

MAKING A DIFFERENCE

NDSU EXTENSION SERVICE

NORTH DAKOTA STATE UNIVERSITY

Using Beneficial's & Pollinator's to Your Benefit

The Situation

Over the last decade, two agricultural related storylines have been gaining attention within entomology and agriculture. This includes "Colony Collapse Disorder" (CCD) and insecticide resistance. Specifically, CCD is defined by the loss of the majority of workers within a colony. Over time, observations have shown that this phenomenon isn't related to any single factor, but rather a combination of items such as (i.e.) chemical usage, insect diseases, large crop monocultures, and the loss of native habitats. Additionally, insecticide resistance has begun to surface in grower discussions. One could argue that over the last 10 years, chemical applications likely serve as the number one method for controlling insect pests in agriculture. Without proper usage of the IPM toolbox, continued chemical usage could spoil the life expectancy of some commonly used pesticides.

Extension Response

In 2017, the Extension Service collaborated with the Natural Resources Conservation Service (NRCS), Ducks Unlimited, The Xerces Society, and others to educate area clientele by hosting a good bug's field day at the NCREC. Pollinators and the importance they have on crops, plus benefits to growers were discussed. Discussions were utilized on how to incorporate native vegetation into field sites to get the greatest population and biggest environmental impact by pollinators and beneficial's.

An outdoor field tour allowed growers to visit several field sites (i.e. grape vineyards, soybeans, sunflowers, gardens) to discuss how to make sites more suited for beneficial insects. Discussions then shifted around the promotion of the IPM toolbox and discussed strategies to control insect pests without using insecticides unless economic thresholds were reached. This toolbox will be pivotal in extending pesticide life expectancies.

Impacts

Discussions allowed growers to begin planning for 2018. Ideas suggested included the

establishment of native plants within ditches, waterways, and the addition of 20 Ft. border strips around field sites that could help improve pollinator populations. Continued discussions allowed growers to discuss what IPM tools are available to them and how they could be used before using chemical control.

Jessica Marshall, Professor at the Dakota College of Bottineau, attended the session, then wrote her own lesson plans to teach horticulture clubs in Stanley and Tioga based on the information shared from these extension programs further promoting these discussions in other areas of the state. Furthermore, she plans to promote this information within her classroom in the coming seasons.

Feedback

"Excellent meeting and looking forward to participating in something that can help the pollinators!"

"... You are very good at the way in which you explain this information, so we non-entomologists can understand too."

Public Value Statement

Understanding the applications of the IPM tool box and pollinator life cycles can potentially help growers save money, prolong the lifetime of essential insecticides, and could potentially improve crop yields.

Primary Contact

Travis J. Prochaska, Ph.D.
Area Extension Specialist, Crop Protection
North Central Research Extension Center
5400 Hwy 83 S
Minot, ND 58701
701.857.7682
Travis.Prochaska@ndsu.edu

Collaborators

NRCS, Xerces Society, Ducks Unlimited, NDSU, and the University of Nebraska-Lincoln.