



ANALYSIS OF VARIABILITY, GROWTH AND SUPPLY RESPONSE OF WHEAT ACREAGE IN VINDHYAN PLATEAU OF MADHYA PRADESH

R.F. AHIRWAR¹, U.S. THAKUR², S.K. SHARMA^{3*} AND K.C. MAHAJAN⁴

Department of Agricultural Economics and Farm management^{1,2}

Department of Agricultural Engineering^{3,4}

JNKVV College of Agriculture, Ganj Basoda, Vidisha, Madhya Pradesh, India

**Corresponding author: er.satishsharma@rediffmail.com*

ABSTRACT: The present study was concerned to the variability, growth rate in area, production and productivity and supply response of wheat acreage in different districts of Vindhyan plateau of Madhya Pradesh. The time series secondary data are concerned area, production and productivity and minimum support price of wheat, area and minimum support price of competing crop (chickpea) and district wise rainfall were collected from 1998-99 to 2013-14. The highest relative change and variability in area was found in Sehore although, Raisen showed highest relative change and variability in production and productivity. The Vindhyan plateau showed highest variability in production as compared to area and productivity. The Bhopal, Sehore and Raisen has positive and highly significant growth rate in area under wheat crop. The all the districts showed positive and highly significant growth rate in production except Vidisha district. The productivity growth rate has positive and highly significant in all the districts except Sehore. The production and productivity growth rate was found positive and highly significant in Vindhyan plateau. The lagged area under wheat, current area under chickpea, lagged minimum support price of chickpea was having positive and highly significant impact on current acreage under wheat in Bhopal. The coefficient of lagged yield of wheat was having positive and significant impact on current acreage of wheat in Vindhyan plateau of Madhya Pradesh.

Key words: Supply response function, growth rate, variability, relative change

Citation: Ahirwar RF, Thakur US, Sharma SK, Mahajan KC (2017) Analysis of variability, growth and supply response of wheat acreage in Vindhyan Plateau of Madhya Pradesh. Indian J Trop Biodiv 25(1) : 98 - 102

Received on : 31 Mar 2017
Accepted on : 08 May 2017
Published on : 30 Jun. 2017

Wheat is the second most important crop after rice in the country. The introduction and rapid spread of high-yielding varieties in 1970s resulted in phenomenal growth in wheat output (Ramesh Chand et al. 2011). Thus it is evident that wheat is a major important food grain crop in India. The total area and production under wheat is about 30.00 million hectare and 93.51 million tonnes with productivity is 3117 kg/ha. Major wheat producing states are Uttar Pradesh, Punjab, Madhya Pradesh, and Haryana which is contributed about 76.10 per cent of the total production of the country. The Madhya Pradesh is rank third in wheat production and second position in area of the country. The total area and production under wheat of Madhya Pradesh is about 5.30 million hectare and 13.13 million tonnes which contributed about 17.66 per cent and 14.05 per cent respectively with productivity is about 2478 Kg/hectare (2012-13). The supply response of wheat acreage depends on marketing and technological factors such as minimum support price, price fluctuation and rainfall. Looking to the about facts, it is necessary to have an estimate of aggregate agricultural supply response to estimate the change in

agricultural term of trade. If the aggregate supply response is small than the current structural adjustment, programme cannot rely exclusively on price instrument for bringing about structural change in agriculture (Palanivel, 1999). The present study was conducted to estimate relative change, variability, growth rate in area, production and productivity and supply response analysis in wheat acreage in different districts of Vindhyan plateau of Madhya Pradesh.

MATERIAL AND METHODS

The present study was confined to Vindhyan plateau of Madhya Pradesh which covers six districts namely, Sehore, Bhopal, Raisen, Vidisha, Sagar and Damoh. This study is mainly based on time series secondary data on area, production and productivity, minimum support price of wheat as well as area and minimum support price of competing crop (chickpea) were collected from different sources such as Directorate of Economics and Statistics, Ministry of Agriculture, GOI, and Govt. of Madhya Pradesh for the period of 1998-99 to 2013-14. The relative change, coefficient of variation, linear growth rates in area, production and productivity, supply response in wheat acreage were analyzed with the help of various statistical tools.