Investigation the Effect of Different Crop Rotation Patterns on Weed Community structure

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Abstract

In order to investigate the effects of crop and crop rotation on weed community structure, an experiment was carried out in research field of collage of Agriculture, Ferdowsi University, Mashhad, during the years of 2013-14 and 2014-15. In the first year, sugar beet was planted in 17th April and cicer, cumin and onion were sown in 7th and 8th March. All sowing, growing and harvesting managements were conventional and crops were harvested in ripening stage. On November, after the last crop (sugar beet) harvest, barley (beverage) was sown in the filed. In the second year, weed population was sampled with a 1*1 m² quadrate. Results showed that there was a correlation between crop type and compendium weed population Flore and those species that have similar morphological performance and life cycle with crops was dominant. There was a regression (r²=0.92) between crop growing season and annual broad leaf weed species number and summer weed species. It seems with increasing in summer crop growing season, summer weed species have more opportunity for growth and development. This result was affected on weed population in barley filed, whether; summer weed species was more in those field sections that sugar beet was sown in previous year.

Key words: Sugar beet, Cumin, Onion, Cicer, Weed