



March 6, 2008

## **TEST RURAL DRINKING WATER THIS SPRING**

If you live on a farm or acreage, checking the quality of your water supply each year is recommended. In town, with public water supplies, the government requires numerous tests, including for more than 100 different contaminants. But with private wells, these are monitored by owners.

In the rural areas, you decide when to test the well and which specific contaminants need to be tested. I recommend you check your drinking water supply annually for the two most common contaminants. Most common, we need to check for bacteria and nitrates in the water. These two tests don't guarantee water safety, but usually they are good indicators of water safety.

This spring is a good time to test. If a contaminant is entering the groundwater with the normal spring recharge of groundwater wells, it is more likely to be detected. Nebraska has a number of laboratories that test drinking water for a charge. Some are government owned while others are private labs.

At the Extension office in Saline County, we work with the Health Department in Grand Island that send us a supply of test bottles for rural water testing. If another contaminant is suspected, test for that also.

When you check for bacteria in a rural water supply, there are many types of bacteria, and some are not harmful but rather more of a nuisance. The most common side effect from those that do not cause human illness is gastrointestinal disorder. High nitrates in the water (greater than 10 parts per million) are dangerous to infants with a condition where blood loses its ability to carry an adequate amount of oxygen. In adults, high nitrates increase cancer risk.

Contaminants in our water are a result of human activities or natural causes. For instance, if soil or rock in contact with the groundwater have higher levels of arsenic or uranium, then that can become an issue. It is important that farmers have a spill kit ready to go to clean up any spills of pesticide or fertilizer so a point source problem does not occur near a well. The quality of design, construction and location of a well, can help prevent nitrate and bacterial contamination. Poor management of manure, human waste or fertilizer is a recipe for problems in a private well.

Water can be treated for contamination. No one treatment can remove all types of contaminants, so it's important to know the type and concentration present in the water. For instance, reverse osmosis treatment systems do not totally eliminate contaminants, but they can reduce contaminants to an acceptable level.

Bacteria can be treated with distillation, disinfection with chlorination, ozone or ultraviolet light. Nitrates can be treated with distillation or a reverse osmosis filter.

For more information on testing the farm or acreage well, contact your local extension office. In Saline County, call 821-2151.



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