

Investigation of the Density and Control Methods of Weed Species That Are a Problem in Broad Bean (*Vicia Faba* L.) Cultivation

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Abstract : This study was carried out at Kahramanmaraş Sutcu Imam University, trial area Faculty of Agriculture and ÜSKİM laboratory in 2022. Many problems are encountered in broad bean (*Vicia faba* L.) cultivation. One of these problems is weeds. In this study, weed species, families, and densities of weeds that are a problem in broad beans were determined. A total of 47 weed species belonging to 20 different families were determined in the experimental area. Weed species found very densely in control 1 plots of the broad bean experimental area were *Sinapis arvensis* 11.50 pieces/m², *Lolium temulentum* L. 11.20, *Ranunculus arvensis* L. 10.95, *Galium tricornutum* Dany. 10.81, *Avena sterilis* 10.60, *Bupleurum lancifolium* 10.40, *Convolvulus arvensis* 10.25 ve *Cynodon dactylon* 10.14 pieces/m². The weed species *Cuscuta campestris* Yunck. which is very common in the control plots of the broad bean experimental area, was calculated as 11.94 units/m². It was determined that *C. campestris* alone caused significant yield and quality loss in broad beans. In this study, it was determined that the most effective method in reducing the weed population was hand hoeing, followed by pre-emergence pendimethalin and post-emergence herbicide with Imazamox active substance. In terms of the effect of these control applications on the pod yield, the hand hoeing application ranked first, the pendimethalin application ranked second, the Imazamox application ranked third, and the control 2 and control 1 plot took the last place.

Keywords : broad bean, weed, struggle, yield

Conference Title : ICAAE 2022 : International Conference on Agriculture and Agroecological Engineering

Conference Location : Istanbul, Türkiye

Conference Dates : December 20-21, 2022