The Sunflower Pathology Working Group

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THE SITUATION

Diseases are one of the most significant yield-limiting factors for sunflower production. However, few pathologist work on sunflower and few academic or Extension resources on sunflower diseases exists. This void has resulted in frequent misidentification of diseases, a lack of IPM recommendations and a 'spray and pray' philosophy among growers.

THE RESPONSE

Beginning in 2013, funding was obtained from the North Central IPM Center to establish the **Sunflower Pathology Working Group (SPWG).**

OBJECTIVES

1) Identify and prioritize stakeholder needs.
2) Develop Extension reference material.
3) Develop scientific reference material.
4) Increase communication among pathologists working on sunflowers.

NOTABLE ACTIVITES

A survey was created to 1) identify the greatest sunflower pathology needs among stakeholders and 2) determine their preferred method of informational resources.

The SPWG meets at the annual APS meeting (August) and at an annual composition in November (location varies).

Stakeholder feedback is obtained at the National Sunflower Association Annual Research Forum in January (Fargo, ND) and the Annual Summer Seminar in June (location varies).

FUTURE ACTIVITIES

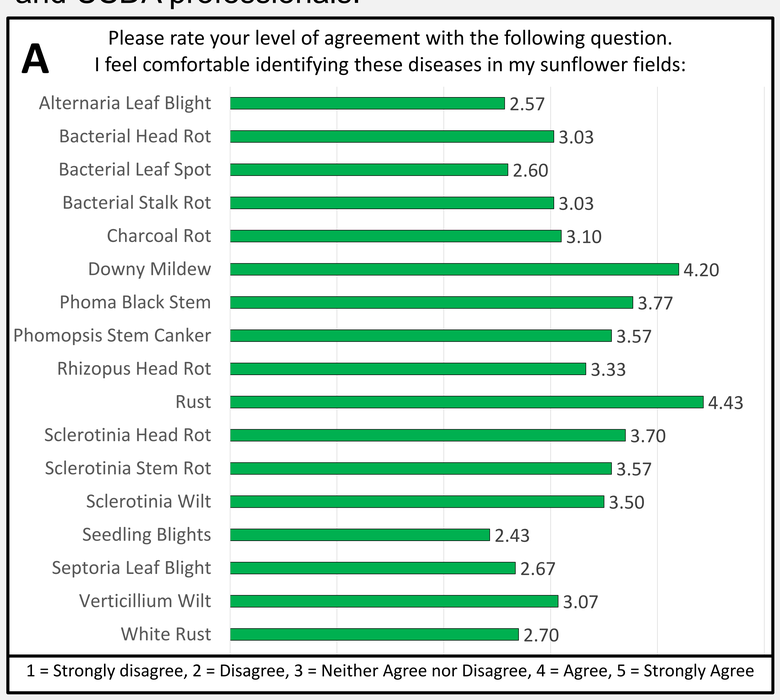
Completion of the APS Sunflower Compendium, composition of Plant Health Progress Diagnostic Guides and an expansion of Extension materials are planned in 2015 and 2016.

RESULTS

Figure 1. Sunflower Diseases

Stakeholders were most comfortable identifying rust and downy mildew (Figures 1 and 2A) and preferred information in full-size and pocket-size print materials (Figure 2B). Consequently, the SPWG designed a 20-card diagnostic card set (Figure 3) to make in-field identification easier. Additionally, the SPWG produced one book chapter (in press) and will submit the first draft of the APS Sunflower Compendium for review in April, 2015 (Figure 4A and B). Communication among pathologists working on sunflower increased through conference calls and meetings (Figure 5 A and B).

Figure 2A and B. Results of selected questions from SPWG survey. The survey was distributed to the National Sunflower Association yield-surveyors list (N=30), made up of growers and Extension, industry and USDA professionals.



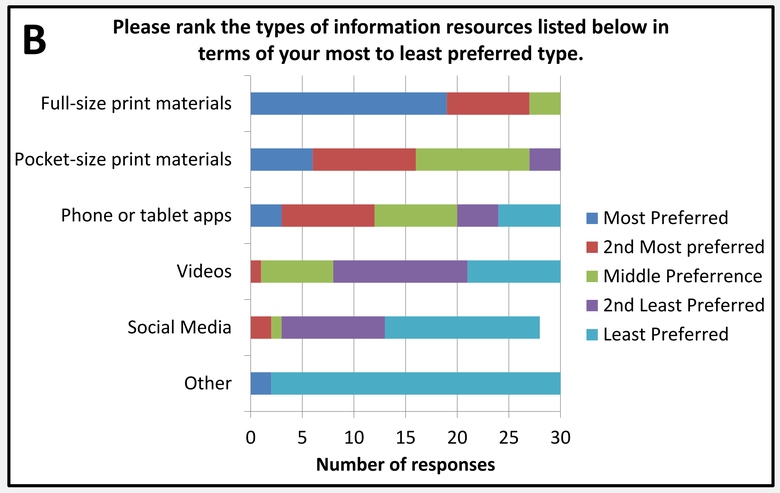


Figure 3. Extension literature developed by the SPWG includes a 20-card diagnostic set.

Figure 4. Scientific reference material developed by the SPWG includes **(A)** a chapter in the upcoming American Oilseed Chemist Society – *Sunflower Oilseed: Chemistry Production Processing and Utilization* (2015) and **(B)** the first American Phytopathological Society - *Sunflower Compendium*

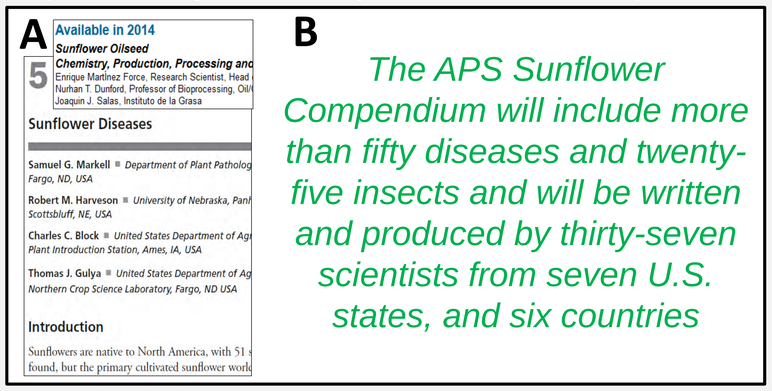


Figure 5. Communication among pathologist increased by (A) conference calls and (B) annual composition meetings.

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