



# Ag. Advantage Monthly

## Combining Agricultural Production with Environmental Stewardship

### Alberta Phosphorus Project Update in Acme Creek

Phosphorus (P) is an essential crop nutrient found in manure and inorganic fertilizers, but can enter creeks and streams via runoff and cause water quality issues. Phosphorus enrichment of streams can cause excessive growth of aquatic weeds and algae, leading to unpleasant smells and the depletion of dissolved oxygen, which can cause fish kills. Some algal blooms produce toxins that can be harmful to livestock, wildlife, pets, and humans. Minimizing P loss from agricultural landscapes is one of the key components in improving water quality in agricultural watersheds and downstream environments. Alberta Agriculture and Rural Development (ARD), the Intensive Livestock Working Group (ILWG), and the Alberta Livestock and Meat Agency (ALMA) have developed a draft version of a P management risk assessment tool to help landowners reduce P loss to surface waters. The Alberta Phosphorus Management Tool (APMT) helps producers evaluate their operations to identify any P loss risks that exist, and suggests potential beneficial management practices (BMPs) that they could adopt to mitigate those risks.



*Acme Creek flows during snowmelt, and rainfall runoff.*

To test the APMT, two watersheds were selected, Tindastoll Creek near Red Deer, and Acme Creek (a tributary of Kneehill Creek) near the town of Acme. Acme Creek was chosen due to the high level of agricultural activity in the area. The project team is currently working with local Acme Creek farmers to assess the risk of phosphorus loss from their lands, suggest BMPs to reduce nutrient loss, and to aid in any grant applications that producers may need for BMPs. In 2015, BMP implementation will commence and water quality will be monitored for a third year. For more information on the Alberta Phosphorus Watershed Project, please contact Janna Casson ([janna.casson@gov.ab.ca](mailto:janna.casson@gov.ab.ca)), Trevor Wallace ([trevor.wallace@gov.ab.ca](mailto:trevor.wallace@gov.ab.ca)) or Ron Axelson ([axelsonilwg@telus.net](mailto:axelsonilwg@telus.net)), or enter the project title in the search option of Alberta Agriculture’s webpage ([www.agric.gov.ab.ca](http://www.agric.gov.ab.ca)).

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### Ag. Plastic Roller

Open burning of agricultural plastics releases harmful toxins to the environment and is illegal under the Substance Release Regulation. This piece of equipment is used to roll used ag. plastics such as grain bags and silage tarps into manageable plastic rolls or “bales”. These bales can then be stored in an environmentally safe manner or shipped by the producer for recycling. To rent please call at least two weeks in advance to ensure the availability of this and other ASB equipment 403-443-5541.



## Spring is a Good Time to Bait Wireworms for Research

As damage to field crops is poised to escalate, consider playing a proactive role in finding a wireworm control solution for your area by submitting samples to Canada’s wireworm research team. Lindane (e.g. Vitavax Dual, etc) insecticide kept wireworm numbers low for several decades on the Prairies. Since the ban of this organochloride pesticide in 2004, wireworm damage in field crops is rebounding; some researchers suggesting we



may just be catching a glimpse of the tip of the iceberg at this point. Varying from region to region, some 30 different wireworm species exhibit diverse behaviors and lifecycles, making a single control

measure improbable. An individual region may contain more than one wireworm species. The worm-like larvae can feed on plant roots and germinating seeds for up to 3 to 5 years, depending on the species, before developing into the adult click beetle stage. While current seed treatments may repel wireworms for a growing season, their populations can continue to increase so that these treatment measures begin to fail.



Canada’s wireworm research team, headed by Dr. Vernon and Dr. van Herk of Agriculture and Agri-food Canada, is identifying wireworm species and researching control measures. The research team needs to know which specific wireworm species dominates in your farming

region so the correct control option(s) can be applied as the problem worsens. Although most crops are susceptible, wireworms prefer eating annual and perennial grasses, so populations can build up in fields that have extended periods of cereal crops or pasture. Crops grown in recently broken sod are especially vulnerable. Due to a greater amount of soil moisture, wireworms migrate near to the soil surface in early spring, making spring the best time to bait and capture wireworms. Baiting can be as simple as burying a small amount (a cup or so) of a cereal-based product like flour, bran or wheat seeds to a depth of four to six inches into the soil at marked locations randomly across a field. Dig up the baits 10 to 14 days later, collecting wireworms and some field soil (not too wet), and then insert them into a hard plastic container for shipping. There may be more than one species present, so collect as many wireworms as possible. Mail your wireworm sample(s) to:

Dr. Vernon  
 Agriculture and Agri-Food Canada  
 6947 #7 Hwy  
 P.O. Box 1000  
 Agassiz, B.C. V0M 1A0

Please include a brief description of where the sample was collected (nearest town or address), information about your crop rotation in this field over the past 4 years, your name and phone number. Once the species are identified, you will be contacted with the results.

-Neil Whatley, March 2015

