

"Accessing Innovation"



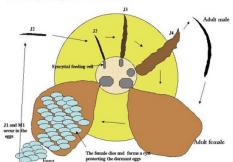
A field view of one location of tissue samples collected earlier this week.

Nematodes - A Continuing **Concern: Jeff Williams**

At a whopping 1 millimeter in length (on average), the transparent and slender worms known as plant-parasitic nematodes are not visible to the human eye as described by the NRCS (1). This has the tendency to create an

"out of sight, out of mind" way of thinking for many. The real evidence comes out of our pockets when the major agricultural pathogens cost an estimated "14 percent loss in ag production" and "\$80-100 billion worth of crop losses every year globally" stated Monsanto (2). Nematodes typically attack the root system, but can also affect stems, leaves, and seeds, too (3). Some symptoms of root-eating nematodes can include "...nutrient deficiency, incipient wilt, stunting, poor yield and sometimes plant death." (4) Typically, "Root-feeding nematodes use their stylets to puncture the thick cell wall of plant root cells and siphon off the internal contents of the plant cell." (1)

Although there are many other characteristics of nematodes to learn, there is still a lot of research to be done. While nematode sampling is one way to detect their presence, a mode of action has been established, a nematicide, by Monsanto's Acceleron brand called NemaStrike. It comes in the form of a seed treatment and is available for both corn and soybeans, "providing Sedentary Endoparasitic Nematodes



broad-spectrum nematode control that stays in the root zone for up to 75 days". (5) For further information, feel free to visit the following sites. rtal/nrcs/detailfull/soils/health/

(2)- https://monsanto.com/news-releases/monsantos-nemastriketm-technology-approved-by-epa/

(3)- https://nematologists.org/resources/information-on-nematology/

(4)- http://www.acceleronsas.com/NemaStrikeTechnology/Pages/Dirt-On-

(5)- https://www.apsnet.org/edcenter/intropp/PathogenGroups/Pages/ IntroNematodes.aspx

A look at the life cycle of a soybean cyst nematode. https://www.apsnet.org/edcenter/intropp/PathogenGroups/Pages/

Ask your Agronomist: Levi Lehmkuhl

Though it's still early in the growing season, this week I would like to explain a few of the characteristics we're seeing in fields that are being scouted to bring perspective to some possible early trends for the year. Thus far, we have observed bean leaf beetles on untreated soybeans with early signs of defoliation. In corn fields, we have found a few cases of black cut worms (pictured right). Some common practices to prevent worm damage can include having a good fall spray program to keep fields free of henbit, which these worms find to be an ideal habitat. One other option of treatment includes the continued use of high treated corn seed from your local dealer.

A common weed that is starting to present itself is shattercane, which can appear late in the season and still disperse upwards of 2000 A black cut worm found seeds per panicle. With the majority of fields already having been sprayed, it's a good idea to monitor this late-season weed. Across the



when out scouting.

countryside we are seeing quite a few areas affected by anhydrous burn, but with a good drink it would easily reverse and aid in overall plant health. For more information on the trends mentioned in the article don't hesitate to come talk to anyone on our agronomy team!

Grain Market Update: Ed Molt

This week both cash and new crop corn and soybeans bounced around, reaching slightly higher prices going into the Memorial day weekend. Though the potential we saw Thursday for a comeback went out the door due to trade tensions and other concerns in production, the overnight markets came back constant to moderately higher coming into our Friday. Prices for corn had us looking to the skies as weather forecasts predict the possibility of moisture for the top sections of the Midwest and Northern Plains. On the flipside, soybeans had gains of approximately 5 cents between yesterday's market into overnight prices. In conclusion, while we continue to look for rain, keep a watchful eye toward the market, particularly finishing old crop sales, as there could be opportunity if prices decide to rise a bit more.

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