

Yield and Yield Attributes of Garden Pea (*Pisum sativum* L.) varieties under Southern Region of Karnataka

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ABSTRACT: The material for the present study comprised of 15 Varieties of Garden pea from various sources across the country to study their yield potential under South Karnataka region. As there is no specific high yielding genotype of Garden pea recommended for cultivation in Bengaluru region, which is located on the Deccan plateau, it is a main challenge to identify a suitable high yielding genotype for southern region of Karnataka so as to recommend for similar situations. The varieties were assessed for performance on yield and quality at College of Agriculture and Research Institute, UAS, GKVK, Bengaluru, India during Rabi 2019-20 and 2020-21. The experiment revealed the presence of significant differences for almost all the major yield and quality contributing characters studied. Among the 15 varieties evaluated, from two seasons pooled average Arka Karthik recorded the highest Pod length (10.30 cm), weight of pod (9.42 g), number of pods plant⁻¹ (50.22), number of green peas per pod (9.50), yield of pods plant⁻¹ (185.80 g), yield of pods plot⁻¹ (4.35 kg) and yield hectare⁻¹ (217.75 q ha⁻¹tonnes) whereas Kashi Uday produced the days to first flower (34.90), and days to fifty percent flowering (44.50). Garden Pea being one of the most suitable vegetable crops for Rabi cultivation, the identified varieties could be raised by the farming community of the region for enhanced yield and economic benefits.

Keywords: Garden pea, Varieties, performance, yield, quality.

INTRODUCTION

Garden pea (*Pisum sativum* L.) is an important cool season legume vegetable crop (Rabbi *et al.*, 2011). Pea cultivation is wide spread in areas having a mild and warm climate, because relatively high or low temperatures are the most important factors limiting pea cultivation (Ambrose, 2008). The genus *Pisum* was considered to be consisted of five species: *P. fulvum*, *P. abyssinicum*, *P. sativum* L., *P. humile* and *P. elatius* mostly found in Mediterranean area and West Asia, out of which only *P. sativum* is cultivated (Verhinin *et al.*, 2003). *P. sativum* having a chromosome number 2n=14, plant is short lived, herbaceous annual which climbs by leaflets tendrils. It is a nutritious vegetable and rich source of protein, and essential amino acid particularly lysine (Nawab *et al.*, 2008) carbohydrate, Vit-A, Vit-C, potassium, phosphorous, minerals, dietary fibers and antioxidant compounds (Urbano *et al.*, 2003; Kichi *et al.*, 2003).

Each 100 g edible portion of the green pea contains moisture 78 g, protein 6.3 g, carbohydrates 14.4 g, energy 84 Kcal, calcium 26 mg, phosphorus 116 mg,

iron 1.9 mg and vitamin A 640 IU (Thamburaj, 2013; Peter *et al.*, 2012). On the basis of seed pea cultivars are divided into two classes, i.e., smooth or wrinkle seeded types; on the basis of height cultivars are classified into three classes, i.e., bush, medium tall and tall types and according to maturity three classes are early, midseason and late cultivars (Datta and Das, 2018). Garden pea is consumed as fresh or cooked vegetable, it is also consumed as processed products like canned, dehydrated and frozen for consumption in off season. In India garden pea occupies about 2.5% of total vegetable production with 9.8 t ha⁻¹ of average national productivity (Anonymous, 2018). India is the largest producer of garden pea next to China (Anonymous, 2011).

As large number of garden pea varieties is now available in the market, considering the above issues, there is a need to compare some of the available varieties select high yielding, better adaptable varieties for commercial cultivation in any specific region. Therefore, the present investigation was focused to identify superior and promising garden pea varieties in respect to yield and other quality contributing

characters under southern region of Karnataka as no similar studies on identification of high yielding genotypes for southern ecosystem has been attempted. The present study assumes significance in this context.

MATERIAL AND METHODS

The field experiment was conducted during 2019-20 and 2020-21 from October to January at Horticulture Research Station, Department of Horticulture, College of Agriculture, UAS, GKVK, Bengaluru. The material consisted of 15 varieties of Garden Peas from different parts of the country. The experiment was laid out in a Randomized Complete Block Design, replicated thrice. A plot size of (2.1 m × 0.9 m) was maintained for each treatment in each replication. The experimental field was well prepared by following Vermicompost and fertilizer doses were applied. Accordingly, 10 tonnes of FYM, 12.5 kg Nitrogen, 75 kg Phosphorus, and 50 kg Potash were applied per hectare during experimental plot land preparation, and 12.5 kg Nitrogen was applied 30 days after sowing. The seeds were sown on beds depth of 4 to 5 cm using the dibbling method, with a spacing of 30 cm × 10. The cultural practices as recommended were uniformly followed. Observations were recorded on five plants from each replication in each Variety for various Yield and yield contributing characters as suggested by Mahajan *et al.*, (2000). The mean data were subjected to statistical analysis as suggested by Panse and Sukhatme (1978).

