

Trends Of Cultivated Area And Cropping Intensity In Relation To Tractor Population In District Muzaffarnagar (U.P.)

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ABSTRACT

Study on trends of cropped area and cropping intensity in relation to tractor population in district Muzaffarnagar, on the basis of secondary data collected from government department concluded that during the period 1971-72 to 2000-01 tractor population increased by eleven fold. However, during the same period Net Cropped Area remained at the level of 327 Th ha with minor ups and down due to saturation in it. Grossed Cropped Area recorded an increase of meager 4 per cent because of shift in area from food grain crops to sugarcane crop.

Key words : tractor population, cultivated area, copping intensity.

INTRODUCTION

Mechanization of Indian Agriculture has assumed greater importance in increasing production and productivity by utilizing scarce and costly agricultural inputs more efficiently. Most important component of modern farming has been the extensive use of tractors. Use of tractor-machinery enhances the availability of farm power, increases precision and timeliness over the farm operations. Generally tractor helps to increase the Net as well as Gross cropped area by providing temporal and spatial adjustments in crop production activities. Pathak et.al. (1978), NCAER (1980) and Balister et. al. (1991) in their studies reported that cropping intensity was higher on tractor farms. This paper presents trends of cropped area and cropping intensity in relation to tractor population in the district Muzaffarnagar (U.P.) for the year 1971-72 to 2000-01.

Profile of the study area:

Muzaffarnagar district is situated between 29°11' and 29° 45' North latitude and 77°03' and 78°07' East longitude in the Western region of Uttar Pradesh. The land of the district, in general, is leveled alluvial plain. The soils are mainly loam and sandy loam with good fertility. There are three distinct weather conditions in the district viz. winter, summer and rainy seasons. Net sown area is about 79 percent of the total geographical area. Almost total sown area has facility of irrigation. Sugarcane and wheat are main crops of the district. Table-1 presents brief profile of the district.

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MATERIALS AND METHODS

For this study secondary data were collected from the Office of the District Statistical Officer, Muzaffarnagar and other sources. Data was analyzed with the help of EXCEL software for the period 1971-72 to 2000-01.

RESULTS AND DISCUSSION

i) Tractor population versus area under food grain and sugarcane crops:

Tractor population increased by 173 per cent during the period 1971-72 to 1977-78 reduced area under food grain crops reduced by 24 per cent during the same period. Similar trends were observed during the periods 1981-82 to 1987-88, 1992-93 to 1996-97 and 1996-97 to 2000-01. Overall, during the year 1971-72 to 2000-01 tractor-population increased by eleven fold and during this period area under sugarcane crop registered an increase of 49 per cent, however area under food grain crop declined by 30 per cent during (Table-2, Fig.-1). Coefficients of correlation between tractor population and area under sugarcane was strong positive and it was negative for the area under food grain crop. Area under crop depends upon a number of factors as climate, requirements of power, irrigation, price of produce, facility of marketing along with availability of tractor machinery system on the farm. Positive influence of tractor population on the area under sugarcane crop may be attributed to the need of more power in the operations like, preparation of land, planting and transportation. Decrease in the area under food grain crops was mainly governed by economic considerations.

ii) Tractor population versus Net and Gross cropped area:

During the year 1971-72 to 1977-78 Net Cropped Area