Chemigation Backflow Prevention

Definition/Purpose

Chemigation Backflow Prevention is a combination of devices (valves, gauges, injectors, drains, etc.) to safeguard water sources from contamination by chemicals used during the irrigation of agricultural crops. The practice is intended to modify or improve chemical 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. NCACSP will only fund chemigation systems conforming to North Carolina Pesticide Board regulations.

2. Injection point on any chemigation system shall be downstream of the filtration system.

3. As a minimum, systems will include the following components:

    a. Double Check Valves installed between the pump discharge and the point of injection.

    b. Inspection Port located between the irrigation pump and check valves.

    c. Vacuum Relief Valve located between the pump and check valves.

    d. Automatic Low-Pressure Drain located between the pump and check valves.

    e. Flow Interruption Device installed on the pesticide supply line.

    f. Check Valve located on the pesticide injection line.

    g. Functional Systems Interlock (capable of shutting down the pesticide injection unit when irrigation water flow stops.)

4. Other BMPs such as critical area planting, field border, filter strip, grassed waterway and nutrient management may further support this practice.

5. ACSP funds can be used to fund retrofitting or installing injection equipment, check valves, gauges, drains and vacuum breakers.

6. Items that are unrelated to backflow prevention (e.g., tanks, mixers, or filters) are not eligible for funding.

7. Systems must be designed by a technical specialist with an "I" designation or a professional engineer.

8. Approval of installation shall be limited to NRCS, Division or District technical specialist with an "I" designation.

CHEMIGATION BACKFLOW PREVENTION SYSTEM	
Maintenance Period	10 years
BMP Units	EACH
Required Effects	ACRES_AFFECTED
JAA/NRCS Standards unless otherwise noted	ENG - 441 - Irrigation System, Microirrigation ENG - 449 - Irrigation Water Management ENG - 430 - Irrigation Pipeline ASAE EP409.1 MAR1989 (R2013) Safety Devices for Chemigation.
CS2 Reference Materials	NC-ACSP-11 Signature Page Map with BMP location, fields, and roads.