

## Genetics of yield and quality traits in cauliflower (*Brassica oleracea* var. *botrytis* L.)

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The curd yield and colour of curd are the most important characters of cauliflower determining its marketability and economics. Genetical study of any trait is prerequisite for designing improvement methodology. For this purpose, six generations ( $P_1$ ,  $P_2$ ,  $F_1$ ,  $F_2$ ,  $B_1$  and  $B_2$ ) were developed by crossing two contrasting each of varieties (Pusa Himjyoti and Pusa Sharad) and lines (BR-161 and BR-207) to study the gene effect of yield (curd weight, curd diameter and curd depth) and quality (curd colour) contributing characters. The magnitude and direction of heterosis varied from cross to cross and over-dominance had predominant role for curd weight, curd diameter and curd depth. In all the economic characters including curd weight, the presence of dominance (h) and dominance x dominance (l) component of genetic variation along with duplicate type of epistasis were present. Curd colour was determined by single gene with white being recessive. Thus, heterosis breeding could be the suitable methodology for improvement of yield trait and backcross for curd colour.

### Biography

Partha Saha is presently working as Scientist at IARI, New Delhi. He has completed Ph.D. degree from IARI. He has been awarded merit gold medal from IARI in Ph.D and Dwarka Nath Memorial Gold Medal in 2012 from Indian Society of Vegetable Science (ISVS). He is life member of Horticulture Society of India, ISVS and Indian Science Congress Association. He has published 8 research papers, 2 popular article, 2 book chapter and 5 seminar abstracts. He is presently engaged in research on improvement of cauliflower and sprouting broccoli and development of DNA markers linked to various diseases.

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