Genetic evaluation of biometrical Results and Discussion traits in wild accessions of Bird's Eye Chilli (Capsicum frutescens L.) an underexploited spice crop

# H. R. Bhoomika<sup>a</sup>, S. Sreelakshmi<sup>a</sup> and **B.M. Dushyanthakumar<sup>b</sup>**

<sup>a</sup>Department of Plantation, Spices, Medicinal and Aromatic Crops, College of Horticulture, Mudigere, UAHS, Shivamogga, Karnataka, India.

<sup>b</sup>Department of Genetics and Plant breeding, UAHS, Shivamogga, Karnataka, India.

## Introduction:

Capsicum frutescens L. is one of the most important species of the genus Capsicum, belonging to family Solanaceae and originated from Central America. The species is commonly called as Bird's Eye Chilli and is also known by many other synonyms like African pepper, Mexican chilli, Tabasco pepper, Cayenne pepper, Thai chilli etc. It is often used to denote any small sized, pointed chilli of high pungency. In India it is found scattered all over the North-Eastern region from Sikkim to Arunachal to Assam and in Southern states of Karnataka, Kerala and Tamil Nadu.

## Material and methods

**Location** –COH, Mudigere; **Design** – RCBD **Replications** – 3; **Year** - 2018-19; No. of genotypes – 35; Spacing - 60 cm x 45 cm

>Analysis of variance for growth an yield traits were found to be significant indicating the genotypes under stud were genetically diverse.

➢Higher GCV and PCV (>20%) wa observed for weight of seeds per frui fruit yield per plant, fresh weight an dry weight of ten fruits, fruit widtl number of seeds per fruit, width an length of fruit stalk, fruit length an number of primary branches (table 1. Similar results were reported Chaudhary et al. (2013) in chilli.

Fruit yield per plant, fruit width, sta width, weight of seeds per fruit an fresh weight of ten fruits showed ver high heritability (>90%).

Weight of seeds per fruit, fruit yield per plant, fresh weight and dry weight of ten fruits, fruit width, number of seeds per fruit, stalk width, stalk length and length of leaf showed high GAM (>40%).

#### **References:**

CHAUDHARY, A., KUMAR, R. AND SOLANKEY, S.S., 2013, Estimation of heterosis for yield and quality chilli components in (Capsicum annuumL.). Afr. J.Biotech., 12 (47): 6605-6610.

	Table 1: Genetic variability parameters for different growth and					
d	SI. No.	Traits of birds eye chill genoty	ges GCV (%)	PCV (%)	h² (%)	GAM (%)
nt Iv	1	Plant height (cm) at 120 DAT	11.08	13.46	67.71	18.78
• y	2	No. of primary branches	23.45	26.83	76.40	42.23
as	3	Days to 50% flowering	9.24	11.01	70.36	15.96
t,	4	Days taken for maturity	8.89	11.83	56.49	13.77
d	5	Fruit length (cm)	22.61	26.98	70.23	39.03
n, d	6	Fruit width (cm)	39.89	40.27	98.00	81.40
d	7	Stalk length (cm)	26.12	28.27	85.38	49.72
).	8	Stalk width (cm)	29.96	30.47	90.59	60.63
ру	9	Fresh weight of 10 fruits (g)	45.44	47.44	91.75	89.67
	10	Dry weight of 10 fruits (g)	48.13	51.59	87.02	92.49
lk d	11	Number of seeds per fruit	43.75	45.43	92.74	86.79
Y	12	Weight of seeds/ fruit (mg)	41.45	42.11	96.89	84.05
	13	Fruit yield per plant (g)	49.03	50.50	92.24	98.05



**Plate 1: Variation in fruit colour** 

**Plate 1: Variation in fruit size**