

Small Grain and Oilseed Crop Field Surveys in South-Central North Dakota

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During the 2004 growing season, field surveys were conducted in North Dakota by the NDSU Extension Service to identify pest presence and agronomic production factors in small grain and oilseed crops. Carrington Research Extension Center staff members Clara Presser, summer IPM crop scout, and Greg Endres, area extension specialist/cropping systems conducted the surveys in 346 fields in 12 south-central counties (Burleigh, Dickey, Eddy, Emmons, Foster, Kidder, LaMoure, Logan, McIntosh, Sheridan, Stutsman, and Wells). Across North Dakota, the survey was coordinated by Marcia McMullen and Carl Bradley, plant pathologists; Phil Glogoza, entomologist; and Duane Berglund. Use of the survey data includes grower and ag industry education, support for labeling of crop protection products, and supporting research and extension programs.

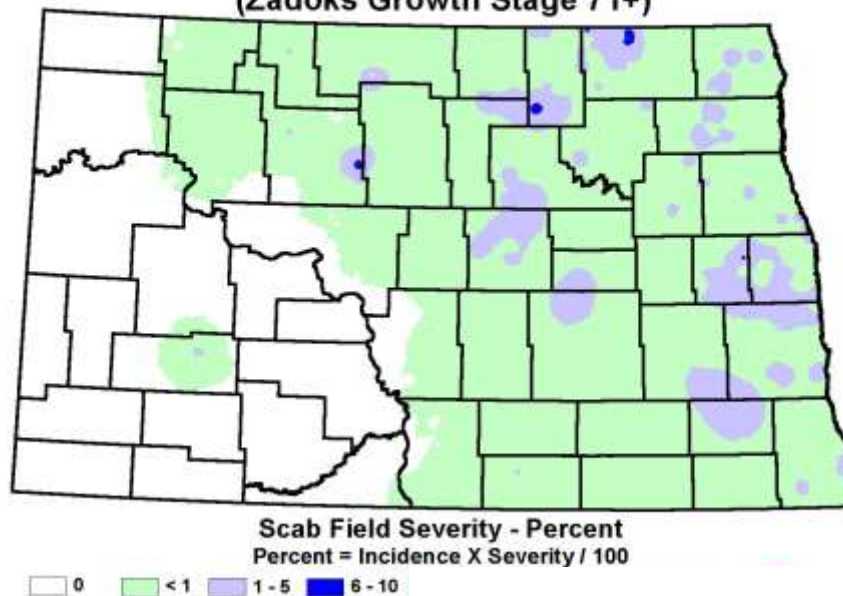
The **small grain** survey was conducted in south-central North Dakota from early June to early August primarily for leaf and head diseases. The 227 surveyed fields included 169 wheat and 58 barley fields. Diseases included in the survey were bacterial leaf blight, barley yellow dwarf, black chaff, Cephalosporium stripe, dwarf bunt, ergot, rust (leaf, stem, and stripe), scab (*Fusarium* head blight), Septoria, smut (flag and loose), spot blotch, tan spot, and wheat streak mosaic. As an example of generated data, the figure below illustrates scab severity across North Dakota. The survey insect list included aphids, cereal leaf beetle, grasshoppers, and thrips (barley).

The **sunflower** survey conducted in south-central ND included 69 fields visited during early July to mid-August to inspect plants for downy mildew, sunflower beetle, and seed weevil. Downy mildew was commonly found in the region as illustrated in the figure below.

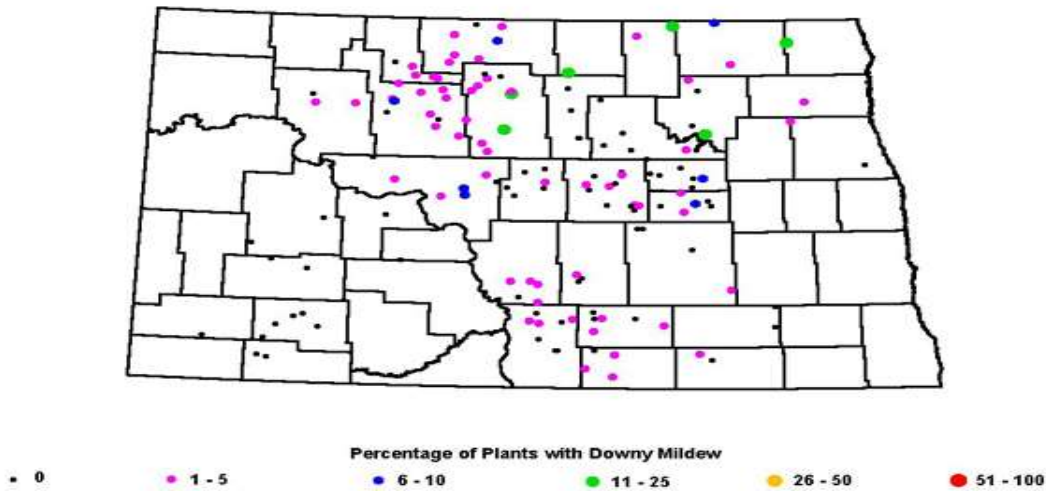
Field Severity of Scab Infections - All Wheat

North Dakota IPM Survey - 2004

(Zadoks Growth Stage 71+)



**ND IPM Survey - 2004
Sunflower Downy Mildew Incidence
2004 Scouting Season**



The **canola** survey was conducted during August 9-11 in 15 swathed fields in Stutsman, Foster, Eddy, Wells, and Sheridan counties. The fields were inspected for the presence of *Sclerotinia* stem rot (white mold), blackleg, aster yellows, and *Alternaria*. White mold was detected in 67% (10) of surveyed fields, but field incidence was low (2-12% of plants infected). Blackleg was found in 60% (9) of the surveyed fields, but with low plant incidence. In addition, the fields were surveyed for flea beetles and grasshoppers.

Thirty-five **soybean** fields were surveyed in Eddy, Foster, Stutsman, LaMoure, and Dickey counties during mid-summer (July 26 to August 5) and again in September. Notes taken included yield estimates, prominent yield limiting factors, plant population, row spacing, tillage system, root nodulation, and presence of weed species, diseases (root, stem and foliar), and soybean aphid. Also, a follow-up telephone survey was conducted by extension agents to gather additional production data from farmers whose fields were visited. Limited data has been compiled at the time of this report.

Maps displaying summaries of survey results by crop and pest are available at the following website: <http://www.ag.ndsu.nodak.edu/aginfo/ndipm/>. Survey details may be obtained by contacting the Carrington Center.