



USDA-CSREES 2006 National Water Quality Conference

Using circulators to enhance BMPs in animal waste management

For over 22 years, the Little River Pond Mill, a circulation machine used to promote or facilitate BAF (biologically active filtration) and BGC (biogeochemical) remediation, has been used in surface water remediation and waste water treatment. The machine, through its circulation action and the resulting aeration and UV exposure component, promotes various biological and geochemical actions in water-based environments. These environments, whether they be livestock or municipal sewage lagoons, lakes or ponds, can be “tweaked” using the pond mill, to create a desired outcome – essentially, you are creating a man-made solution for a man-made environmental challenge using “Mother Nature’s” natural processing techniques.

The processing technique can be geared to almost any circumstance. In livestock lagoon or tank waste management the process can promote:

1. Odour reduction/elimination
2. Solids digestion
3. Nutrient mineralization and stabilization
4. Production reduction or elimination of greenhouse gases and other potentially harmful gases
5. Carbon sequestration by microbes
6. Creation of “Red Water” – California Dairy Campaign demonstration project
7. Reduction of harmful pathogens

Waste management in lagoons and tanks is based around the following factors:

- a. Machine numbers required for animal units
- b. Desired end result; regulatory requirements
- c. Surface area availability
- d. Potential for retrofit to management practices and/or operation facility

We promote using the 3-R’s in water consumption – reduce, re-use, recycle

- a. Reduced water consumption
- b. Re-use of water
- c. Recycling of water

The Company has improved machine operational efficiency and customer satisfaction through consistent upgrades and improvements to machine design and utilization and after 22 years, still has the most efficient and economical circulator on the market. In 2003, the Company created the Environmental Management Division and expanded its services to provide the public with

professionally trained individuals to assist in solving a variety of agri-environmental challenges.

Information on speaker.

Miss Cameron (M.Sc., PAg) has been with the family owned business since it began some 22 years ago. Besides 22 years in the field, Kathleen has 11 years of University education including a Masters degree in soil science with specializations in relevant environmentally based disciplines (soil, plants, ecology, limnology, microbiology); presently holds positions with the provincial and Saskatoon branches of the Saskatchewan Institute of Agrologists (professional association); and volunteers with the Saskatchewan Chamber of Commerce Environmental Committee. Kathleen is passionate about environmental protection and strongly believes that the environment and business can work cooperatively together to create an effective and productive society.

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