

2018 Summary of Extension Integrated Pest Management (IPM) Field Survey in South-Central North Dakota

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During the 2018 crop season, an IPM small grain, soybean and sunflower field survey was conducted by NDSU Extension, in cooperation with the North Dakota Department of Agriculture, to identify crop pest presence and agronomic factors. Use of the survey data includes farmer, crop adviser and ag industry education; support for exporting North Dakota crops; and reference for educational and research projects.

State IPM survey coordinators are Janet Knodel, extension entomologist; Patrick Beauzay, State IPM coordinator and entomology research specialist; and Sam Markell and Andrew Friskop, extension plant pathologists. Brittney Aasand, crop scout based at the Carrington Research Extension Center (CREC), surveyed 439 fields in 11 south-central counties: Burleigh, Dickey, Eddy, Emmons, Foster, Kidder, LaMoure, Logan, McIntosh, Stutsman, and Wells.

The small grain survey was conducted in 285 **spring and winter wheat**, and 23 **barley** fields during the last week of May through July, for 20 leaf and head diseases, and six insects. Primary diseases found during the survey were tan spot (wheat), bacterial leaf blight, Fusarium head blight (scab), net and spot blotch (barley), and ergot (wheat). Insects surveyed were grasshoppers, cereal aphids, cereal leaf beetle, wheat stem maggot and sawfly, and barley thrips.

The **soybean** survey was conducted in 100 fields from the last week of June through the first week of August to detect grasshoppers, soybean aphid, bean leaf beetle, and spider mites. Soybean aphids were first detected on July 23 but density per plant was very low throughout the scouting period. Thirty-two percent of the fields were grown on previous soybean ground. Twenty-seven percent of fields were grown in 30-inch rows; 24 percent were solid seeded; and the balance were in intermediate spaced rows (15 or 22 inch).

The survey included 31 **sunflower** fields inspected during the last week of June through the first week of August for grasshoppers, red sunflower seed weevils, downy mildew, sunflower rust, and verticillium wilt. Seed weevils were found in 7 of 31 fields. Downy mildew was found in 2 fields. Corn was the most common crop that preceded sunflower (68 percent of total fields) followed by wheat (32 percent).

Maps displaying summaries of the state survey results by crop and pest are available at the following website: www.ag.ndsu.edu/ndipm



Crop scout, Brittney Aasand, places insect traps.

Also, insect traps were placed in four **wheat** fields (CREC, Medina, McHenry, and Wishek area) to sample for two exotic insects (ND Dept. of Ag). Sunflower moth, banded sunflower moth (BSM) and *Cochylis arthuri* (CA) pheromone traps were located at the CREC during mid-June through the first 10 days of August to monitor the presence of these **sunflower** insects. BSM and CA were first detected in early July, while the sunflower moth appeared mid-July, and all moth types were present through the balance of the monitoring period. BSM had the highest trap counts. In addition, a Swede midge trap was placed in a CREC **canola** trial (NDSU Dept. of Entomology). Also, soil samples for nematodes were collected from 11 **wheat** fields (one per county) for the ND Dept. of Ag.

Details from the field surveys may be obtained by contacting the CREC.