RESULTS AND DISCUSSION

Yield attributes. The results indicated the existence of significant differences among the Garden Pea Varieties for all the yield traits observed (Table 1, 2 & 3). From the two seasons pooled data the highest length of pod was observed in Arka Karthik (10.30 cm), followed by Arka Apoorva (10.12 cm) and PSM-6 (9.97 cm), whereas minimum length of pod (6.51) was recorded in Magadi Local. The difference in average length of pod of different Varieties due to their genetic make-up had already been observed and reported by Bhushan *et al.* (2013), Sharma *et al.* (2013). The width of pod recorded was maximum in Arka Karthik (2.66 cm) followed by Arka Apoorva and Kashi Uday (2.27 cm). The lowest width of pod was noted in Magadi Local (6.19 cm). Such variation for width of pod has been reported by Kumar and Kohali (2001), the highest weight of pod was observed in (9.42 g) in Arka Karthik followed by PSM-6 (9.25 g) and Kashi Uday (9.26 g) whereas the lowest weight of pod (5.50 g) was recorded in Magadi Local. The variation for weight of pod due to

variation in Genotypes. Kumar and Kohali (2001), also reported similar findings from their experiment on Garden Pea. In the present study, the highest number of green peas per pod (9.50) was recorded in Arka Karthik followed by PSM-6 (9.00) and Arka Apoorva (8.93) whereas number of green peas per pod was the lowest in (6.17) Magadi Local. These findings are in conformity with the earlier findings of Mukherjee *et al.* (2013); Phom *et al.* (2014). Among the garden pea varieties evaluated, highest number of pods per plant was registered in Arka Karthik (20.29) followed by Arka Apoorva (19.69) and Arka Uttam (15.03). Whereas the lowest number of pods per plant⁻¹ (6.81) was observed in Magadi Local. The results corroborate with the findings of Amjad and Anjum (2002); Ankur *et al.* (2006); Khan *et al.* (2013) Higher hundred pod weight was observed in Arka Karthik (959.97 g), followed by Kashi Uday (904.53 g) and Arka Apoorva whereas lower hundred pod weight (565.21 g) was recorded in Magadi Local. The difference in hundred pod weight of different Varieties due to their genetic make-up had already been observed and reported by Ankur *et al.* (2006); Khan *et al.* (2013). The higher hundred seed weight recorded was maximum in Arka Karthik (51.67 g), which was on par with Kashi Uday (49.20 g), Arka Apoorva (46.65 g) and Kashi Nandini (44.61 g), while the lowest hundred seed weight (32.37 g), was recorded in Magadi Local (C). Similar variations were observed in Chadha *et al.* (2013) in Garden pea. Lesser number of days taken for commencement of first pod formation (40.74), after sowing was recorded in Kashi Uday which was significantly at par with Kashi Nandini (42.04), Kashi Ageti (44.19) and Kashi Mukti (44.71). More days taken for commencement of first pod formation (66.80) was observed in Magadi Local. Similar findings were observed in Amin *et al.* (2014), and Patel *et al.* (2006) days taken for last picking after sowing (107.73) was observed in Arka Karthik followed by Arka Apoorva (104.47) and Arka Uttam (103.90). Lesser days taken for last picking after sowing (90.03) was observed in Kashi Ageti which was on par with PSM-3 (90.73) and PSM-6 (90.95). Similar findings were reported in Amin *et al.* (2014); Patel *et al.* (2006). Lesser days were taken for marketable maturity after sowing (51.19) was observed in Kashi Uday followed by Kashi Nandini (52.37), Kashi Mukti (52.91) and PSM-6 (52.97). Most days taken for marketable maturity after sowing (71.85) were recorded in Magadi Local (C). These findings are in conformity with the earlier findings of Kalloo *et al.* (2005) in vegetable pea.

Table 1: Performance of Garden pea varieties for Yield traits.

