

## MANURE SPREADER FOR LEASE



Foster County SCD has a Hagedorn 5290 manure spreader which is available for lease. It has vertical beaters and a capacity of approximately 420 bushels. The district has shafts to fit either 1 3/8 or 1 3/4 PTO.

The manure spreader is available for \$300 per day. This cost includes manure testing and soil testing on one field if the leasee desires and makes arrangements in time to receive the results prior to application. There is a \$500 repair and clean-up deposit, which will be applied to the rental cost if the machine is returned properly cleaned and in good repair.

For more information, contact the SCD office at 652-2551 ext. 3.

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## Harmful Algal Blooms

You may recall that in 2014, an algal bloom on Lake Erie resulted in the City of Toledo, Ohio, shutting down its drinking water intake. The city announced via Facebook that its tap water was too poisonous to drink. This past summer, closer to home in northeast North Dakota, Homme Dam in Walsh County had a well-publicized algal bloom that concerned recreationalists.

What do you picture in your mind when you hear algal bloom -- more specifically 'Harmful Algal Bloom'? It is safe to say you do not picture roses and daisies.

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### **Harmful Algal Blooms**

A harmful algal bloom (HAB) is not only uninviting but also potentially harmful. Typically, a HAB is an overgrowth of cyanobacteria (blue-green algae) in surface water. Cyanobacteria are microscopic organisms found in all types of water. They are more like bacteria than plants, but because they live in water and use sunlight to create food (photosynthesis) they are often called 'blue-green algae.'

Cyanobacteria are important to freshwater ecosystems because they make oxygen as a by-product of photosynthesis, and they are a food source for other organisms.

### **The Harmful in HABs**

Under certain environmental conditions, cyanobacteria can multiply quickly and form a bloom. Some species of cyanobacteria produce cyanotoxins that are released when the cells die and rupture. The toxins can cause harm to people, wildlife, livestock, pets and aquatic life. Almost every year in North Dakota, a few cases of pet and livestock deaths occur due to drinking water with HABs. Additional effects of HABs include:

- Blocking sunlight needed for other aquatic organisms
- Raising treatment costs for public water supply systems and industries
- Depleting dissolved oxygen as the algae dies off, resulting in fish kills

Specific human health effects are:

- Allergic-like reactions
- Skin rashes
- Eye irritation
- Gastroenteritis
- Respiratory irritation
- Neurological effects

### **What Causes HABs?**

- Excess nutrients (phosphorus and nitrogen)
- Warm water temperatures
- Slow-moving water
- Sunlight



The major source of food for algae is nutrients that enter North Dakota lakes from:

- Fertilizers (fields and yards)
- Livestock and pet waste
- Septic systems

### **A Long-term Problem**

Once a waterbody has an excess of nutrients, the problem cannot be fixed overnight. Nutrients must be removed mechanically and/or allowed to be reduced naturally through internal cycling, while limiting the sources of nutrients in the watershed. Several North Dakota lakes have hypolimnetic drawdown systems that remove nutrient-rich water from the bottom of the lake. These systems can be effective at removing nutrients, but they do not address the nutrient sources.

### **What Can You Do?**

Everyone plays a part in feeding the algae, from how you fertilize your lawn to the timing of fertilizing a 160-acre field, to whether or not you pick up your pet's waste, to the proper management of livestock waste.

Tips to reduce nutrients from entering runoff to our surface waters:

- Sample the soil in your yard before you fertilize.
- Leave your grass clippings on the lawn—they give nitrogen back to the lawn.
- If you do need to fertilize, use only the recommended amount of product, and keep it off sidewalks and other hard surfaces
- Use field soil samples to calculate a nutrient budget for your crops.
- Complete a comprehensive nutrient management plan for your farm.
- Sample manure before applying it to the soil to ensure it is applied at the correct agronomic rate.

By limiting the nutrient sources in a watershed, we all can help prevent the growth of algae in our lakes.

### **For More Information**

To learn more about HABs and nutrient reduction, contact the North Dakota Department of Health Watershed Management Program.