

Second Laureate Applied Research



- ◆ **Project title:** Study on control methods of pests and weeds for seed production from first cut of alfalfa with several years old in Hamedan farms
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Abstract:

First cut of alfalfa fields with several years old is not economic for forage production, but is suitable for seed production. Currently seed product was done from second and third cuts of alfalfa fields with more than 5 years old, but these farms strongly infested by golden dodder, tarnished plant bugs, and alfalfa tarnished plant bug. They cause flower shattering in alfalfa farms of seed production and unfortunately their damage are very high and becomes impossible crop harvesting. So, with controlling mentioned pest and weeds can produced high quality and quantity seed yield. In this order, seven different integrated control methods of pest and weeds were evaluated: A. Physical (using the blame on 1st April), B. Chemical control in early spring (1st April) and insecticide spraying at green buds appearance), C. Chemical with herbicide (Gramaxon at early spring), D. Herbicide (on 1st April) and insecticide sparing at green buds appearance, E. Cultural (cutting when was height 5 cm) and Chemical: (insecticide sparing at green buds appearance), F. Physical control (field blaming on 1st April) and chemical method (spraying at the green buds appearance), G. chemical by herbicide (Gramaxone on 1st April) and insecticide (sparing at green buds appearance); and control. This study was carried out in random complete block design with 4 replications. According to the results of this study most methods were effective in control of pests of first cut in comparison with control and their differences was significant in 1% level. Among them treatments of F, E and G had favorable results in control of major pests of first cut of alfalfa seed farms and they had high quality of seed yield; and 9 times of seed production (370 g/m² or 3700kg/hect). These results are great transformation in seed production.

