

Effect of yield and price variability on the acreage allocation to chickpea crop in Maharashtra state

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ABSTRACT

One-year lag acreage of chickpea was taken for studying supply response relationship. In order to examine the effect of yield and price variability on the acreage allocation to chickpea crop the coefficient of variation of yield and price of chickpea crop were included in estimating equation and Cobb-Douglas and Linear forms. The results revealed that lag acreage significantly affect the chickpea acreage in Marathwada. An increase variation in past prices of chickpea crop reduces area allocation in this crop. There was in some cases an autonomous increase in chickpea area over the period of time; in general the adjustment of farmers in area allocation to chickpea and other variables. Farmers responds to the lag relative price and adjusted their chickpea area in current year. It is therefore, necessary that the remunerative prices for the chickpea should be fixed by the Government.

INTRODUCTION

Pulses form an important part of Indian dietary. They are rich in protein and enhance the biological value of the protein consumed. Being leguminous crop possessing root nodules they fix and utilize atmospheric nitrogen. Chickpea are very important pulse crop unlike other pulses it doesn't produce heartiness or flatulence. Grains are also eaten whole (after germinating them) parched, salted with sugar or boiled with condiments. The present study pertains to the Marathwada region of Maharashtra state for the year 2004-05. This region comprises of Eight districts namely Aurangabad, Parbhani, Jalna, Hingoli, Beed, Latur, Nanded and Osmanabad districts. The objectives of the present study were to study the effect of yields and price risk in chickpea crop on acreage allocation and to examine the impact of other non price factors on the acreage allocation to chickpea crops in Marathwada.

METHODOLOGY

The present study pertains to the Marathwada region of Maharashtra State. In view of the importance of the pulse crop in Marathwada, the present study was planned to examine the factors responsible for determining acreage under chickpea crop in the region. Crop acreage is affected by change in price and non-price factors. Nerlovian acreage adjustment lag model was considered

to be appropriate for examining the farmer's acreage response behavior (Singh and Swarup, 1988 and Panda, 1993). One-year lag acreage of chickpea was taken for studying supply response relationship and for this the following model was used-

$$A_t^* = a + bP_{t-1} + u_t \quad (1)$$

$$A_t - A_{t-1} = B(A_t^* - A_{t-1}); 0 < B < 1 \quad (2)$$

where A_t^* = The planned equilibrium acreage.

P_{t-1} = Price (Absolute or relative) in period t-1

A_t and A_{t-1} = Actual acreage in time t and t-1

B = Coefficient of adjustment

U_t = Error term

In order to examine the effect of yield and price variability on the acreage allocation to chickpea crop, the coefficient of variation of yield and price of chickpea crop were included in estimating equation and Cobb-Douglas and linear forms are used.

RESULTS AND DISCUSSION

Estimates of acreage response for chickpea crop in different districts of Marathwada: Aurangabad district:

Results obtained for chickpea crop for Aurangabad district are shown in Table 1. It is seen from the table that value coefficient of multiple determination was 0.80 which means that the variable included in the function

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