



## Intercropping trial in cauliflower (*Brassica oleracea* L.var. *botrytis*) cv. SNOWBALL-16

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### ABSTRACT

The present experiment on intercropping trial in Cauliflower (*Brassica oleracea* L.var.*botrytis*) cv. SNOWBALL-16 was carried out with the aim to find out the best intercropping system with better growth, yield and economic potential. Cauliflower intercropped with black cumin, ajowan, fenugreek and marigold. Growth parameters very well showed that at the preliminary stages of growth, different intercropping treatments remained insignificant in all the growth parameters where as at later stages of growth *i.e.* at 45 and 60 DAT, all intercrops tried were significantly influenced and enhanced the growth parameters which led to luxurious growth of cauliflower and intercrops simultaneously. At harvest maximum yield was achieved with T<sub>3</sub> (cauliflower + fenugreek) 16.58 t/ha followed by 14.80t/ha with T<sub>4</sub> (cauliflower +marigold).

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Agrawal, M.K., Kar, D.S. and Das, A.B. (2011). Intercropping trial in cauliflower (*Brassica oleracea* L.var. *botrytis*) cv. SNOWBALL-16, *Asian J. Hort.*, 6 (1) : 13-15.

**Key words :** Cauliflower, Yield, Biomass, Cost economics, Intercropping

The efficiency of agricultural production depends upon the maximum utilization of sunshine received on land area occupied by the crop. The amount of light that penetrates a crop canopy is affected by the size, shape and arrangement of leaves and also by structure of the leaves. During its early stages of growth, a crop does not have enough leaf area to use most of the solar radiation falling on the field. Maximum use of solar radiation usually occurs at a certain leaf area index, the duration of which is usually relatively brief in short duration crop. Where the crop takes a long time to fill out the area due to wide spacing between its rows and plants, much sunshine is wasted there. One way of reducing the loss is to use intercrops, which is another method of increasing the productivity of farm through increased light space utilization. Intercropping is a traditional system practiced by peasant farmers in the tropics and the most important advantage of intercropping is that it is more efficient and productive than sole cropping due to its higher combined yield. Intercropping refers to growing two or more dissimilar crops, simultaneously on the same piece of land, crop intensification is in both time and space dimensions. Intercrops mostly used are marigold, black cumin, ajowan and fenugreek.

### MATERIALS AND METHODS

The present experiment was conducted during winter season (2003-2004) at Department of Horticulture, Allahabad Agricultural Institute-Deemed University, Allahabad. The Experiment was carried out in Randomized Block Design with five treatments. The treatments were replicated four times. Details of the treatments are T<sub>0</sub>-control cauliflower (as monocrop), T<sub>1</sub> - Cauliflower + kala zira, T<sub>2</sub> - Cauliflower + ajowan, T<sub>3</sub> - Cauliflower + fenugreek, T<sub>4</sub> - Cauliflower + marigold. The experimental field was prepared by ploughing with a tractor drawn disc plough following two cross harrowing and planking. The field was thoroughly leveled by a leveler before it was laid out. Cauliflower variety snowball -16 seedlings were transplanted at required spacing in the evening in the experimental field and then irrigated. Simultaneously intercrops were sown/transplanted on same day in between the cauliflower rows. Observation on growth and yield were recorded to make a critical analysis of performance as affected by treatments.

### RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarised under following heads: