

SAMPLING FOR NITRATES

Sample Technique

The following techniques apply to wheat, other small grains, and other forages that you may wish to have tested for nitrate levels.

Harvest at least one (1) pound of fresh weight for each sample. The plants should be cut at the intended harvest height. We would suggest cutting the plants at no less than three (3) inches above the soil surface. Nitrates tend to accumulate in the lower stems. By keeping the cutting height above three inches, nitrate levels in the harvested plant should be reduced.

Collect a representative sample from each field. Usually five or more locations across a field will serve as a representative sample. Plants from the five or more locations in the field should be combined into one sample for nitrate testing.

If multiple fields are in question, wheat or other crops at different growth stages should be submitted as separate samples. Growth stage, the date when fertilizer nitrogen was applied, and the extent of freeze damage all could affect nitrate levels in the plants.

Cut plants should be stored in paper bags and mailed in cardboard boxes overnight to the testing laboratory. The better option is to put the plant samples in a cooler with ice and drive them directly to the laboratories the same day the plants were harvested. If the plant samples will be stored overnight, then they should be stored in a freezer in paper bags.

When collecting the plant samples, DO NOT put them in plastic bags. Plant samples stored in plastic bags at room temperature will lower nitrate levels, resulting in inaccurate results.

During the handling process, nitrate levels could decrease in the plant sample, especially if they are stored overnight at room temperature. If a period of time has occurred between harvesting and testing the samples, then you could expect that nitrate levels reported would be less than nitrate levels in the field.

Testing Laboratories

Breathitt Veterinary Laboratories in Hopkinsville, KY will return an answer within 24 hours. The Kentucky Livestock Disease Diagnostic Center (LDDC) will return an answer within 3 or more days. Both labs charge \$10 per sample. Both labs do not require a veterinarian to submit these samples. County ANR Agents and private farmers from Kentucky CAN submit samples directly to either Breathitt or LDDC. Several commercial laboratories may conduct the nitrate testing as well.

Contact Information

Murray State University Breathitt Veterinary Center PO Box 2000 715 North Drive Hopkinsville, KY 42241-2000 Phone (270) 886-3959

Livestock Disease Diagnostic Center 1490 Bull Lea Road Lexington, KY 40512 Phone (859) 253-0571 Fax (859) 255-1624