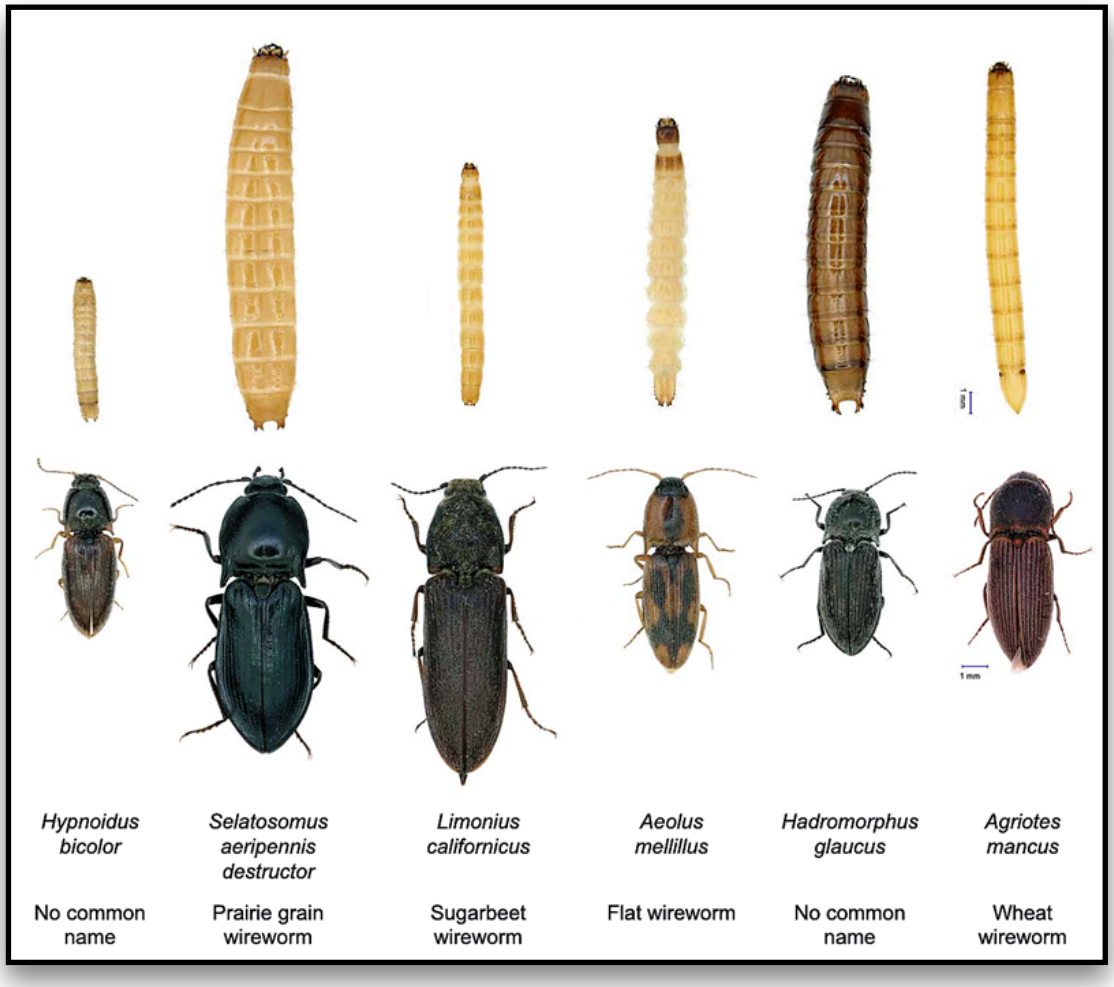
BATTLE RIVER IMPLEMENTS LTD.

