Journal of Pharmacognosy and Phytochemistry

Available online at www.phytojournal.com

E-ISSN: 2278-4136
P-ISSN: 2349-8234
www.phytojournal.com
JPP 2020; 9(3): 1351-1355
Received: 24-03-2020
Accepted: 28-04-2020

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Mean performance of various Chilli (*Capsicum annuum* L.) genotypes

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Abstract
The present investigation was carried out at the Experimental Field, Division of Vegetable Science, SKUAST-K, Shalimar during *Kharif* 2018. The experiment was laid out in randomized complete block design (RCBD) with three replications. Sixty genotypes were evaluated for various quantitative and qualitative traits. Analysis of variance revealed significant differences among genotypes for all the traits. Three genotypes *viz*; SKAU-193, SKAU-173 and SKAU-163 showed yield potential of 239.43 q hac^{-1}, 206.02 q $hac^{-1}$and 186.24 q hac^{-1} is significantly higher than Kashmir Long-1(184.54 q ha^{-1}).

Keywords: Chilli, quantitative traits, qualitative traits, genotypes

Introduction
Chilli (*Capsicum annuum* L.) (2n=2x=24) belongs to the family *Solanaceae* (Nightshade). The genus name *Capsicum* is derived from the Latin word 'capsa' meaning chest or box because of the shape of fruit which encloses seeds very neatly, as in the box. It is native of Tropical America and West Indies and is believed to have been introduced to India by the Portugese in the seventeenth century. Since then it has gained importance as an inevitable condiment and vegetable. Its production and consumption has steadily increased worldwide during 20th century due to its use as both vegetable and spice and is an important component of diverse cuisines in the world. It is the leading spice-cum-vegetable crop grown commercially throughout the world. Its fruit appear in different shapes, sizes and colours. It is highly valued for its green or red ripe fruits with characteristic pungency, colour and flavour. It is consumed as fresh, dried or in powder form (El-Ghoraba *et al.*, 2013; Pujar *et al.*, 2017) [3, 13]. The fruits are an excellent source of health-related phytochemical compounds, such as vitamin C (143.7µg), vitamin A (292.04 IU) vitamin E (0.69 mg), vitamin K (14 µg) per 100g, minerals like Calcium, Phosphorus and Iron of fruits, alkaloid capsaicin/capsicutin (C_{18} $H_{27}NO_3$) and red pigment Capsanthin ($C_{40}H_{56}0_3$). The crop is grown throughout the world including tropics, subtropics and temperate regions (Pickersgill, 1997) [12]. As per latest statistics it is grown over an area of 366 thousand hectares with an average production of 3737 thousand metric tonnes in India (FOA, 2018-19) [5]. In Kashmir it is grown on an area of 3,200 hectares with an annual production of 64,800 tonnes (NHB, 2017) [9]. The major chilli growing states of India are Andhra Pradesh, Karnataka, Maharashtra, Orissa, Tamil Nadu, Madhya Pradesh, West Bengal and Rajasthan.

Material and Methods
The present investigation was conducted in the Experimental Field, Division of Vegetable Science, Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir, Shalimar, Srinagar during the year 2018. The experimental field is situated within the premises of university campus, about 12.5 km from main city, at 34° N latitude and 74.9° E longitude. During the experimentation period the average maximum temperature recorded was 25.3°C and the average minimum temperature recorded was 10.9°C. The total precipitation of 800.8 mm was received during 2018. The experiment was laid out in Randomized Complete Block Design (RCBD) with three replications. The experimental material consisted of 60 chilli genotypes. The plot size was kept 2.7x1.4m (3.78m^2). Each plot consisted of 2 rows of each genotype in each replication at spacing of 45 x 45 cm. Observations were recorded on twenty quantitative and qualitative parameters *viz*., plant height (cm), plant spread (cm), number of branches $pant^{-1}$, days to flower initiation, days to fruit initiation, days to harvesting, fruit length (cm), fruit diameter (cm), fruit weight $plant^{-1}$ (g), fruit pedicel length (cm), fruit pedicel diameter (cm), number of fruits $plant^{-1}$, fruit yield $plant^{-1}$, fruit yield $hectare^{-1}$, dry matter

content (%), vitamin C content (mg/100g), capsaicin content (mg/g), capsanthin content (ASTA units), total phenols (mg/100g) and instrumental colour (L*,a*,b*) to study the magnitude of genetic variability existing in the experimental material under study. Five competitive plants were selected at random from each replication and tagged for recording the biometrical observations. Mean values for all the characters were worked out. Observations were recorded at the appropriate developmental stages of plant growth. The data collected was analyzed using the software Windostat 9.1.

