

Economic viability of sunflower cultivation for crop diversification in Punjab

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ABSTRACT

Sunflower is one of the major oilseed crops grown in Punjab. The area under sunflower could not be increased in the state to desired level owing to relative less profitability as compared to its major competing crop *i.e.* late sown wheat. Sunflower yielded lower returns in terms of gross returns as well as returns over variable cost as compared with late sown wheat. The benefit cost ratio of sunflower came out to be only 1.27 which was much lower than 1.74 in case of wheat – its major competing crop. The marginal value productivity analysis has highlighted that sunflower productivity can be enhanced by spending more on urea, plant protection measures and human labour for pesticide spray etc even at the given level of technology in the state. To give a boost to the sunflower cultivation for diversification in the state, two dimensional efforts *i.e.* technological in terms of research and development as well as policy with respect to effective market support is required.

INTRODUCTION

Oilseeds base in Punjab has dwindled over the last about three and half decades. The oilseeds cultivation in the state has squeezed from about 3 lakh hectares in 1970-71 to merely 0.70 lakh hectares in 2006-07 (Anonymous, 2007). The area under the entire major oilseed crops *viz.*, groundnut, sesamum, rapeseed-mustard, linseed including sunflower covered only 0.89 per cent of the total cropped area. To fulfill the domestic requirements, India has been importing edible oils worth Rs. 6234 crore during 2006-07 (www.commerce.nic.in). On the other hand, wheat and paddy are being grown over about three fourth of the total cropped area and the state is in surplus in the production of wheat. Rather the ongoing mono culture of rice – wheat rotation has created ecological imbalances in the form of depletion of underground water, widespread deficiency of micronutrients in the soil, increased use of insecticides, pesticides etc. An expert committee constituted by the Govt. of Punjab in 2002, on diversification of Punjab agriculture, recommended the shift of 10 lakh hectares area from paddy-wheat to other crops including oilseeds (Johl, 2002). This would be possible if oilseed cultivation becomes equally/ more remunerative *vis-à-vis* their competing crops. Sunflower is one of the major oilseed crops sown in Punjab, which occupied nearly 22 per cent of the total area under oilseeds and yielding about 32 per cent of the total production

during the year 2006-07. In view of this, the present study was planned to examine the comparative economics (benefit- cost) of sunflower *vis a vis* its major competing crop (late sown wheat), factors affecting productivity and resource use efficiency of sunflower cultivation in Punjab with the idea to bring out policy issues/ interventions required to strengthen the oilseeds base in general and that of sunflower in particular in the Punjab. The specific objectives of the study were to conduct the benefit cost analysis of sunflower in relation to its main competing crop *i.e.* late sown wheat in Punjab, to examine the determinants of value productivity of sunflower, to bring out policy suggestions to broad base the production of sunflower in the state.

METHODOLOGY

The present study was conducted in two blocks (Nakodar and Jalandhar West) of Jalandhar district of Punjab where maximum concentration of sunflower cultivation has been found. The nature of the study required primary data from sunflower growers through field survey. Multistage random sampling technique was followed to select the respondents for data collection. From each block, two clusters of villages (2-6) were selected. Complete list of farmers growing sunflower crop in a particular cluster was prepared and 25 respondents were randomly selected. Thus, from two clusters,

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