

FERTILIZER STORAGE AND HANDLING

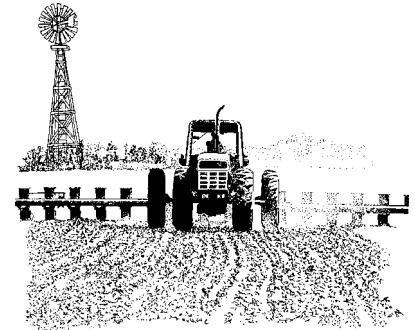
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FARM*A*SYST *Farm/Ranch Self-Assessment System for Arizona*

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This fact sheet is taken from the Arizona Farm*A*Syst workbook. Farm*A*Syst is a voluntary groundwater pollution prevention program designed for farmers and rural residents. The goals of the program are to help rural residents: understand potential causes of groundwater contamination, identify farmstead management practices that pose risks to groundwater, and develop a plan to reduce those risks.

Almost every farmer or rural land owner uses some form of fertilizer to improve plant growth. Certain fertilizer nutrients, however, can be harmful for animals and humans if they enter groundwater or surface water sources. Nitrate is the fertilizer nutrient that most often causes water contamination problems. It is easily leached through soil or carried away by surface runoff water. High levels of nitrate in drinking water can reduce the ability of blood to carry oxygen. Infants and young animals are most susceptible to this condition. Although the condition can be fatal if not diagnosed quickly, it is easily reversed with treatment.

Commercial fertilizers are not the only sources of nitrate. Others include septic systems, barnyards, and manure storage. Natural sources of nitrate are lightning, rotting organic matter, and plants in the legume family.

The federal government has set strict standards regarding nitrate levels in drinking water. These standards state that drinking water cannot contain more than 10 parts per million (ppm) of nitrate-nitrogen per liter. One ppm is equivalent to 1 ounce in 7,800 gallons.

Nitrate and microorganisms are the two most common contaminants in drinking water supplies nationwide. Effective fertilizer management is essential to reduce health risks from nitrate in drinking water.

What can you do?

1. Protect your drinking water from contamination by storing and handling fertilizers safely.
2. Avoid storing large amounts of fertilizer on your farm or homestead site. Buy only the amount you need.
3. Make sure you have a safe storage area.

Item	Question	Yes	No
1. Maximum storage time for any fertilizer.	a. Fertilizers are stored for immediate use period, or up to one month.		
	b. Fertilizers are stored for more than 6 months.		
2. Separation of liquid and dry fertilizers.	a. All dry fertilizers are stored above or separate from liquid fertilizers.		
	b. Any dry fertilizer is stored together with liquid fertilizer.		
3. Condition of fertilizer bags.	a. No bag has holes or tears, <u>or</u> bags are repaired quickly, and all bags are clearly labeled.		
	b. Holes or tears are not repaired, and some bags are not labeled.		
4. Type of storage facility.	a. All fertilizers are stored in a building or fenced-in area kept locked when not in use, and <u>only</u> fertilizers are stored in the area.		
	b. Fertilizers are stored in an unlocked building or area.		

The questions listed above can help you determine whether your fertilizer storage and handling practices may pose a risk to groundwater.

Take a few minutes to complete the questions. If you answered **yes** to mostly "a" questions, your groundwater is probably safe from becoming polluted from your fertilizer storage and handling practices. If you answered **yes** to mostly "b" questions, then your groundwater may be at high risk of becoming polluted.

Worksheet number four in the Farm*A*Syst book will give you a more complete assessment of your fertilizer storage and handling practices. If you are interested in obtaining a copy of Arizona's Farm*A*Syst workbook, please contact the College of Agriculture's Publications Distribution Center, 4042 North Campbell Avenue, Tucson, Arizona 85721. The office phone number is (520) 621-1713 and the FAX number is (520)795-8508. The cost of the workbook is \$5.00 plus shipping. Contact your county extension office or NRCS office if you have questions about how to use the workbook.