

EFFECT OF ALLELOPATHIC COMPOUNDS OF SOME ROOT WEED PLANTS ON THE GERMINATION AND SEEDLING GROWTH OF SOME CROPS.

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ABSTRACT

A laboratory experiment was conducted in field crop department-College of Agriculture-Tikrit Univ. During 2009 ,to determined the effect of allelopathic compounds which obtained from the extract of root systems of some weed plants like, Johnson grass *Sorghum halepense*,Eruca plant *E.sativa*,common sow thistle *Sonchus oleraceus* and cheese weed *Malva parviflora*,on the germination and seedling growth of wheat, barley and corn crops.

The results which obtained were:

1-The extract of common sow thistle roots ingibited the seed germination and seedling growth significantly than other extracts for all crops .

2- The Johnson grass extract inhibited the plamule length of corn seedling about 29.9% than the control treatment, while the cheese weed root extract reduced the seedling growth of wheat about 23.3%.

3-The Johnson grass root extract reduced the radical length of wheat about 38.2% comparing with control-treatment .

4-Dry weights of plamule of all crops which studied were affected significantly.

The highest reduction obtained from common sow thistle plant root extract the reduction percentages were 36.5% ,51.3%,and 28.1%for wheat, barley and corn respectively.

5-The radical dry weights of corn seedling reduced significantly when the seeds treated with common sow thistle plant root and Eruca plant root the percentages were 76.3%and 80.3%respectivly.