Treatments (Varieties)	Length of pod (cm)			Width of pod (cm)			Weight of pod (g)			Number of green peas per pod			Number of pods per plant		
	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average
T ₁ (Kashi Mukti)	8.48	8.30	8.39	1.57	1.82	1.69	7.54	7.74	7.64	7.87	6.60	7.23	8.48	9.60	9.05
T ₂ (Kashi Ageti)	6.73	6.69	6.71	1.52	1.39	1.40	6.74	6.81	6.78	7.73	6.87	7.30	7.87	9.87	8.88
T ₃ (Kashi Nandini)	8.10	7.97	8.03	1.84	1.92	1.88	7.67	7.94	7.81	8.47	6.83	7.65	8.60	7.60	8.07
T ₄ (Kashi Uday)	8.44	8.25	8.34	2.11	2.43	2.27	9.12	9.39	9.26	8.07	7.00	7.53	11.40	9.33	10.27
T ₅ (PSM-2)	8.41	7.73	8.07	1.55	1.33	1.44	7.31	7.58	7.45	7.60	7.50	7.55	12.47	10.67	11.38
T ₆ (PSM-3)	8.76	8.28	8.52	1.74	1.34	1.54	6.43	6.16	6.30	8.27	7.53	7.90	11.33	9.53	10.29
T ₇ (PSM-4)	8.21	7.74	7.97	1.45	1.86	1.65	6.32	6.46	6.39	8.20	7.73	7.97	13.40	11.13	12.07
T ₈ (PSM-6)	10.12	9.83	9.97	1.53	1.60	1.57	8.88	9.61	9.25	9.27	8.73	9.00	16.40	12.60	14.33
T ₉ (Arka Karthik)	10.26	10.35	10.30	2.74	2.59	2.66	9.35	9.48	9.42	9.60	9.40	9.50	21.73	18.33	20.29
T ₁₀ (Arka Apoorva)	10.21	10.03	10.12	2.55	2.26	2.41	8.11	9.31	8.71	9.13	8.40	8.77	21.26	18.13	19.69
T ₁₁ (Arka Uttam)	9.69	9.42	9.55	1.55	1.79	1.67	8.56	7.56	8.06	8.40	8.07	8.23	16.60	13.33	15.03
T ₁₂ (Kashi Samridhi)	8.55	8.19	8.37	1.52	1.44	1.48	6.54	6.68	6.61	8.40	7.73	8.07	12.60	9.67	11.13
T ₁₃ (Kashi Shakti)	8.68	8.58	8.63	1.33	1.51	1.42	7.49	7.29	7.39	8.80	8.15	8.93	13.61	12.05	13.06
T ₁₄ (Pant Uphar)	8.52	8.36	8.44	1.25	1.61	1.43	7.46	6.93	7.20	9.13	7.57	8.35	12.93	10.67	12.16
T ₁₅ (Magadi Local)	6.46	6.56	6.51	1.24	1.29	1.26	5.56	5.43	5.50	6.33	6.00	6.17	7.27	6.47	6.81
S.Em (±)	0.27	0.28	0.25	0.10	0.12	0.09	0.162	0.22	0.12	0.26	0.24	0.20	0.49	0.50	0.39
C.D. at 0.5%	0.78	0.82	0.73	0.31	0.34	0.26	1.47	0.66	0.37	0.75	0.71	0.58	1.43	1.45	1.13

Table 2: Performance of Garden pea varieties for Yield traits.

