Promoting successful production of alternative crops in a period of low commodity prices

The Situation
In the face of low prices for the major commodities, especially corn and wheat, many North Dakota crop producers sought alternative crops for their farming operations that would offer better profit potential in 2016. High prices for peas and lentils, driven by drought and associated crop failures in the Indian subcontinent, led to a sharp increase in pea and lentil production in central and western North Dakota. Established pea and lentil producers expanded their acreage of the crops, often tightening crop rotations, and producers who had never previously grown these crops experimented with them. Crop diseases can be important production constraints for pea and lentil production, and successful disease management can be critical for successful production of the crops.

Extension Response
Plant pathologist Michael Wunsch delivered outreach talks on management of diseases of peas and lentils to producers, crop advisors, and other agricultural professionals. Talks were conducted at events organized by private industry, commodity groups, and university extension. Particular emphasis was placed on root diseases, which are heavily influenced by crop rotation intervals.

Feedback
Educational presentations on the management of diseases of peas and lentils were well received by stakeholders. Audience participation at the presentations was high, with multiple questions routinely asked both during and after talks. In conversations with producers during and after meetings, many producers indicated that they were implementing changes in production practices in response to information they obtained. Likewise, attendees of NDSU’s Western Crop and Pest Management School gave very positive feedback on the talk given on Aphanomyces Root Rot of peas and lentils, with over 90% of attendees who completed the survey indicating that they gained new and useful information from the talk.

Public Value Statement
Peas and lentils are important rotational crops in central and Western North Dakota; they fix nitrogen, thereby reducing fertilizer inputs in subsequent crops, they help break disease and pest cycles in wheat and barley production, and their inclusion in crop rotations helps diversify farm incomes. As fairly minor crops, however, they are not targets of significant research and development investment from agribusiness. Both producers and private-sector agronomists rely heavily on university extension specialists for production recommendations for peas and lentils.

Impacts
Over 500 producers, crop advisors, and other agricultural professionals received updated recommendations on managing critical diseases of field peas and lentils, including Aphanomyces and Fusarium root rots, Ascochyta blight, powdery mildew, and bacterial blight.

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