Result and Discussion

In this study, chilli genotypes showed wide range of variability for most of the morphological, growth and fruit characters. The estimates of mean values from Table 1 revealed that no genotype was superior for all the characters under study. However SKAU-77 (86.00), SKAU-38 (81.33), SKAU-231 (80.73), SKAU-227 (79.73) were superior for plant height, SKAU-106 (86.64), followed by SKAU-62 (85.58) and SKAU-128 (85.18) for plant spread; SKAU-173 (48.93) followed by SKAU-181 (47.53) and SKAU-191 (46.40) for number of branches plant^{-1}; SKAU-237 (38.60) followed by SKAU-247 (38.60) and Arka Lohit (38.46) for days to flower initiation; SKAU-198 (46.53) followed by SKAU-173 (46.40) and SKAU-208 (46.33) for days to fruit initiation; SKAU-195 (134.66) followed by SKAU-208 (134.66) and SKAU-216 (134.66) for days to harvesting. For fruit length; SKAU-198 (16.07) recorded maximum fruit length followed by SKAU-195 (16.03) and SKAU-148 (15.97). For fruit diameter; SKAU-141 (1.92) recorded maximum fruit diameter followed by SKAU-221 (1.59) and SKAU-38 (1.52). For fruit weight; SKAU-141 (9.28) recorded maximum fruit weight followed by Arka Lohit (9.09) and SKAU-216 (8.51). For fruit pedicel length; SKAU-141 (6.01) recorded maximum fruit pedicel length followed by SKAU-211(5.89) and SKAU-38 (5.88), for fruit pedicel diameter; Arka Lohit (0.44) followed by SKAU-148 (0.40) and SKAU-193 (0.35), for number of fruits plant^{-1}; SKAU-188 (99.86) followed by SKAU-193 (91.86) and KL-1 (89.26). For fruit yield per hectare; SKAU-193 (239.43) followed by SKAU-173 (206.02) and SKAU-163 (186.24), for dry matter content; SKAU-237(86.07) followed by SKAU-52 (85.92) and SKAU-167 (85.84) were found superior. In case of quality parameters the highest vitamin C content was recorded in SKAU-58 (201.16 mg100g^{-1}) followed by SKAU-73(199.76 mg100g^{-1}) and SKAU-173 (196.28 mg100g^{-1}). Highest capsaicin content was recorded in SKAU-62 (0.75 mg g^{-1}) followed by SKAU-106 (0.75 mg g^{-1}) and SKAU-52 (0.73 mg g^{-1}). Highest capsanthin content was recorded in SKAU-198 (125.83 units) followed by SKAU-227 (125.05 units) and SKAU-193(123.63 units) for capsanthin content. Highest phenol content was recorded in SKAU-193(7.70) followed by SKAU-221 (7.46) and SKAU-177 (7.46). Highest instrumental colour L* was recorded in SKAU-118 (50.11) followed by SC-1019(49.25) and SKAU-122 (48.28), SKAU-118(45.26) followed by IC-505242 (43.66) and SKAU-122 (43.32) for instrumental colour a, SKAU-193 (18.58), SKAU-132 (17.89), SKAU-43 (17.77) for instrumental colour b. A wide range of variations existing for various quantitative traits has also been reported in chilli by various workers like Farhad *et al.* (2008), Patel *et al.* (2009), Gupta *et al.* (2009), Chattopadhyay *et al*. (2011), Zehra (2014), Janaki *et al.* (2015), Pandiyaraj *et al.* (2017) Jogi *et al*. (2017), Ain (2018) [4, 11, 6, 2, 14, 7, 10, 8, 1].

An overall perusal of Table 1 on performance of genotypes revealed that none of the genotypes exhibited superior performance for all the traits however, certain genotypes exhibited superior performance for some economically important traits *viz*., SKAU-193 was superior for fruit weight, fruit pedicel diameter, number of fruits plant^{-1}, fruit yield plant^{-1}, capsanthin content, total phenol and instrumental colour b, SKAU-38 for plant height, fruit diameter, fruit pedicel length and fruit pedicel diameter while SKAU-141 for fruit diameter, fruit weight, fruit pedicel length and fruit pedicel diameter.

Since no genotype could be identified to have superior performance for all the characters, the genotype with maximum good characteristics could be used in a well planned hybridization programme to select superior performing lines in the successive segregating lines.