Treatments (Varieties)	Hundred Pod weight (g)			Hundred seed weight (g)			Days to first pod Picking			Days to last pod picking			Days to marketable maturity		
	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average
T ₁ (Kashi Mukti)	599.67	615.67	607.67	37.05	34.39	35.72	43.34	46.08	44.71	90.87	91.32	91.09	51.60	54.21	52.91
T ₂ (Kashi Ageti)	550.73	579.61	565.21	43.19	41.16	42.18	46.27	42.11	44.19	87.67	92.40	90.03	52.67	55.32	53.99
T ₃ (Kashi Nandini)	646.47	700.47	673.47	46.67	42.56	44.61	42.25	41.83	42.04	90.87	91.87	91.37	53.33	51.40	52.37
T ₄ (Kashi Uday)	809.20	899.87	904.53	48.99	49.42	49.20	41.40	40.08	40.74	91.00	92.53	91.77	50.75	51.63	51.19
T ₅ (PSM-2)	800.40	571.40	685.90	38.03	39.33	38.68	53.40	54.27	53.83	90.67	92.60	91.63	51.27	56.09	53.68
T ₆ (PSM-3)	729.40	676.27	702.83	44.12	42.65	43.39	51.87	53.33	52.60	89.67	91.80	90.73	52.67	54.32	53.50
T ₇ (PSM-4)	674.13	645.73	659.93	34.53	37.79	36.16	53.60	54.20	53.90	90.72	92.33	91.53	51.53	59.27	55.40
T ₈ (PSM-6)	801.27	701.67	751.47	43.67	42.81	43.24	54.01	55.63	54.82	91.19	90.72	90.95	54.58	51.37	52.97
T ₉ (Arka Karthik)	968.79	951.15	959.97	53.20	50.14	51.67	63.93	66.20	65.07	104.80	110.67	107.73	66.87	70.23	68.55
T ₁₀ (Arka Apoorva)	846.73	859.07	852.90	48.44	44.86	46.65	62.67	59.93	61.30	104.20	104.73	104.47	66.20	69.07	67.64
T ₁₁ (Arka Uttam)	634.73	649.00	641.87	44.70	43.82	44.26	52.93	57.47	55.20	102.60	105.20	103.90	63.80	69.27	66.53
T ₁₂ (Kashi Samridhi)	803.93	707.80	755.87	42.31	46.47	44.39	63.40	60.73	62.07	93.13	94.33	93.73	68.07	70.01	69.04
T ₁₃ (Kashi Shakti)	728.07	667.60	697.83	39.72	38.21	38.97	60.61	58.93	59.77	91.13	92.47	91.80	65.93	61.36	63.65
T ₁₄ (Pant Uphar)	771.87	678.67	725.27	37.39	34.37	35.88	56.08	53.71	54.89	91.73	91.08	91.41	64.88	61.25	63.07
T ₁₅ (Magadi Local)	555.80	525.67	540.70	33.31	31.42	32.37	62.73	70.87	66.80	95.67	94.40	95.03	72.93	70.77	71.85
S.Em (±)	23.86	32.78	22.76	1.47	1.36	0.97	1.01	1.25	0.83	1.71	1.41	1.07	1.52	1.16	1.00
C.D. @ 0.5%	69.13	94.95	65.93	4.25	3.94	2.80	3.94	3.63	2.40	4.97	4.10	3.12	4.43	3.37	2.89

Maximum pod yield plant⁻¹ was recorded in Arka Karthik (185.80 g), followed by Arka Apoorva (173.67 g) and Kashi Uday (118.85 g) whereas the pod yield plant⁻¹ recorded was the least in Magadi Local (49.32 g). The yield of pods plant⁻¹ is directly related to number of primary branches, number of pods and pod weight and similar results in Garden Pea has been reported Khan *et al.* (2013) in Garden Pea. The pod yield plot⁻¹ ranged from 4.35 to 1.26 kg⁻¹ with the highest fruit yield plot⁻¹ registered in (4.35 kg/ plot), Arka Karthik followed by Kashi Uday (3.63 kg/ plot) and Arka Apoorva (3.41 kg/ plot) respectively. The Pod yield plot⁻¹ was the lowest in Magadi Local (1.26 kg/ plot). The yield of pods per hectare⁻¹ (217.75 q ha⁻¹) was maximum in Arka Karthik followed by Kashi Uday (181.50 q/ha) and Arka Apoorva (170.75 q ha⁻¹) the differences in yield could be attributed to the differential genetic make-up and adaptability for the given agro climatic conditions by the hybrids as

reported by Thorat *et al.* (2009) in cluster bean. Yield is one of the most important complex traits and was found to be greatly affected by both environmental conditions and management. Variations in green pod yield per plant among different Garden Pea varieties might be due to the varietal characteristics coupled with environmental factor. The varieties that have demonstrated superior yield performance had a significantly greater number of primary branches and leaves on them, as well as greater number of nodes with more inflorescences, that could have resulted in the synthesis of more food material which was supplied to the pods resulted in greater yield per plant. In contrast, the lowest yield in variety Magadi Local (C) could be attributed to poor growth in terms of height of plant and branch count, resulting in the production of fewer carbohydrates. The variations among the different vegetable crops were also reported by several workers *i.e.* Chadha *et al.* (2013) in garden pea.

