



# Impact of improved technologies on the productivity and economics of sesame (*Sesamum indicum*) at farmer's fields in Fatehpur district of Uttar Pradesh

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**Abstract :** Improved cultivation techniques of rainfed sesame were demonstrated against farmer's practice in front line demonstration during *Kharif*-2008 and 2009 at farmer's fields in Fatehpur district of central Uttar Pradesh. Combination of all technologies, viz., fertilizers, plant protection, varieties and intercropping system increased the seed yield over farmer's practice by 150.5 and 148.5 per cent while net return increased by 214.7 and 213.1 per cent during 2008 and 2009, respectively. All the individual technologies also increased the seed yield and net return over farmer's practices. Among these, highest seed yield and net returns were observed with improved variety followed by fertilizers, plant protection and intercropping system.

**Key Words :** Sesame, Demonstrations, Improved techniques, Rainfed, Economics, Productivity

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## INTRODUCTION

Sesame is a rainy season crop in central Uttar Pradesh and grown under rainfed condition. The production of sesame per unit area is quite low in the state of Uttar Pradesh (162 kg/ha) against national average (345 kg/ha) and average productivity obtained in front line demonstrations (600kg/ha). Sesame productivity in India also is far below the world's average. Such low productivity is because the crop is grown mostly on poor and marginal lands under rainfed situation without adoption of improved cultivation techniques. Results of research experiments are available to show that with improved package of practices, average productivity of 600-700 kg/ha may be easily obtained from sesame crop even under rainfed situation. The need is to popularize these practices among farmers. With this view, some improved technologies of sesame were demonstrated on farmers fields against farmer's practice in front line demonstrations.

## MATERIALS AND METHODS

Front line demonstrations was carried out on farmers fields of district Fatehpur of Central Uttar Pradesh. In all 55 demonstrations were conducted during *Kharif*-2008 and 2009. All demonstrations were carried out under rainfed condition. The soils in general were sandy loam with pH ranging from 7.2 to 7.5. The soils were low in nitrogen (175-200kg/ha), low to medium in phosphorus (9-14kg P<sub>2</sub>O<sub>5</sub>/ha) and medium in potassium (250-300 kg/ha). Demonstrations on improved technology consisted, whole package of practices (improved variety + Rec. fertilizers + Rec. plant protection measures + thinning + weeding), recommended fertilizers, recommended plant protection measures, improved variety and intercropping with greengram. Farmer's practice contained local variety and hand weeding only. Improved variety used was "Shekhar". Recommended fertilizers were applied @ 30kg N+15 kg P<sub>2</sub>O<sub>5</sub>+ 15kg K<sub>2</sub>O/ha. In case of recommended plant protection measures, seed was treated with thirum @ 2.5g/kg seed and