Table 1: Mean performance of chilli (*Capsicum annuum* L.) genotypes for various quantitative and qualitative traits

S. No.	Genotypes	Plant height (cm)	Plant spread (cm)	No. of branches plant-1	Days to flower initiation	Days to fruit initiation	Days to harvesting	Fruit length (cm)	Fruit diameter (cm)	Fruit Weight (g)	Fruit pedicel length (cm)	Fruit pedicel diameter (cm)
1.	SKAU-32	63.26	65.16	30.93	24.66	31.53	102.40	8.18	1.32	4.50	3.92	0.31
2.	SKAU-36	61.73	69.39	38.73	35.40	42.66	102.80	9.02	0.78	1.69	5.02	0.28
3.	SKAU-38	81.33	68.74	44.66	24.40	31.53	109.60	15.58	1.52	8.15	5.88	0.33
4	SKAU-40	64.80	82.93	45.93	30.86	42.66	108.40	12.22	1.02	6.28	4.92	0.31
5.	SKAU-43	62.93	82.91	40.80	31.80	42.73	108.86	15.10	1.08	7.18	4.35	0.29
6.	SKAU-45	62.53	84.04	34.46	31.73	42.66	107.26	12.22	1.01	3.25	5.09	0.28
7.	SKAU-52	54.86	81.10	33.80	31.80	42.60	110.46	12.00	0.96	4.19	5.70	0.26
8.	SKAU-58	57.26	62.25	26.93	31.80	42.46	108.93	15.00	1.05	6.28	5.12	0.28
9.	SKAU-62	67.26	85.58	34.26	37.80	44.73	102.60	10.17	0.88	2.36	4.52	0.28
10.	SKAU-68	69.93	73.81	27.53	37.66	44.53	103.66	11.18	0.98	4.40	4.35	0.30
11.	SKAU-73	70.20	81.96	23.73	31.33	42.60	108.06	13.06	1.24	7.46	5.07	0.30
12.	SKAU-77	86.00	68.10	23.20	31.40	42.73	108.93	15.63	1.14	8.28	4.85	0.30
13	SKAU-80	67.06	55.59	22.80	37.66	44.80	109.66	12.90	0.96	3.31	4.92	0.32
14	SKAU-84	79.20	69.54	31.00	37.60	44.46	102.73	9.95	0.94	3.25	4.16	0.27
15.	SKAU-89	65.93	69.86	23.33	31.60	42.66	107.73	12.14	0.98	4.24	4.95	0.25
16.	SKAU-91	52.40	52.66	31.80	31.40	42.73	109.73	10.11	0.92	2.35	4.58	0.30
17.	SKAU-96	65.33	64.88	22.73	24.66	31.40	102.53	14.90	1.03	4.34	5.32	0.25
18.	SKAU-106	79.46	86.64	31.73	24.60	42.66	102.53	10.12	0.99	3.63	4.76	0.28
19.	SKAU-109	65.13	74.29	29.86	31.40	42.60	109.46	8.54	0.84	3.06	4.44	0.28
20.	SKAU-111	51.93	73.72	31.00	31.40	43.26	109.93	12.75	1.12	6.59	5.34	0.27
21.	SKAU-118	50.53	59.80	25.33	31.46	43.00	108.80	11.57	1.02	4.14	4.53	0.26

