

Determination of the Seed Vigor of Soybean Cultivated as Main and Second Crop in Turkey

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Abstract : This research was conducted to determine the difference in seed vigor between the seed lots cultivated in main and second crop of soybean in Turkey. Seeds from soybean cv. Cinsoy and Umut-2002 were evaluated in the laboratory for germination, emergence, cool test at 18°C for 10 days, and cold test at 10°C for 4 days and 25°C for 6 days. Result showed that the initial oil contents of Cinsoy and Umut-2002 and seeds were determined to be 19.8 and 20.1% in main crop, and 18.7 and 22.1% in second crop, respectively. It was determined that a clear difference between main and second crop soybean seed lots for seed vigor was found. Germination and emergence percentage were higher in the seed from second crop cultivation of the cultivars. There was no significant difference in germination percentage in cool and cold test while seedling growth was better in the seeds of second crop soybean. The highest seed vigor index (477.6) was found in the seeds of the cultivars grown at second crop. Standard germination percentage did not give a sensitive separation for determining seed vigor of soybean lots. It was concluded that second crop soybean seeds were found the most suitable for seed production while main crop soybean gave higher protein lower oil content.

Keywords : Glycine max L., germination, emergence, protein content, vigor test

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