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# INVESTIGATION OF THE EFFICACY OF SEVERAL COMMON HERBICIDES ON SUGAR BEET SEEDLING DAMPING-OFF DISEASE IN GREENHOUSE

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## ABSTRACT

Seedling damping- off is one the most important disease of sugar beet. In this study, the effect of five commonly herbicides were investigated on pathogens of sugar beet seedling damping- off in greenhouse. *Rhizoctonia solani* (R.S.K.4 and R.S.K.5) and *Fusarium proliferatum* (F.P.K.1) are used as pathogens which its isolation have been approved during research projects in the growing season among 2007 to 2009. Greenhouse study was done in factorial experiment in a randomized complete block design. Factors included sugar beet cultivars in four levels (Shirin, Jolgah, Gaduk and 31145) and herbicides (no herbicides in healthy control, no herbicides in unhealthy control, Betanal AM, Betanal Progress AM, Betanal Progress OF, Safary and Pyramin). The effect of experiment treatments on controlling damping- off disease was evaluated by determining percent of healthy seedling during 15, 30, 45 and 60 days after planting. Greenhouse results about the experiment of the effects of cultivar and herbicide factors separately on percent of healthy seedling showed that there was not significant difference between various treatments. However, the results related to the experiment of the interaction effects between two above-mentioned factors on percent of healthy seedling showed that there was significant difference between different treatments in the 5% level. In this experiment, the maximum percent of healthy seedling belonged to treatments related to Shirin, Jolgah and 31145 when Betanal AM, Betanal Progress AM and Betanal Progress OF had been applied in them.

**KEYWORDS:** Herbicides, Seedling Damping-Off Disease, Sugar Beet