

## How to Collect and Submit Samples to TVMDL for Nitrate Tests

Collecting a good sample is critical to getting a meaningful test result.

Forages that tend to be potentially high in nitrate are sorghums (miaze, milo, johnsongrass, haygrazer, sudan, sudax), corn, and sometimes coastal that has been heavily fertilized. Pigweed or careless weed (*Amaranthus* sp.) and lamb's quarters or goosefoot (*Chenopodium* sp.) are plants that specifically concentrate nitrate from the soil under drought conditions.

For nitrate testing, the pasture in question should be evaluated as a whole unit, and the sample you take should try to represent all the variations in forage growth throughout the pasture. For example, there should be a few stalks from low spots, a few from high spots, a few of the tallest, and a few of the shortest plants. If your pasture is level, think of it as a grid of 12 boxes, and take one stalk from each box. A good sample for nitrate testing consists of 12 to 15 plant stalks with leaf material. Please cut the plants at about 3 inches above the ground; any that are pulled up by the roots will contaminate your sample with dirt and give a falsely high nitrate measurement.

If you want to have baled hay tested, talk to your county agent about using a hay probe to collect a representative sample from a 3 or 4 bales. The probe samples can be shipped in clearly labeled paper bags. Samples should be sent so that they arrive at TVMDL within 24 hours.

Wrap your samples in paper or tie them and clearly label them, if there are several. Wherever possible, if you will simply number them and keep yourself a list, it will speed up our processing significantly. When we receive your sample, we will chip it, subsample it, and dry it before grinding it for extraction. The test we run takes overnight, and we will have a result for you the day after we receive the sample.

The charge for each sample tested for nitrate is \$6.00. If you would like to have the result faxed or phoned to you, please add an additional \$ .50 to your total. (For example, if I wanted 3 samples tested, and a phone call, the check I would send would be for \$18.50, made out to TVMDL.)

\$6.00/Sample                      overnight test                      fresh forage or hay

If you need further information, please call (409) 845-3414, Toxicology.

If you need both prussic acid and nitrate, please collect samples as listed for nitrate, but make sure we get them quickly. The cost for the two tests is \$11.00/sample.

Mailing address:  
TVMDL  
P.O. Drawer 3040  
College Station, TX 77841-3040

Courier address:  
TVMDL  
1 Sipple Road  
College Station, TX 77843

## How to Collect/Submit Samples to TVMDL for Prussic Acid Tests

Collecting a good sample is critical to getting a meaningful test result.

Forages that are potentially high in prussic acid are any of the sorghums: maize, milo, johnsongrass, haygrazer, sudan, sudax. Corn, coastal, dallisgrass, and bahia do not have cyanogenic potential.

For prussic acid testing, the most critical thing to know is that the cyanide begins to leave the sample as soon as the plant begins to die. Therefore, all samples to be assayed for prussic should be hand-carried to the lab or shipped by overnight service. If your pasture is completely haygrazer, or one of the other grasses listed above, the sampling scheme is similar to that for nitrate tests: walk through the entire pasture and take some tall and some short plants, some from high spots and some from low spots. If your pasture is level, think of it as a grid of 12 boxes, and take one stalk from each box. A good sample for prussic acid testing consists of leaf material from 10 to 12 plants, since most of the cyanide potential in the plants is in the leaves. Send them sealed in a plastic bag, and try to keep the sample somewhat cool to prevent deterioration (refrigerate before shipping, or drive it to the lab in a cooler.) Samples should be sent to that they arrive at TVMDL within 24 hours.

If your pasture has patches of sorghum in it, you may want to test only those plants. Let us know your situation, so that we can help you interpret our results.

If you want to have baled hay tested, talk to your county agent about using a hay probe to collect a sample. Probe samples for prussic acid should be immediately delivered into canning jars (one probe per jar) and sealed up tight, then brought to the lab or shipped overnight.

Please clearly label all your samples, if there are several. Wherever possible, if you will number them and keep yourself a list, it will speed up our processing. When we receive your sample, we will incubate it with a picric acid solution in a chloroform atmosphere for an hour, then read the result. The test we run takes a total of about 2 hours, and we can have a result for you the day we receive the sample.

The charge for each sample tested for prussic acid is \$5.00. If you would like to have the result faxed or phoned to you, please add an additional \$.50 to your total. (For example, if I wanted 3 samples tested, and a phone call back, the check I would send would be for \$15.50, made out to TVMDL.)

\$5.00/sample                      same-day test                      fresh forage or hay  
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