22.	SKAU-122	51.73	49.16	26.20	31.60	43.73	109.60	10.21	0.90	4.21	4.76	0.22
23.	SKAU-128	70.00	85.18	25.86	31.60	43.66	110.80	12.79	0.94	4.64	4.97	0.27
24.	SKAU-132	62.33	70.53	24.33	31.73	43.66	110.40	11.87	1.02	4.45	5.04	0.28
25.	SKAU-139	63.53	78.49	29.60	37.66	44.80	102.73	8.98	0.98	2.67	4.79	0.25
26.	SKAU-141	60.20	61.67	36.00	31.73	42.66	109.46	13.21	1.92	9.28	6.01	0.33
27.	SKAU-148	59.60	54.89	26.53	31.73	45.33	110.26	15.97	1.38	8.15	5.80	0.40
28.	SKAU-153	50.00	59.81	22.86	37.66	42.80	102.60	8.46	0.98	1.38	5.04	0.26
29.	SKAU-157	51.73	56.85	23.20	37.66	44.73	109.80	13.16	0.98	3.44	4.67	0.28
30.	SKAU-160	69.00	49.46	21.13	37.66	45.53	108.53	7.00	0.89	2.52	3.91	0.27
31.	SKAU-163	68.66	52.06	20.73	37.13	45.46	109.46	11.00	1.05	3.18	4.03	0.28
32.	SKAU-167	53.53	44.33	14.26	37.40	45.46	110.20	11.42	0.94	3.30	5.08	0.27
33.	SKAU-173	58.66	61.76	48.93	37.66	46.40	129.60	15.08	1.18	7.16	4.69	0.28
34.	SKAU-177	58.26	51.37	44.86	37.46	45.40	130.80	14.90	1.12	6.28	4.88	0.32
35.	SKAU-181	49.16	60.02	47.53	36.13	44.73	125.20	9.16	0.98	4.13	3.10	0.21
36.	SKAU-188	63.00	63.20	46.00	36.66	45.66	134.66	13.75	1.06	5.32	4.72	0.27
37.	SKAU-191	63.73	60.35	46.40	34.80	44.80	129.60	15.08	1.05	5.47	4.96	0.31
38.	SKAU-193	66.06	53.02	41.60	37.73	45.73	129.66	15.08	1.40	8.26	5.12	0.35
39.	SKAU-195	61.33	62.79	41.60	37.53	45.46	134.66	16.03	1.09	6.52	4.96	0.26
40.	SKAU-198	62.26	61.15	42.06	37.53	46.53	134.60	16.07	1.16	7.66	5.05	0.26
41.	SKAU-208	73.20	61.41	45.06	37.60	46.33	134.66	15.46	1.12	7.34	4.96	0.25
42.	SKAU-211	72.73	60.31	41.13	36.93	45.86	129.73	13.41	0.99	5.32	5.89	0.25
43.	SKAU-216	65.00	60.46	33.00	35.86	45.60	134.66	15.73	1.26	8.51	4.75	0.26
44.	SKAU-218	74.20	60.82	36.20	35.60	45.66	129.46	15.05	1.01	5.46	4.64	0.26
45.	SKAU-221	72.06	58.43	39.60	37.66	45.40	114.40	15.96	1.59	6.02	5.25	0.33
46.	SKAU-224	70.26	59.02	43.73	37.60	45.53	121.06	13.36	1.00	4.64	5.14	0.35
47.	SKAU-227	79.73	66.38	36.33	36.80	45.40	128.66	13.50	1.21	7.08	4.04	0.34
48.	SKAU-231	80.73	62.17	35.93	38.46	45.40	131.46	10.69	0.97	3.41	5.18	0.27
49.	SKAU-233	62.13	60.29	39.80	38.46	45.30	128.53	10.31	1.40	4.19	5.39	0.24
50.	SKAU-237	53.06	62.16	39.93	38.60	44.06	129.26	11.50	1.12	5.54	4.59	0.26
51.	SKAU-243	60.40	49.56	39.80	38.40	44.33	124.73	11.78	1.10	6.85	4.30	0.33
52.	SKAU-247	55.46	57.46	40.20	38.60	45.00	129.40	10.66	1.14	6.38	3.62	0.34
53.	SC-104	71.73	61.65	37.33	36.00	45.60	124.80	13.66	1.10	6.26	4.40	0.27
54.	SC-1019	66.86	62.38	39.86	37.66	45.46	129.66	9.94	0.97	4.16	3.92	0.26
55.	IC-391082	52.66	61.33	35.73	37.46	45.73	129.13	8.98	1.10	3.52	4.03	0.25
56.	IC-505242	55.06	58.60	32.73	37.93	45.46	129.93	10.53	1.00	4.37	5.04	0.25
57.	IC-561617	66.46	62.43	39.86	38.00	45.26	128.60	10.42	0.82	2.90	5.31	0.26
58.	Local Kashmiri Chilli-1	49.24	57.70	17.66	31.20	42.20	109.66	7.10	0.95	3.24	2.10	0.24
59.	Arka Lohit	65.80	58.83	41.06	38.46	43.73	129.46	13.00	1.32	9.09	5.17	0.44
60.	KL-1	61.46	63.02	45.53	37.93	45.46	130.53	13.60	1.02	6.49	4.23	0.26
	CD at 5%	1.64	1.45	0.75	0.33	0.11	0.38	0.71	0.20	0.18	0.50	0.03
	SE(d)	0.58	0.51	0.26	0.11	0.32	0.31	0.25	0.07	0.06	0.17	0.01

