

Resources Developed by the Sunflower Pathology Working Group

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BACKGROUND

Diseases are one of the most significant yield-limiting factors for sunflower production, yet until recently, limited reference and Extension materials on sunflower diseases were available. In 2013, a small group of pathologists formed a Sunflower Pathology Working Group (SPWG) with support from the North Central Integrated Pest Management (IPM) Center. The mission of the SPWG is to develop reference and Extension materials and that will help growers and stakeholders better identify and manage diseases. To best accomplish this, the SPWG conducts frequent surveys to determine the greatest needs and best information delivery method(s).

MEASURING PREVIOUS OUTPUTS

A survey was distributed during a presentation titled 'Help us Help You: Disease Management and Resource Discussion' at the National Sunflower Association Research Forum in Fargo January 13-14, 2020. Attendees were asked to identify their role (Figure 1), rate the usefulness of different information delivery mediums (Figure 2), their level of comfort identifying categories of diseases (Figure 3), and their intent to use diagnostic materials (Figure 4). Responses were used to help usefulness of previous activities of the SPWG and plan the development of future outputs.

Figure 1. Responses of 32 survey participants of the 2020 NSA Research Forum to the question 'What best describes your role with sunflowers (circle all that apply)?'

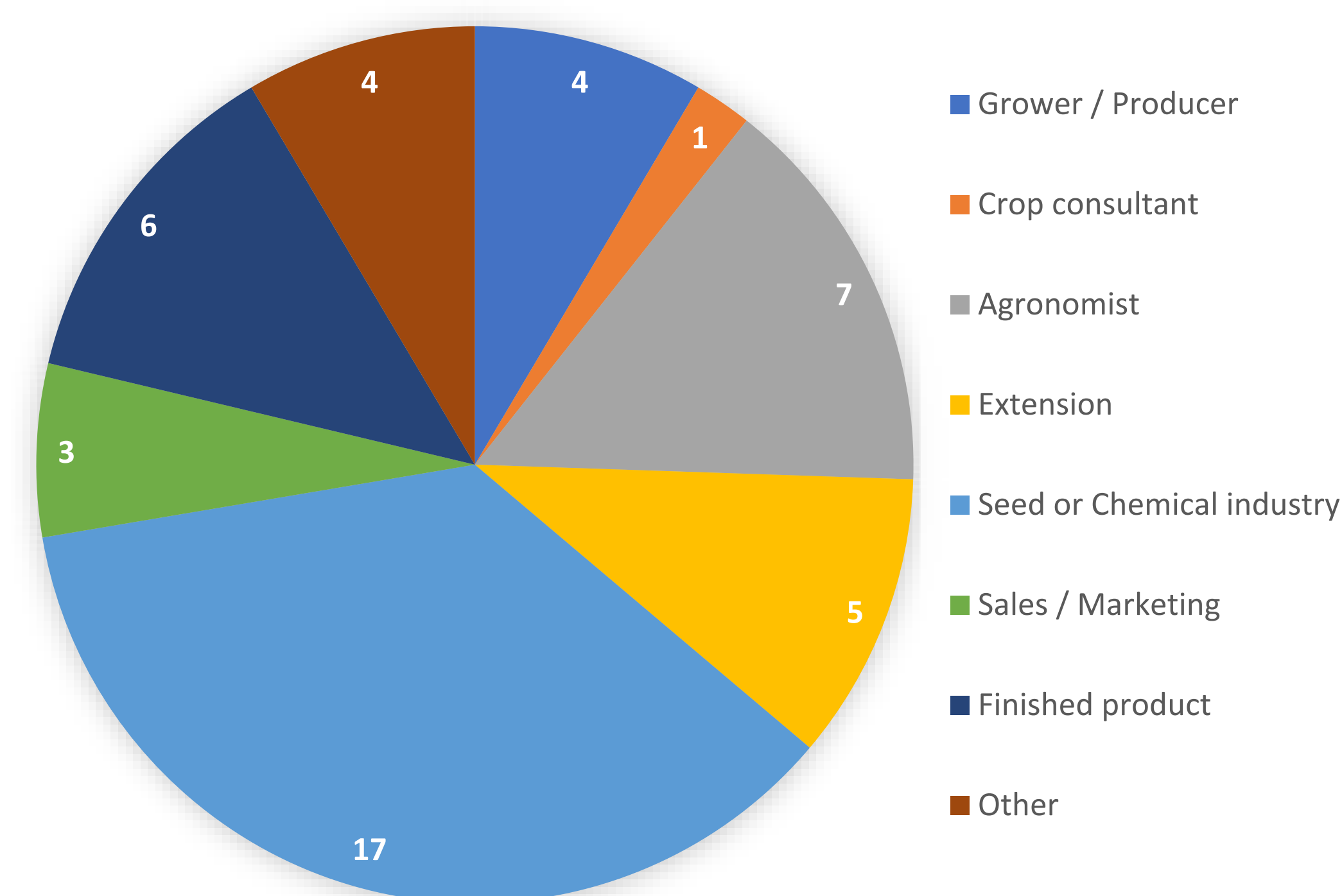


Figure 2. Mean response of 32 survey participants of the 2020 NSA Research Forum to the question 'I have used, or plan to use, the following resource materials'.

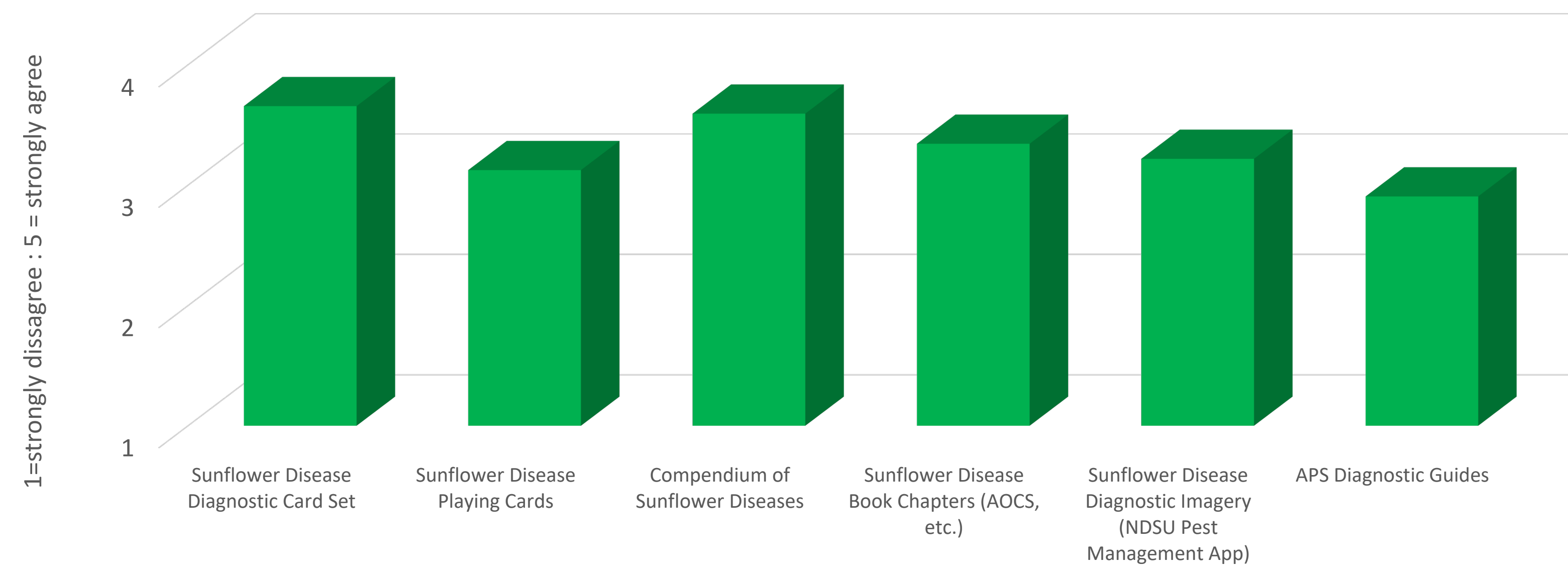


Figure 3. Mean response of 32 survey participants of the 2020 NSA Research Forum to the question 'I feel comfortable identifying and distinguishing these groups of diseases'.

