Temporal and Spatial Analysis of Soil Water Resources as a Decision Aid in Selecting Spring and Fall Planting Dates for Forages. (A03-williams103721-Poster)

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Abstract:

Overseeding and establishment of cool-season forages in either the fall or spring require sufficient rainfall and soil moisture to insure seed germination and seedling establishment. Given a window of opportunity for planting, what are the odds of having sufficient moisture? Here we examine a simple rainfall model and soil water balance model using 30 years of historical climate data to predict the precipitation and soil moisture during specified periods in the fall and spring for 23 counties in Oklahoma. The fall planting period was from September 20 to October 20, while the spring period was from April 15 to May 30. The results favor spring planting regardless of location. Probabilities for spring rainfall were greater than 0.94 for 25 mm, while for the fall the probabilities of greater than 25 mm ranged between 0.75 and 0.88. Probabilities of sufficient soil moisture followed the same trend. However, the soil moisture was also modified by the antecedent soil water availability before the planting period. Information gained from such simple models may help extension personnel to advise the best season for planting cool-season forages.

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