

Land Lots and Shannon-Winner Index in Sarpolzahab Agro Ecosystems- Western Iran

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Abstract : Various factors including land lots can affect biodiversity indices in Agricultural systems. Field study conducted to evaluate factors affecting crop diversity in Sarpolzahab in 2012. Required data were collected through direct observation of farms and filling questionnaires. Total numbers of 140 questionnaires were filled, SAS Software was used to analyse data and Ecological Methodology Program was applied to calculate Shannon-Winner index, subsequently. Results of study indicated that average number of land lots for each farmer was 2.78 and various from 2.2 in Rikhak Olia Village to 4.31 in Golam Kaboud Olia Village which shows small size of land lots due to separating larger lots by children of deceased farmers. The correlation between number of land lots and species biodiversity (0.308**) was significant and Shannon-Winner index was (0.262**). Therefore, according to the mentioned results one can assume that increase in number of land lots results in improving of the target index. Multiple land lots allow farmers to cultivate various crops which results in increasing biodiversity of crops in agro ecosystem. Subsequently, this increase will facilitate economic sustainability of the farmers and distribution of work force in the region throughout the year. The correlation of seasonal workers with biodiversity of crop species (0.256**) and Shannon-Winner (0.286**) was statistically significant and increasing number of seasonal work forces had resulted in improving crop biodiversity and decreasing dominant species or single crop farming systems. Vegetable farms which have a significant diversity, require a significant number of work forces which describes correlation between number of workers and diversity of species.

Keywords : agricultural systems, biodiversity indices, Shannon-Winner index, sustainability, rural

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