S. No.	Genotypes	No. of fruits plant-1	Fruit yield plant-1(g)	Fruit yield ha-1 (q)	Dry matter content (%)	Vitamin C (green) (mg100-1g)	Capsaicin content (mg g-1)	Capsanthin content (ASTA units)	Total phenol (mg100-1g)	Instrumental Colour L*	Instrumental Colour a	Instrumental Colour b
1.	SKAU-32	50.46	226.83	71.32	69.42	180.94	0.41	86.46	6.20	45.83	40.78	14.72
2.	SKAU-36	55.06	106.07	33.49	79.51	162.95	0.37	84.68	5.80	42.04	37.24	15.86
3.	SKAU-38	40.60	247.15	78.41	72.12	140.24	0.33	70.14	6.40	38.67	35.25	17.45
4	SKAU-40	49.26	259.62	82.41	82.30	129.50	0.46	72.67	6.56	35.22	30.78	15.78
5.	SKAU-43	39.40	229.75	72.77	79.76	65.52	0.53	82.76	5.73	38.18	34.30	17.77
6.	SKAU-45	42.86	152.91	48.53	74.89	62.62	0.61	94.90	6.16	47.26	42.25	15.90
7.	SKAU-52	41.80	200.38	63.48	85.92	71.06	0.73	94.81	6.56	45.91	41.26	16.13
8.	SKAU-58	35.73	163.42	74.06	75.94	201.16	0.60	66.24	6.43	45.92	40.79	16.11
9.	SKAU-62	50.53	114.19	36.14	76.80	71.00	0.75	107.30	6.26	35.97	31.78	14.90
10.	SKAU-68	53.60	244.36	77.45	77.77	193.44	0.71	109.09	5.83	37.85	34.98	16.12
11.	SKAU-73	50.73	353.57	112.06	70.08	199.76	0.61	85.40	6.13	40.79	35.83	16.79
12.	SKAU-77	48.66	172.01	54.49	75.87	178.69	0.63	96.35	6.43	38.49	33.45	15.85
13	SKAU-80	60.13	251.54	79.78	74.94	88.62	0.57	99.32	6.23	41.45	38.12	15.97
14	SKAU-84	62.66	206.77	66.02	61.54	57.00	0.64	84.13	6.76	43.22	39.33	15.77
15.	SKAU-89	49.86	216.16	68.46	62.86	191.98	0.70	82.19	7.00	45.30	40.19	17.00
16.	SKAU-91	33.73	86.20	27.19	80.66	163.98	0.52	80.80	6.26	35.87	31.43	15.10
17.	SKAU-96	42.73	167.52	53.11	81.30	64.39	0.71	76.00	7.10	38.70	35.15	15.83
18.	SKAU-106	32.13	128.13	40.52	78.10	124.74	0.75	122.20	6.43	41.22	36.91	14.79
19.	SKAU-109	40.86	105.83	33.43	75.02	83.12	0.56	97.81	4.93	41.00	37.10	15.81
20.	SKAU-111	44.93	301.36	95.44	75.02	108.56	0.51	93.72	6.20	46.06	40.66	16.05
21.	SKAU-118	30.40	82.62	26.02	81.94	96.72	0.60	98.20	6.03	50.11	45.26	16.83
22.	SKAU-122	63.73	241.98	76.60	79.93	73.78	0.47	96.59	5.13	48.28	43.32	15.35

