

The Critical Period of Weed Control in Double-Cropped Soybean

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Double-cropped soybean after winter cereals is the most common soybean production system in the eastern Mediterranean region of Turkey. Weeds are among the main obstacles to double-cropped soybean. A study was conducted in 2002 and 2003 to determine the critical period of weed control (CPWC) for double-cropped soybean. The treatments consisted of either allowing weeds to infest the crop for increasing durations after sowing, or maintaining plots weed-free for increasing durations after sowing. The Gompertz and logistic equations were fitted to relative yields representing the critical weed-free period and the critical time of weed removal, respectively. Johnsongrass (*Sorghum halepense*), common cocklebur (*Xanthium strumarium*) and field bindweed (*Convolvulus arvensis*) were the dominant weeds. For 5% crop loss level, the CPWC was almost all season long, whereas it was from V1 to R6-R7 growth stages for 10% yield loss level. These findings indicate that pre-sowing or pre-emergence control methods should be applied in the region to avoid greater crop losses. KEY WORDS: Soybean; critical period of weed control; weed interference; time of weed removal; yield loss.

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