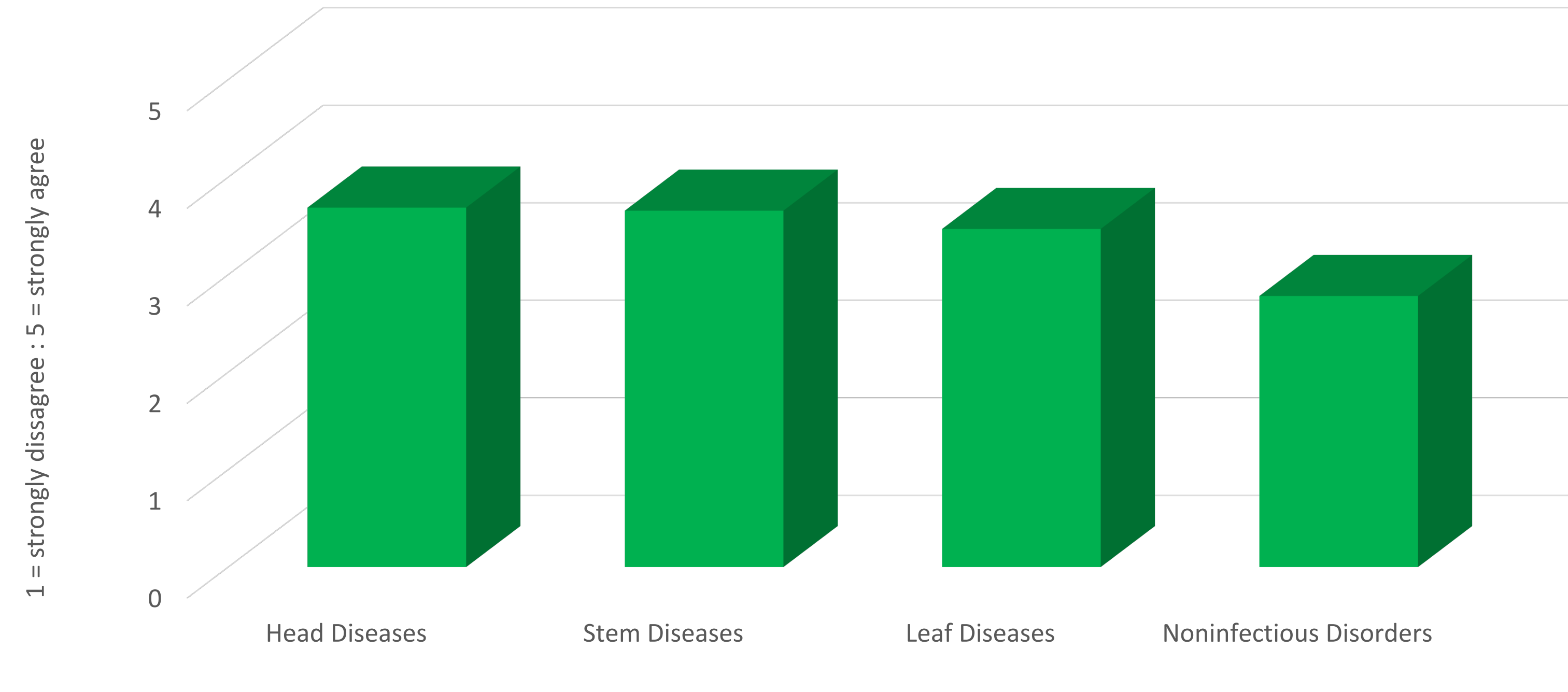
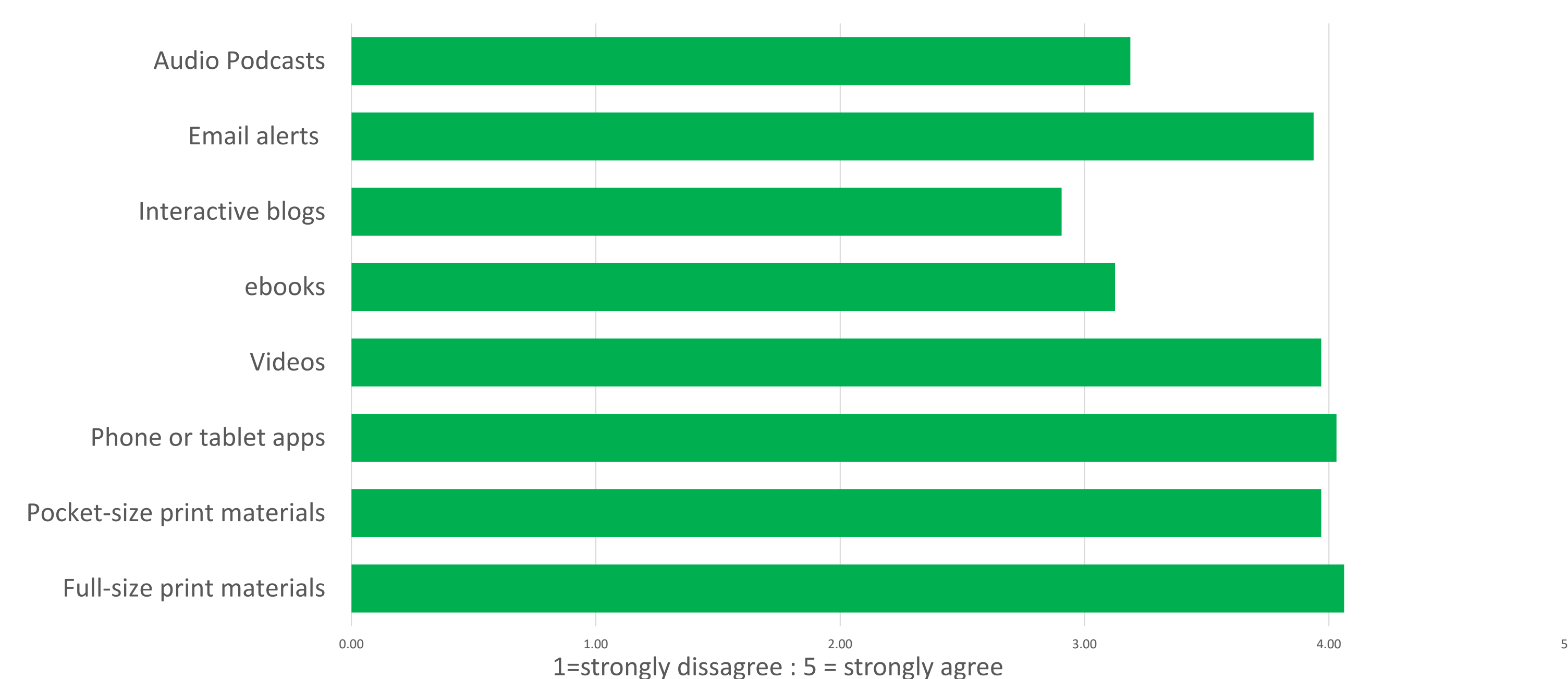


Figure 4. Mean response of 32 survey participants of the 2020 NSA Research Forum to the question 'I find these types of resource materials useful for agronomic information'.



FUTURE ACTIVITIES

The SPWG is currently developing several new resources to help growers and their advisors identify and manage diseases.

- Currently drafted, is a new sunflower diagnostic series on nutrient and noninfectious disorders. This will address diseases that survey participants are 'least comfortable identifying' (Figure 3).
- An updated 'diseases' section of the National Sunflower Association website nearly complete <https://www.sunflowernsa.com/growers/Diseases/>.
- Additional activities planned by the SPWG include a USDA-CARE grant proposal to support disease management demonstration plots in three states, and print and online resources for plant disease diagnosticians and college students.

Figure 5. Recently updated disease page (Downy Mildew) of the National Sunflower Association website www.sunflowernsa.com/diseases/downy-mildew



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