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**Effect of mating-disrupt electronic system on
vine cicada control, *Psalmocharias alhageos*
(Hom.:Cicadidae)**

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One of way for pest controlling through biological control is making disruption. Disruption usually made in communication channel. For example it is made pheromone disruption for insects that use pheromone for their communication. Because of some insects communicate by sound signals, Therefore, sound signals can be used in controlling these pests. Vine cicada, *Psalmocharias alhageos* (Hom.: Cicadidae), is one of the most important pests of grape vine in Iran, which generates sound for it's communication. Main damage of vine cicada is caused by long feeding of nymphs on vine roots and oviposition inside shoots. For controlling this pest, sound traps which mimic the adult cicada sound are used to lure and kill the opposite sex. However, it is hard to mimic the exact sound signal produced by an insect. This problem makes sound traps less efficient. In this research, a new electronic system was designed and tested which disrupted in sound signal communication of adult cicadas. As female cicadas search for the sound signals produced by male cicada, our system was producing a sound signal which had a frequency close to what is produced by male cicada, disrupting on mating behavior of female cicada. In this research, the number of shoots receiving eggs was counted in the area that the sound signals of the designed device were applied. The results showed that this system can disrupt in mating behavior of female cicada resulting in oviposition reduction.

Key words: vine cicada, *Psalmocharias alhageos*, mating behavior, disruptive signals, pest control.

Note: the presenter (H. Zamanian) was not able to attend the meeting, due to difficulties with acquiring a visa for the USA.