AGRONOMY UPDATE

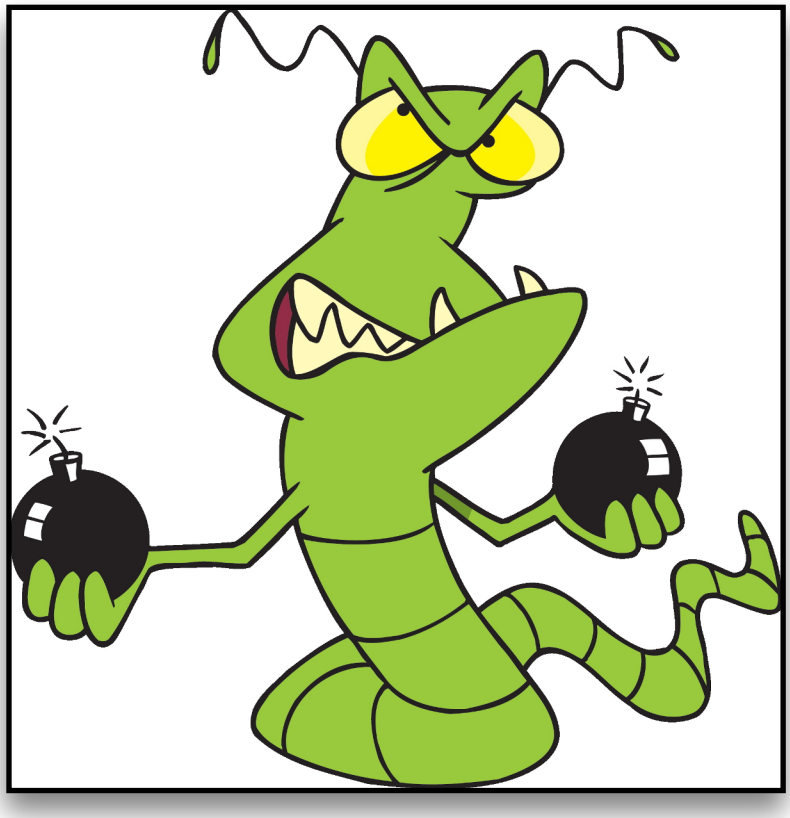
DECEMBER 2021

WIREWORMS

Many producers have had the experience of walking into a field and finding patches of thin or even entirely missing crop. While there are several things that can lead to this pattern of crop loss, I am increasingly seeing this kind of damage being caused by wireworm. But what exactly are wireworms? We talk about them like they are a single species, but one of the issues with current control methods for this pest is the diversity of the problem. Wireworms are not a single species; they are the larval stage of a class of insect called Click Beetles, and there are at least 300 known species of them on the Prairies. How long these Click Beetles can remain in the larval stage depends on what species you are talking about. Some will go through their life cycle in a single year, others take as long as 3 years, and a few species will remain in the larval stage even longer than that. Fortunately, we don't have to deal with all 300 species in our fields. Less than half a dozen species cause the vast majority of our problems.



Agriculture & Agri-Food Canada; photo by J. Saguez



Wireworms tend to be a patchy problem – one field may have a bad infestation and the next have almost none. Or you can have places within a field with large populations and elsewhere in the field they are not an issue. Scouting for them can be problematic as the symptoms can be similar to those of cutworms, where entire patches of crop disappear, or they can be as subtle as a few tillers dying back in cereals as the wireworms chew through the crown roots supplying them.

While there are several integrated pest management options for dealing with wireworms, the most common control method has been chemical seed treatments.

LPhoto from Glacier Farm Media 2018

CHEMICAL SEED TREATMENTS

However, most of the seed treatments available until lately have had a major drawback – they repelled the wireworms or paralyzed them temporarily, which protected the crop but had no impact on the pest's population. A grower could be continuously using wireworm seed treatment on a field to protect the crop, and all the while the wireworm population could continue to grow. In some cases the populations have grown to the point that they were able to overcome the seed protection and do damage despite the treatment.

Early in 2021 a new type of seed treatment called *broflamilide*(Trade name Teraxxa) was registered in Canada that actually reduces the wireworm populations. Initial studies show as much as a 70% reduction in the wireworm populations. This chemical also has residual properties that allow it to work on multiple generations of wireworm in the same season. Possibly this can lead to using wireworm protection in rotation (every 2 or 4 years) rather than as the annual expenditure it is right now for many.

We still have a lot of work to do to improve our understanding wireworms. At present we do not have the practical ability to monitor this insect consistently, and we do not even have economic thresholds established to help us make informed decisions on whether or not to treat. We also do not have a clear understanding yet of the impact that this new chemical may have on all off target species. But if you are treating for wireworms every year and feel like you are getting nowhere, this new development may be of interest to you. For a very complete education on what we currently know about wireworms and the different managements strategies available, Agriculture & Agri-Food Canada has recently updated its Field Guide on wireworms. It is definitely worth reviewing if you are having wireworm issues.

https://publications.gc.ca/collections/collection_2021/aac-aafc/A42-125-2021-eng.pdf

BATTLE RIVER IMPLEMENTS LTD.

WAYNE SPURRILL, P. AG AGRONOMIST

WSPURRILL@BRILTD.COM

CELL 780 781-1616 OFFICE 780 672-4463