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POLLUTION PREVENTION BEGINS AT HOME

Doug Hamilton, Extension Waste Management Specialist at Oklahoma State University noted, back in the early 1970's, his aunt taped a note to her refrigerator that read, "Ecology begins at home." It was a not too subtle reminder to the cousins. "If you want to save the planet, you can start by cleaning your room." This is a good reminder that pollution prevention begins at home and includes all levels of the food growth, production, processing, preparation and consumption cycle. While the Environmental Protection Agency, Nebraska Department of Environmental Quality, United States Department of Agriculture, Nebraska Department of Agriculture and other federal, state and local agencies strive to keep our water and food clean, we also bear personal responsibility.

Manure can pollute water in three ways: bacterial contamination, eutrophication, and dissolved oxygen depletion. All warm blooded animals including; hogs, humans, cats, and chimpanzees cultivate bacteria in their colon. Intestinal bacteria help animals digest food. Microbes start growing at one end of the colon and ride the flow until they leave with feces, and some bacteria can continue growing in water. The primary concern with bacterial contamination is human health. If ingested, certain intestinal bacteria can make us sick if our immune system is weak. They may also enter our bodies through mucus membranes and cuts on the skin. A basic goal of the Clean Water Act of 1972 was to make the nation's waters "swimmable and fishable", so fecal coliforms entering water used for primary contact recreation or as a source of drinking water are controlled. This can also occur in home and municipal water from wells. That is why it is so important to pick-up a home water test kit from the Extension Office and have your water tested.

The second way manure can pollute water is by eutrophication. This means adding nutrients to water particularly phosphorus. This is a challenge for Nebraska as our soils are rich in phosphorus and it is sometimes hard to tell what comes from soil erosion and what comes from manure. For example several counties regulate possible manure contaminates by forcing them to be underground within hours. We "protect" the surface water by increasing losses of our number one resource and number one pollutant of Nebraska water, SOIL.

Manure can potentially pollute surface water by removing oxygen. Oxygen is difficult to maintain in aqueous environments. Oxygen must dissolve into water before it can be useful. If animals or microorganisms use dissolved oxygen faster than it can be replaced, the level drops and aerobic organisms such as fish die. This is not uncommon after a dry spell in Nebraska when weeds in the pond bottom are submerged and the decay process sucks up the dissolved oxygen. Phosphorus levels result in bacteria and algae to growing out of control and removing dissolved oxygen from the water. So, what can a livestock farmers do to prevent the big three causes of water pollution from occurring? The short answer is: keep doing what you are doing. Prevent overflows and spills, reduce runoff, and apply manure and effluent to meet crop nutrient needs.

We need to work toward making regulations fit in line with good farming techniques. We need to realize that pointing a finger results in the other three being pointed back at ourselves. We need to be responsible in applications of lawn and garden fertilizers, pesticides, and pet animal manures.

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