Awareness of Goss’ Leaf Blight and Wilt of Corn in North Dakota

The Situation
The yield limiting corn disease Goss’ leaf blight and wilt (Goss’ wilt) was first documented in North Dakota in 2011. Corn disease survey efforts have been conducted since 2014 to document the prevalence of this disease in the state. In order to help reduce risk, it is important to promote awareness of this corn disease and reinforce management decisions. This is exceedingly more important during low market prices when growers may start shortening time intervals between corn crops and potentially enhancing Goss’ wilt risk.

Extension Response
The NDSU Extension Plant Pathology group worked collaboratively with the North Dakota Department of Agriculture and NDSU Plant Diagnostic Lab in 2016 to document the prevalence of Goss’ wilt in the state. This was accomplished by conducting a foliar disease survey across North Dakota (coordinated by a graduate research specialist) and plant samples submitted to the Plant Diagnostic Lab. A total of 82 fields were visually assessed for Goss’ wilt and an additional three samples were obtained from the NDSU Plant Diagnostic Lab.

Impacts
Disease Survey Results
In 2016, Goss’ wilt was identified in 24% of the surveyed fields. Most fields were low in incidence and severity, however, one field was severely devastated by the disease (>90% of the field affected by the disease). Observing the explosive nature of the disease, highlights the importance of identification and management.

Yield Loss Assessment
Field trials conducted in 2016 have shown that yield losses under severe epidemics on susceptible hybrids can exceed 45%. Whereas, the incorporation of a tolerant hybrid can lessen yield loss to 8-10%.

Images and videos obtained from the field trials will be used to teach agricultural professionals during winter Extension meetings.

Feedback
“Appreciated the experience to see what the disease looked like.”
-Attendee of ND Corn Utilization Council Research Field Tour

Public Value Statement
Promoting awareness and management of corn diseases can strengthen economic health in communities throughout the state.

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