



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## The Effects of Row Spacing on Yield and Yield Components of Full Season and Double-Cropped Soybean

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**Abstract:** Compared to full season soybean cropping systems, seed yield reduction is a major concern in double-cropped soybean production systems. This study was conducted at the Research Farm of Mustafa Kemal University, Hatay, Turkey, to determine if it is possible to enhance the yield of both full season and double-cropped soybean by narrowing row spacing. Two soybean cultivars, A3935 and S4240, were planted using row widths of 30, 50, and 70 cm, and twin row (50 25 50 cm) in 2004 and 2005. Seed yield and the other investigated plant parameters of double-cropped soybean were lower compared to full season soybean. Row spacing had a significant effect on plant height, number of nodes per plant, main-stem pod and seed number, branch pod and seed number, and seed yield in both cropping systems. The highest seed yield (4142.5 kg ha<sup>-1</sup>) averaged over years was obtained from a 50-cm row width in full season soybean cropping, whereas a 30-cm row width had the highest seed yield (3241.5 kg ha<sup>-1</sup>) in double-cropped soybean. In full season soybean production, a 23% yield increase was recorded when row width was shifted from 70 to 50 cm, and no yield increase was recorded by further narrowing the row width. In double-cropped soybean, 24.8%, 59.5%, and 35.6% yield increases were recorded when soybean was planted in 50 and 30 cm, and twin row width, respectively, instead of a 70-cm row width. Our results indicated that yield reductions in double-cropped soybean production could be alleviated by narrowing the row width in the eastern Mediterranean region.

**Key Words:** Soybean, Glycine max, planting date, row width, seed yield, yield decrease

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