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## Crop diversification in Maharashtra state: An economic analysis

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griculture has been considered a major factor in transforming human societies from small primitive bands into huge technologically advanced nations. The advance of human being is largely due to awareness of progress and need of the cultivation for food production. The process of development is dynamic one involving constant change in strategy, structure and procedure. Due to variations in the soil type, rainfall, cropping pattern and natural conditions for cultivations, the analysis for the study was extended to two divisions of Marathwada i.e., Aurangabad and Latur and for Marathwada region as a whole to examine the cropping pattern changes in different districts of Marathwada region over a period of time and to study extent of crop diversification in different districts of Marathwada region with factors affecting cropping pattern changes .The districts selected for the present study are viz. Parbhani, Nanded, Latur, Jalna, Beed, Hingoli, Aurangabad and Osmanabad. The study was based on secondary data. Time series (secondary) data on the area, production and productivity of selected crops, total food production etc has been collected for the period 1980-81 to 2010-11. The data was pertain to a period of 31 years i.e. from 1980-81 to 2010-11. The time points at which analysis of cropping pattern has been done are 1980-81,1985-86, 1990-91, 1995-96, 2001-05 and 2010-11. (Venkatramanan and Prahaladachar, 1980). Cropping pattern in terms of percentage share of individual crops in gross cropped area was worked out at points of time. Performance of area, production, and productivity of major crops analyzed by calculating compound growth rates. Crop diversification index and cropping intensity are indicators for observing and quantifying cropping pattern changes. Entropy index (EI), Modified Entropy index (MEI) and Composite Entropy Index (CEI) was used to quantify the crop diversification. Multiple regression analysis has been carried out using the time series data for the period from 1980-81 to 2009-10 to identify the important factors affecting crop diversification (Joshi et al., 2004; 2006; Kebebe, 2000). The Composite Entropy Index (Y) was the specified function of independent variables. The study revealed that there exist wide temporal change in cropping pattern i.e., area of Sorghum replaced by soybean and soybean attained prestigious position in the cropping pattern of Marathwada region. Latur division and Marathwada region diversified more than that of Aurangabad division. Osmanabad, Parbhani and Nanded districts showed increasing level of diversification while Jalana and Latur districts showed low level of diversification. Aurangabad and Beed are more or less stable in the case of crop diversification. In case of cereals group, mechanization showed significant impact on crop diversification in Aurangabad district where fertilizer use was significantly effect on crop diversification in Laturdistrict. In the case of oilseed group, percentage of small and marginal land holders in total holding showed positively significant impact on oilseed group in Aurangabad district where average size of holding showed positive significant impact on crop diversification in Latur division.

Keywords: Cropping pattern, CGR, crop diversification indices (E.I, M.E.I and C.E.I ), determinants, multiple regression analysis.

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