Title: Impact of irrigation systems on disease development and microclimate

Abstract

Tar spot, a major fungal pathogen of corn, has been a concern for many growers in Nebraska and the Midwest. As the pathogen, *Phyllachora maydis,* spreads westward into more arid regions, it will be critical to understand the relationship between irrigation and disease development. Therefore, research has been conducted to understand how individual irrigation events impact disease development and microclimate before, during, and after an irrigation event occurs. It was discovered that irrigation throughout the season can significantly increase disease severity and change the microclimate of the canopy before, during, and after an irrigation event in comparison to nearby rainfed conditions. Other research focused on management, evaluates the effect of chemigation on disease development under center-pivot irrigation systems and the impact of nozzle height on canopy climate and disease control.