

The Integrated Pest Management Crop Survey Improves Decision-making and Increases Grower's Profits

The Situation

Each year, insects and diseases attack North Dakota's crops, potentially causing large losses in yield and quality. Crop producers need up-to-date data on pest occurrence, distribution, and severity so that they can make informed and timely management decisions, which can make the difference between profit and loss for a crop that year.

Extension Response

Every year, a group of NDSU trained field scouts help producers stay informed about pest problems by surveying fields of major crops for insect and disease occurrence and severity. The survey has been titled the Integrated Pest Management (IPM) Survey, with the intent that once pests are found, they may need to be managed using an IPM approach. Field scouts are trained each year in late May and are provided with scouting protocols and equipment for accurate field scouting. In 2016, field scouts surveyed four major crops (wheat, barley, soybean, and sunflower) across the state.

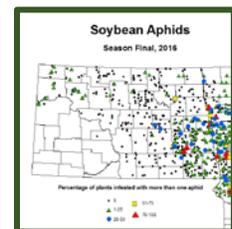
Impacts

Short term impacts relate to **real-time information about crop pest problems**. Here's some examples of how the field scouts identified important information about crop pests, which helped producers make effective IPM decisions in 2016:

- Timely information obtained by the field scouts was critical in updating producers and agricultural professionals throughout the state about the early arrival of stripe rust.
- Fusarium head blight (scab) was documented in about 15% of wheat fields scouted. Although scab levels were generally low across the state, higher levels of scab were found in northcentral and northwestern ND.
- Soybean aphid populations were sub-economic, reducing insecticides inputs for soybean aphid management in 2016.
- Insect trapping provided early detection and tracked seasonal activity of banded sunflower moth and sunflower moth in sunflower, and wheat midge in wheat.

A 2016 evaluation survey established the following IPM impacts, which increased producers' knowledge and/or changed their behavior:

- 90% of respondents conducted pest identification.
- 80% used the weekly ND IPM maps of pest incidence / severity published in the NDSU Extension Service *Crop & Pest Report* or on IPM website.
- 84% conducted pest scouting and used economic thresholds before making pesticide applications.
- 80% used NDSU's crop production guidelines.
- 78% relied on NDSU's pesticide guides.
- 59% stated that at least one article on pest management or crop production in the NDSU Extension Service *Crop & Pest Report* increased their profitability in 2016.



Public Value Statement

The NDSU Extension Crop Management team promotes IPM strategies for management of crop pests, which supports judicious use of pesticides for economic and environmental sustainability.

Resource Links

<https://www.ag.ndsu.edu/ndipm/>

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