23.	SKAU-128	43.60	207.22	65.71	81.92	190.84	0.51	103.33	6.06	39.47	36.53	17.06
24.	SKAU-132	60.13	261.42	82.74	83.19	111.86	0.62	97.74	6.76	37.98	34.96	17.89
25.	SKAU-139	60.00	260.12	82.42	73.90	80.20	0.62	102.72	6.26	40.88	36.13	16.64
26.	SKAU-141	51.00	348.90	110.57	83.10	195.01	0.51	83.96	5.23	38.88	34.98	15.88
27.	SKAU-148	69.13	410.12	130.19	81.54	183.74	0.43	95.36	6.13	41.11	37.88	14.77
28.	SKAU-153	41.40	75.59	23.90	74.00	102.57	0.39	116.52	6.76	36.35	38.26	15.89
29.	SKAU-157	44.93	169.43	53.54	74.18	114.26	0.29	83.39	5.10	41.54	38.34	15.00
30.	SKAU-160	34.66	107.10	33.85	85.74	183.00	0.35	73.27	5.70	36.97	32.01	16.63
31.	SKAU-163	30.53	59.10	186.24	84.80	142.20	0.37	67.28	5.20	42.15	37.43	14.88
32.	SKAU-167	32.40	117.01	36.92	85.84	130.94	0.31	74.67	5.30	41.26	35.83	16.58
33.	SKAU-173	78.73	649.20	206.02	81.72	196.28	0.55	106.69	7.20	41.00	36.13	15.21
34.	SKAU-177	65.26	295.72	93.75	82.84	74.37	0.62	99.68	7.46	41.71	36.98	16.00
35.	SKAU-181	65.06	280.14	88.67	81.30	64.18	0.40	85.02	7.10	36.20	31.11	14.87
36.	SKAU-188	99.86	539.83	171.21	80.00	179.81	0.43	112.06	7.16	41.03	36.03	14.91
37.	SKAU-191	73.80	408.68	129.62	81.41	78.92	0.46	117.30	7.43	38.84	34.51	14.77
38.	SKAU-193	91.86	759.52	239.43	83.49	192.28	0.63	123.63	7.70	45.34	40.15	18.58
39.	SKAU-195	80.80	558.35	177.14	80.06	173.98	0.53	100.33	7.06	46.11	41.10	17.70
40.	SKAU-198	70.53	526.12	166.87	80.20	114.80	0.61	125.83	7.00	44.17	38.66	16.66
41.	SKAU-208	64.40	466.87	148.03	79.44	133.84	0.57	119.29	7.00	42.95	38.22	16.32
42.	SKAU-211	67.73	391.44	124.01	79.98	163.67	0.54	70.71	7.06	41.19	36.36	15.88
43.	SKAU-216	63.93	476.86	151.21	82.85	122.70	0.51	106.69	7.00	39.89	35.00	14.63
44.	SKAU-218	56.20	326.29	103.38	81.53	193.44	0.53	96.18	6.83	41.69	36.74	15.73
45.	SKAU-221	84.00	506.22	160.09	82.90	104.46	0.63	108.20	7.46	41.26	36.34	15.66
46.	SKAU-224	87.13	428.15	135.76	82.90	155.02	0.57	118.76	6.83	39.09	35.87	16.54
47.	SKAU-227	58.40	342.11	108.46	81.84	143.70	0.62	125.05	6.86	37.86	36.09	15.62
48.	SKAU-231	38.66	148.48	46.87	81.65	142.54	0.51	84.30	6.70	39.45	36.13	14.43
49.	SKAU-233	43.53	182.35	57.77	83.91	154.89	0.46	83.33	6.26	40.67	35.81	15.73
50.	SKAU-237	30.80	155.20	49.09	86.07	80.94	0.51	92.72	6.66	40.99	35.78	14.34
51.	SKAU-243	62.20	399.90	126.76	82.82	164.20	0.53	85.26	6.13	40.88	36.47	14.53
52.	SKAU-247	68.80	450.74	142.95	80.06	134.42	0.56	105.43	5.86	41.25	35.91	14.47
53.	SC-104	56.26	261.80	82.95	83.96	196.10	0.47	115.60	6.76	46.20	41.20	15.80
54.	SC-1019	47.86	195.98	62.00	80.11	115.40	0.51	120.49	7.00	49.25	33.88	15.54
55.	IC-391082	57.46	191.07	60.52	80.95	145.21	0.53	113.24	5.83	35.57	30.87	14.91
56.	IC-505242	29.86	119.88	37.98	82.06	135.94	0.51	113.91	5.83	38.95	43.66	15.91
57.	IC-561617	63.60	174.05	55.02	82.20	131.15	0.57	97.39	7.20	41.10	35.65	14.43
58.	Local Kashmiri Chilli-1	29.66	76.40	24.13	85.20	43.86	0.43	80.07	4.90	41.22	38.91	17.12
59.	Arka Lohit	45.66	401.03	127.08	82.92	192.59	0.49	96.05	6.36	37.02	31.79	15.59
60.	KL-1	89.26	581.80	184.54	80.84	106.77	0.52	78.93	7.00	40.30	35.19	15.77
	CD at 5%	1.21	2.15	2.03	0.45	1.09	0.02	8.02	0.13	1.11	3.45	0.68
	SE(d)	0.43	9.3	0.72	0.16	0.39	0.00	2.86	0.04	0.39	1.23	0.24

Conclusion

In this study the genotypes showed wide range of variability for most of the morphological, growth and fruit characters (Table-1). Based on the overall performance of the genotypes under study the genotypes SKAU-193, SKAU-173 and SKAU-163 were found to be best with respect to yield indicating that these genotypes should be considered for further improvement.

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