Nez Perce Reservation Citizens

Compare Nitrogen Effect on Corn Disease

The Situation
Corn grown on the Nez Perce Reservation expresses high levels of a disease—"corn smut". This disease reduces corn yield and quality by invading stem, ear, and tassel tissue. Severity of this disease may be related to increasing soil-applied nitrogen rates.

Our Response
Cooperatively establish a study with the Nez Perce Tribal Food Bank to evaluate corn disease response to varying rates of soil-applied nitrogen fertilizer.

Our Goals
♦ Establish a corn garden and corn smut disease comparison study.
♦ Determine disease response to different rates of soil-applied nitrogen fertilizer.
♦ Provide educational tours of the garden and the disease study.

Achievements
♦ A corn garden and corn smut disease study was initiated and completed.
♦ A statistical evaluation indicated that increasing soil-applied nitrogen fertilizer also increased corn smut severity.
♦ The same evaluation provides significant evidence that lowering nitrogen rates decreases corn smut severity and corn yield.

♦ A fungicidal seed treatment and/or disease resistant corn varieties should be planted to protect against this disease.

Cooperators
Nez Perce Tribal Food Bank
UI/Nez Perce County Master Gardeners

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