

IRRIGATION REGIMES AND PLANT POPULATION DENSITY EFFECTS ON SEED YIELD, PROTEIN AND OIL CONTENT OF THREE SOYBEAN CULTIVARS.

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ABSTRACT

Field experiments; for two years (2000 and 2001), were conducted in a split – factorial, based on a randomized complete block design (RCBD) with three replications to study the effects of irrigation regimes, plant densities and soybean cultivars on seed yield and seed oil and protein contents. Irrigation regimes were assigned to main plots and plant densities and soybean cultivars to subplots. It was revealed that treatments affected all parameters measured significantly in both years. Highest and lowest rate of seed yield per plant and per unit area were produced by I₂ and I₄ irrigation regimes (irrigation after 60mm and 100 mm evaporation from class A pan) respectively. Plant densities also affected seed yield per unit area significantly. The highest and lowest rate of seed yield obtained from 50 (D₃) and 30 (D₁) plants per m², respectively. Cultivars were also different for seed yield production . Williams (V₂) produced the highest and Hill (V₃), the lowest yields , respectively.

Key Words: Class A pan, Irrigation, Oil and protein content, Plant density, Soybean cultivars.