charge to NCACSP is restricted to a total listed on the NCACSP average cost list.
6. Systems must be designed by a technical specialist with an "I" designation or a professional engineer.
7. Approval of installation shall be limited to NRCS, Division or District technical specialist with an "I" designation.
8. BMP acres affected are required on the contract.
9. Minimum life of BMP is ten (10) years.

Standards

N. C. NRCS Technical Guide, Section IV, Standard #441 (Irrigation System, Microirrigation), #449 (Irrigation Water Management), #430 (Irrigation Pipeline), ASAE Engineering Practice Standard #EP 409.1 (Backflow Safety Devices for Chemigation).