

## **02 NCAC 09L .2002      APPLICATION OF PESTICIDES THROUGH IRRIGATION SYSTEMS**

(a) Irrigation systems shall be fitted with antisiphon devices and a functional systems interlock that will prevent the backflow of pesticide or pesticide-water mixtures into water supplies or the backflow of water or pesticide-water mixtures into pesticide supplies during times of irrigation system failure or equipment shutdown.

(b) Pesticides shall not be injected into an irrigation system on the suction side of the irrigation pump.

(c) Safety devices or valves shall be installed between:

- (1) the irrigation system pump discharge and the point of pesticide injection into the irrigation system, and
- (2) the point of pesticide injection into the irrigation system and the pesticide tank or container in accordance with Rule .2002(d).

(d) Such systems shall meet the following criteria:

- (1) double check valves shall be located between the irrigation pump discharge and the point of pesticide injection into the irrigation pipeline. These valves, when installed, shall be on a horizontal plane and level. A deviation of not more than 10 degrees from the horizontal shall be set;
- (2) an inspection port shall be located between the irrigation pump discharge and the mainline check valves. In many cases, the vacuum relief valve connection can serve as the inspection port;
- (3) a vacuum relief valve shall be located on the top of the horizontal irrigation pipeline between the discharge side of the irrigation pump and the inlet side of the double check valves. The vacuum relief valve shall have an orifice size of at least 3/4 inch for a 4-inch diameter irrigation pipe. The orifice size shall increase proportionally to an increase in irrigation pipe diameter;
- (4) an automatic low pressure drain shall be located on the bottom of the horizontal irrigation pipeline between the discharge side of the irrigation pump and the inlet side of the double check valves. Such device shall be level and have an orifice size of at least 3/4 inch for a 4-inch diameter irrigation pipe. The orifice size shall increase proportionally to an increase in irrigation pipe diameter. The drain shall not extend beyond the inside surface of the bottom of the irrigation pipeline and shall be at least two inches above grade. The automatic low pressure drain shall discharge at least 20 feet from any water supply. The discharge from the drain shall be controlled to prevent the drainage from reentering the water supply;
- (5) a flow interrupter device shall be located in the pesticide supply line between the pesticide injection unit and the pesticide supply tank or container. A closed solenoid-operated valve or other similar device is an acceptable method to prevent flow of pesticide or water in either direction during pesticide injection system failure or shutdown;
- (6) a check valve shall be located on the pesticide injection line between the point of pesticide injection into the irrigation system and the pesticide injection unit to prevent the overflow of the pesticide supply tank or container; and
- (7) a functional systems interlock shall be provided. If interruption of the irrigation water flow occurs, the interlock must, at a minimum, cause the shutdown of the pesticide injection unit. If the irrigation pump and pesticide injection unit are at different sites, a low pressure cutoff, located near the point of pesticide injection into the irrigation system, may be electrically connected to the pesticide injection unit to provide for its shutdown in the event of low water pressure.

*History Note: Authority G.S. 143-463; 143-466;  
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