Research **P**aper

Studies on character association in some genotypes of cauliflower under mid hill conditions of western Himalayas

■ S.P. SINGH **and** R.K. DOGRA[1]

| Members of the Research Forum |

Associated Authors:
[1]Department Fruit Science, Y.S. Parmar University of Horticulture and Forestry, Nauni, SOLAN (H.P.) INDIA

Author for correspondence :
S.P. SINGH
Department of Vegetable Science, Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, SOLAN (H.P.) INDIA
Email : spskanwar@yahoo.co.in

ABSTRACT : Twenty three genotypes of cauliflower (*Brassica oleracea* var. botrytis L.) were evaluated for seven biometric traits *viz.,* days to curd maturity, curd size, plant frame, leaf area, net curd weight, gross curd weight and stalk length. The significant positive correlation was found between characters net curd weight and gross curd weight followed by that between net curd weight and leaf area. Significant positive association of net curd weight was found with gross curd weight. Days to curd maturity showed positive significant association with plant frame and leaf area. Highest positive direct effect on net curd weight per plant was recorded by gross curd weight followed by curd size and leaf area. Gross weight was found to be the important character as it was effective both in direct and indirect selection of the superior genotypes with high net curd weight.

KEY WORDS : Cauliflower, (*Brassica oleracea* var. botrytis L.), Correlation, Path analysis, Direct effect, Indirect effect

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Cauliflower (*Brassica oleracea* var. botrytis L.) a member of cruciferae, is an important cole crop which is widely grown both in hills and plains. It is grown for curds which are used as vegetable, in curries, soups and pickles. It is a good source of proteins, carbohydrates, minerals and also possesses vitamins to an appreciable extent. Cauliflower is said to be a native of Southern Europe in Mediterranean region and was introduced in India in 1822 from England. At the time of introduction, Cornish and other European types were grown and these introductions with the passage of time got intercrossed and adapted to the hot and humid climatic conditions in the plains of India, giving a group now, commonly known as tropical or Indian cauliflowers (Chatterjee and Swarup, 1972). There is considerable amount of variability in cauliflower and different groups like tropical cauliflower and snow ball groups etc are available. The curd yield in cauliflower depends upon various other horticultural characters, thus to obtain rational higher yields the understanding on the association of characters with net curd weight and other horticultural traits among themselves is essential. Further path coefficient analysis is an efficient tool to elucidate the direct and the indirect effect of each character towards yield. Hence, the present investigation was taken up to study the association among net curd weight and its component characters in mid hill conditions of western Himalayas.

RESEARCH METHODS

The experimental material for the present study comprised of twenty three genotypes of cauliflower. All these collections were grown in Completely Randomized Block Design with three replications at the Experimental Farm of Department of Vegetable Science, Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni Solan situated at 30-50°N latitude, 77.8°E longitude and 1200 m above mean sea level. Each entry was grown at 60 x 45 cm spacing with 30 plants in a plot. The recommended cultural practices were followed to raise the crop. Observations were recorded on ten randomly taken competitive plants in each replication of each genotype on seven biometric traits *viz.,* days to curd maturity, curd size, plant frame, leaf area, net curd weight, gross curd weight and stalk length. The correlation coefficient was computed as suggested by Panse and Sukhatme (1967). Path coefficient analysis was carried out using the formula of Dewey and Lu