Scheduling irrigation to maximize soybean yield in Michigan. (C03-bernards120106-Poster)

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Abstract:

Five irrigation schedules, based on soybean growth stage and soil water deficit, were evaluated to determine when irrigation should begin to achieve maximum soybean seed yield on sandy soils in Michigan. Irrigation was applied when the soil water deficit reached 50% in the surface 3 feet as measured by TDR. Irrigation treatments included full season, flowering (R1-R2), pod development (R3-R4), seed development (R5-R6) and no irrigation. Yields of the full season, flowering, and pod elongation treatments were not statistically different (65-75 bu/ac); the seed fill and dryland treatments yielded significantly less (58.3 and 42.9 bu/ac) than the full season and flowering treatments in 2001. Two applications of glyphosate controlled weeds better than one but did not affect seed yield. Season-long weed control improved as more irrigation water was applied.

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