Performance of cabbage (Brassica oleracea var. capitata L.) F₁ hybrids under hill zone of Karnataka

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Abstract: A field experiment was conducted at ZARS, Mudigere to study the performance of cabbage F₁ hybrids and O.P. variety were tried during Rabi season. Among the F₁ hybrids and O.P. variety, the F₁ hybrids Krishna (71.08 t/ha) followed by Shristi (69.68 t/ha) and Rajrani (68.92 t/ha) recorded highest yield and lowest yield was recorded in O.P. variety pride of India (16.23 t/ha). The highest diameter of head was recorded in Krishna (18.29 cm) followed by Shristi (18.27 cm) and Rajrani (18.07 cm). The weight of individual head recorded was more in Krishna (1919 g) followed by Shristi (1881 g) and Rajrani (1861 g). The growth and yield attributing parameters recorded were higher in these three F₁ hybrids with lower incidence of diamond back moth.

Key words: Krishna, Shristi, Rajrani, Pride of India, Diamond back moth, Head

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Cabbage (Brassica oleracea var. capitata L.) is an important winter vegetable crop of the country. It was introduced to our country by Portuguese and became popular during British rule (Bose et al., 2000). It is being grown in all types of gardens and used in culinary preparations, salad, pickles and dehydration. The productivity of the crop is however, very low in our country and particularly in the hill zone of Karnataka. The lower productivity is attributed to growing of traditional cultivars. The traditional varieties perform poorly both in head formation and yield per unit area and are prone to pest and diseases (Joshi, 1998). It has been reported that higher yields of cabbage can be obtained by growing suitable F₁ hybrids. Presently, about 80 per cent of area is under cultivation of F₁ hybrids. Most of the hybrid seeds in India are imported by seed companies and sold under different brand names (Anonymous, 2001). Cultivation of suitable F₁ hybrids is utmost important because of their higher yields, suitability to wide climatic fluctuations and their tolerance to pest and diseases. Though many hybrids have been released by different seed companies, their performance varies from region to region. Hence, identifying suitable hybrids for the region requires immediate attention for obtaining high yield and better quality cabbage heads. The major crops of hill zone are coffee in uplands and paddy in low lands. Cabbage is commonly grown under paddy fallows. A very limited work has been done on evaluation of suitable F₁ hybrids for the zone. Hence, study was conducted to evaluate cabbage hybrids under the hill zone of Karnataka.

RESEARCH METHODS

Field experiment was conducted in the region V of zone-9 at the Zonal Agricultural Research Station, Mudigere, Chikkamagalur District, Karnataka in red sandy clay loam soils, during Rabi season in a Randomized Block Design with three replications. The treatments consisted of 12 F₁ hybrids and one improved variety. The F₁ hybrids were Krishna, NS-22, Harirani, Hariranigol, Hybrid Hero, Super Hero, Maharani, Karishma, No-33, Rajrani, Shristi, Bobby and variety Pride of India. The seedlings of these were raised as per the recommended nursery management practices. The seedlings of 28 days old were transplanted in the main field at a spacing of 60x45 cm. The recommended cultural practices were followed for the hybrids and variety. The observations were recorded on 50th day after transplanting and at harvest on five randomly selected plants from each plot. Observations were recorded on number of non-wrapper leaves, incidence of diamond back...