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PROCEEDINGS
Efficacy and host range of thistle tortoise beetle
(*Cassida rubiginosa*) for biological control of Canada thistle
(*Cirsium arvense*)

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Canada thistle (*Cirsium arvense*) is a noxious weed and one of the most problematic weeds in field crops, orchards, vegetables, pastures and grasslands in Iran. The thistle tortoise beetle (*Cassida rubiginosa*), an herbivore insect, seems to be an effective agent for suppressing the biomass and survival of Canada thistle. Feeding 20 insects on each plant reduced total biomass and seed production by 78% and 94%, respectively. Host range studies on *Cassida rubiginosa*, which feeds actively on this weed as larva and adult, were carried out in 20 crops with two methods of no-choice and multiple-choice, and in 22 weeds through field surveys. The results showed that plant feeding and female ovipositor by the beetle were observed in Russian knapweed, common Russian thistle, bull thistle and Canada thistle. Green Thistle beetle fed on sunflower but only about 5% of plant shoots were eaten and only in no choice treatments; however this beetle did not deposit any eggs on sunflower. Green thistle beetle could be a promising classical biocontrol agent for Canada thistle in grasses, natural grasslands, agricultural fields and pastures.

Keywords: Biological control, Herbivory, Natural enemies, Weed

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