

CSV-216R, a promising *rabi* sorghum variety for Karnataka, India

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ABSTRACT

CSV 216R, a new *rabi* sorghum variety was evaluated in different zones of Karnataka during 2000-01 and 2001-02. The performance of CSV 216R was compared with popular *rabi* sorghum varieties. The increase in grain yield of CSV 216R over the best check (DSV 5) was 13.9 per cent in zone-III and 18.6 per cent in zone-VIII. Under irrigated conditions it registered 40.3 and 45.0 per cent increase in grain and fodder yield, respectively over the popular variety (M 35-1). The variety responded up to 60 kg Nitrogen. The variety recorded highest grain and fodder yield when sown during 4th week of September. It registered higher grain and fodder yield as compared to popular variety M 35-1 and hybrid CSH 15R. In the farmers field also the pest and disease reactions were similar to the popular variety M 35-1. The grain and *roti* qualities were also comparable to M 35-1.

Key words : *Rabi* sorghum variety, CSV 216R, DSV 4, DSV 5, M 35-1

INTRODUCTION

India has the largest share (32%) of world's area under sorghum. However, the productivity is low (555 kg/ha) due to poor resource base and other problems like pest (shootfly) and disease (charcoal rot), weeds and erratic weather conditions. Karnataka has nearly 65% of total sorghum area which accounts for 44% of the total sorghum production. Since 1936, M 35-1 is ruling *rabi* sorghum variety due to its excellent grain quality, drought tolerance nature and adaptability to varying agro-climatic conditions. However, the productivity of the variety is less due to its poor response to improved management practices and also it is susceptible to charcoal rot disease. Charcoal rot is the major disease causing up to 60 per cent yield losses (Anahosur and Patil, 1983). Nearly 32 per cent of the actual produce of sorghum is lost due to insect pests in India (Borad and Mittal, 1983). Conventional methods for the control of shootfly are not practical and cost effective for subsistence farmers. Breeding for resistance to shootfly is a slow process which requires several cycles of crossing to combine high level of resistance with high yield (Rana *et al.* 1975). The efforts made to develop high yielding variety led to the release of the varieties like Muguti, DSV 4, DSV 5, CSV

14R and Swati. However, none of these could make much impact on the farmer's fields due to their inconsistent yield and susceptibility to shootfly and charcoal rot. Keeping these facts in view, much emphasis has been given to evolve a variety with superior grain and fodder yield appreciable degree of resistance to insect pest and diseases. Efforts made in this direction at MPKV, Rahuri led to the development of variety CSV 216R. The present paper envisages the relative performance of this variety in Karnataka in comparison with popular varieties like M 35-1, DSV 4 and DSV 5.

MATERIALS AND METHODS

The variety CSV 216R was identified at MPKV, Rahuri during 1998 from the land races of Dhulia region. The variety was evaluated during the years 2000-01 and 2001-02 in different locations of zone II, III and VIII of Karnataka to know its performance in the state. The total number of entries in all these trials ranged from 10-12. The popular variety M 35-1 and the recently released varieties DSV 4 and DSV 5 were used as checks. The CRBD with three replications was followed at all the locations. The recommended package of practices was followed in each year at each location to raise the good crop. The variety was also evaluated on the farmer's fields of Basavan Bagewadi taluka of Bijapur district and Lingasoor taluka of Raichur district along with other two entries *viz.*, M 35-1 and CSH 15R. The observations on grain yield, number of days to flowering, plant height, 1000 grain weight, deadhearts due to shootfly, charcoal rot

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