



NOVEMBER AGRONOMY UPDATE

BIOBEDS. What is a biobed?

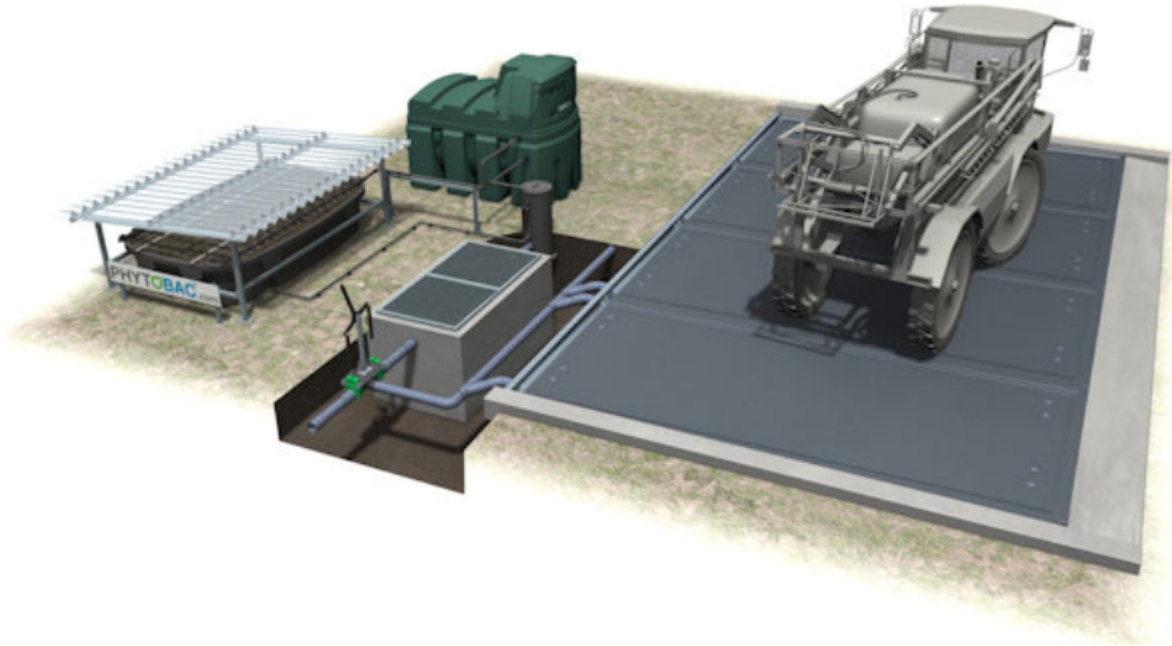
While much of public focus on Agriculture these days center around the topic of Greenhouse Gas Emissions, it seems that every operation on the farm is coming under close scrutiny. The public in general is taking an increased interest in where their food comes from and how it is produced. When you couple that with the fact that 98% of Canadians no longer have any association with or even a basic understanding of the Agricultural industry, it is in our own self-interest to be doing everything we can to be responsible stewards of the land.

Often we can look to what is happening in Europe and see what the future holds for us here in terms of public expectations and regulatory requirements; and one thing you can expect to see over the next few years is increased concerns about what we are doing with the rinsate when we clean our sprayer tanks. This is where biobeds come in to play.



Picture #1 - South Saskatchewan Watershed stewards

So what is a biobed? In its simplest terms, it is any structure used to remove pesticides from the water used to rinse sprayers. They range from small scale and simple such as the one pictured below that was built by the City of Saskatoon (picture #1) to large scale and complex commercially available system being sold to farmers in the U.K (picture #2).



Picture #2 – image from intershape.com

According to a March 2019 Canola Watch article “The biobed itself is a lined pit or box. It has weeping tile and a piping system to remove effluent after it has trickled to the bottom. The biobed contains a ‘biomix’ of three ingredients: chopped cereal straw, peat and coarse-textured soil. After moistening the mix and letting it sit for four to six weeks, the natural pesticide-digesting microbial complex is ready to work. The setup requires a sprayer rinse area with a sump to collect the rinsate. It also requires a tank to hold rinsate, which is then applied drip wise over the biobed. Quite likely, biobeds in Canada will require a heating system to warm up the biomix so it’s ready to go in May. Effluent from the biobed can be recycled to irrigate non-cropped areas, such as yards.”

So why build a biobed? While many farmers do much of their rinsing right in the field, most still have a site in the yard where a lot of fills and sprayer cleanup occurs. This can often lead to contamination of both surface and groundwater. A biobed gives producers a safe and acceptable way to dispose of the diluted pesticide waste. While there are not a lot of on farm biobeds being used in western Canada right now, there are several examples of

them on Research farms and in municipalities. Groups such as **Farming Smarter** have received funding and are looking at ways biobeds can be adapted to our Western Canadian climate and had just built a mobile biobed to promote the concept at trade shows when COVID shut things down. Hopefully, you will be able to see their work at trade shows this upcoming winter.

If you would like to learn more about biobeds, how they work and how to build one, there are several excellent places to look. I would recommend the following links; a federal government publication with the riveting title of **"A robust biobed design for managing pesticide rinsate under Canadian conditions"**

https://publications.gc.ca/collections/collection_2018/aac-aafc/A42-123-2018-eng.pdf , as well as an excellent article by Tom Wolfe in Sprayers 101 called **"Biobeds for Pesticide Waste Disposal"** <https://sprayers101.com/biobed/> . And finally, you can watch a virtual tour of the Biobed built by Faming Smarter at <https://www.youtube.com/watch?v=TdO90Ys7U50>. If the link does not take you right to the presentation, just hit the "browse Youtube" button and it should take you there.

While a topic like biobeds may not be top of mind for you right now, I think it is important to know that things like this are likely on the regulatory horizon and to know that there are resources out there when the time comes that you need to address the issue.

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