Tropentag, September 17-19, 2018, Ghent

"Global food security and food safety:
The role of universities"

The Role of Universities in Changing Cultural Pattern and Creating Sustainable Employment in the Villages of Marvdasht, Iran

Ali Mojab Ghasroddashti[1], Mostafa Fooladi[2], Shokrollah Ordoobadi[3], Hassan Gharaat[4]

[1] *Ferdowsi University of Mashhad, Dept. of Agronomy, Iran*
[2] *Azad University of Gorgan, Dept. of Agronomy, Iran*
[3] *Shiraz University, Dept. of Agronomy, Iran*
[4] *Tarbiat Modares University, Dept. of Organic Chemistry, Iran*

Abstract

Precipitation in Iran does not have spatial and temporal uniformity. Some regions of Iran receive less than 50 mm while the northern part receives more than 850 mm of rain annually. This rate is less than one-third of worldwide average precipitation (831mm) and almost one third of the average in Asia. Moreover, according to the recent droughts and low rainfall level as well as the unpredicted reduction of groundwater resources in Marvdasht, Iran, it is impossible to grow some plants which demand high amount of water. Changing the cultural pattern and introducing new plants with different planting dates can play an important role in agricultural sectors, unemployment rate and food security. As an example, safflower, which is resistant to drought and salinity, is an appropriate candidate for the farmers with respect to self-sufficiency in oil production in this area (considering the high rate of oilseed import). Because of cultivation potential of safflower in autumn and spring, it can be planted instead of different plants. The drought has caused an increase in planting safflower (most of them are spring-planting types) from 600 hectares in 2014 to 2600 hectares in 2017 in this region. This experiment aimed to compare the yield and water-use efficiency in spring and autumn planting. The results showed that the yield of autumn cultivation was significantly more than that of spring one by average of 2.75 tons in a hectare because of the low evaporation level in autumn type, the reduction of irrigation needs and the increase in water use efficiency. In addition, autumn cultivation was more appropriate, causing high sustainable employment and water resources protection.

Keywords: Changing cultural pattern, sustainable employment, universities, safflower

Contact Address: Ali Mojab Ghasroddashti, Ferdowsi University of Mashhad, Dept. of Agronomy, Azadi Square, 91775-1163 Mashhad, Iran, e-mail: mojab@stu.um.ac.ir