

RESIDUAL EFFECTS OF HERBICIDES USED IN CORN FIELDS ON GROWTH OF WHEAT (*TRITICUM AESTIVUM* L.)

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Introduction: Traditionally, wheat is cultivated after corn in most areas of Fars province. In most cases, slight to severe damages to wheat seedlings including stunting and poor growth could be observed under such conditions.

Material and method: A greenhouse experiment was conducted at Shiraz during 2010 to study the residual effects of corn herbicides i.e. foramsulfuron and atrazine+alachlor mixture on the subsequent crop i.e. wheat (*Triticum aestivum* L.). A completely randomized design (CRD) in 8 treatments and 4 replications was used. The treatments were 0, 1, 5, 10, 20, 40, 50, and 100 percent of recommended dose of the herbicides under field conditions. Pots 7 cm in diameter were filled with a virgin loamy silt soil. Ten wheat seeds cv. Shiraz were planted in 5 pre-determined holes in the pots and after germination, thinned to 5 plants per pot. The plants were grown for 8 weeks. At harvest, the growth parameters including height and fresh and dry weights of shoots and roots were determined. Data were subjected to analysis of variance by computer facilities, using SAS program.

Result and discussion: The results showed that the effects of atrazine+alachlor mixture residues on the growth parameters of wheat were more pronounced than that of foramsulfuron. However, the growth parameters of wheat were reduced at all concentrations of both treatments i.e. foramsulfuron and/or atrazine+alachlor significantly, compared to untreated control. The plants remained alive at all doses of foramsulfuron although they were stunted. The stunting was increased linearly with increasing percentages of herbicide residue. However, all plants died at more than 50% residues of atrazine+alachlor.

Keywords- herbicides, residue effect, wheat.