Table 3: Performance of Garden pea varieties for Yield characters

Treatments	(Varieties)	Yield of pods per plant (g)			Yield of pods per plot (kg)			Yield of pods (q/ha)		
		2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average
T ₁	Kashi Mukthi	50.88	59.14	55.01	2.89	2.32	2.60	144.50	116.00	130.25
T ₂	Kashi Ageti	60.91	74.42	67.66	2.60	1.94	2.27	130.00	97.00	113.50
T ₃	Kashi Nandini	58.57	51.22	54.89	2.37	1.75	2.06	118.50	87.50	103.00
T ₄	Kashi Uday	127.80	109.90	118.85	3.51	3.75	3.63	175.50	187.50	181.50
T ₅	PSM-2	107.24	84.25	95.74	1.80	2.09	1.94	90.00	104.50	97.25
T ₆	PSM-3	85.88	69.66	77.77	2.03	1.87	1.95	101.50	93.50	97.50
T ₇	PSM-4	82.54	71.57	77.05	1.55	1.91	1.73	77.50	95.50	86.50
T ₈	PSM-6	116.10	86.53	101.31	2.22	3.97	3.09	111.00	198.50	154.75
T ₉	Arka Karthik	208.83	162.77	185.80	4.43	4.28	4.35	221.50	214.00	217.75
T ₁₀	Arka Apoorva	196.52	150.82	173.67	3.39	3.44	3.41	169.50	172.00	170.75
T ₁₁	Arka Uttam	109.55	82.40	95.98	2.86	2.35	2.60	143.00	117.50	130.25
T ₁₂	Kashi Samridhhi	95.26	82.78	89.02	2.46	2.56	2.51	123.00	128.00	125.50
T ₁₃	Kashi Shakti	94.73	71.56	83.14	2.32	2.00	2.16	116.00	100.00	108.00
T ₁₄	Pant Uphar	94.26	79.92	87.09	1.72	1.99	1.85	86.00	99.50	92.75
T ₁₅	Magadi Local	50.38	48.27	49.32	1.18	1.35	1.26	59.00	67.50	63.25
S.Em (+)		3.21	3.84	5.54	0.09	0.10	0.09	4.63	3.46	4.97
C.D.@ 0.5%		9.30	11.12	16.05	0.25	0.29	0.26	13.41	10.02	14.40

The results indicated the existence of significant differences among the Garden Pea Varieties for all the Qualitative traits observed (Table 4). Maximum firmness was recorded in Arka Karthik (24.55 N) followed by Arka Apoorva (23.23 N). Whereas the least was recorded in Magadi Local (17.73 N). Similar results in Garden pea have been reported earlier by Phom *et al.* (2014) in vegetable pea. The moisture content ranged from 51.99 % to 74.99 % with the highest moisture content registered in Arka Karthik, (74.99 %) followed by Kashi Uday (72.99%), and PSM-6 (72.62 %) respectively where as the lowest was recorded in Magadi Local (34.81%). Differences in moisture content might be due to the genetic constitution of the genotypes. Similar results have been reported by Mukherjee *et al.* (2013) in vegetable pea. The shelling percentage was the maximum in Arka Karthik, (51.75%) followed by Kashi Uday (51.10 %), and PSM-6 (50.80%) respectively and the lowest was recorded in Magadi Local (34.81 %) differences in

shelling percentage among the varieties was also possibly due to genetical variation. Such type of varietal differences was also reported by Thakor (2008), Mukherjee *et al.* (2013) in vegetable pea. Pooled data results have significantly higher T.S.S (17.29 °Brix) was recorded in Pant Uphar which was found to be on par with PSM-4 (16.30 °Brix) and Kashi Uday (16.24°Brix) while the lowest T.S.S (12.82 °Brix) was recorded in Magadi Local (C). Similar results were obtained by Khichi *et al.* (2016) in garden pea. Higher protein content (25.18 %) was recorded in Arka Karthik which was found to be on par with PSM-6 (23.17 %), Arka Uttam (22.62 %) and Arka Apoorva (22.11 %), while the lowest protein content (11.14) was recorded in variety Magadi Local (C). The difference in protein content may be due to variation in genotypes. However, factors such as pH, ionic strength, or the presence of other ingredients will affect the functional properties of garden pea protein. Such variations were also reported by Khichi *et al.* (2016) in garden pea.

Table 4: Performance of Garden pea varieties for Quality characters.

Treatments (Varieties)	Firmness			Shelling (%)			TSS (°Brix)			Moisture content (%)			Protein content (%)		
	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average	2019-20	2020-21	Pooled average
T ₁ (Kashi Mukti)	21.08	20.90	20.99	45.10	42.01	43.56	14.45	14.0	14.63	64.87	63.59	64.23	14.25	13.56	13.91
T ₂ (Kashi Ageti)	21.46	21.44	21.45	46.13	44.67	45.40	13.43	15.26	14.34	65.01	67.51	66.26	13.32	11.47	12.39
T ₃ (Kashi Nandini)	21.72	21.71	21.72	44.87	43.60	44.23	17.61	14.87	16.24	61.29	64.01	62.65	15.79	14.09	14.94
T ₄ (Kashi Uday)	22.39	21.92	22.16	51.95	50.25	51.10	14.38	15.21	14.80	71.31	74.67	72.99	16.21	15.18	15.69
T ₅ (PSM-2)	20.89	20.78	20.84	40.59	43.45	42.02	15.37	16.06	15.72	64.59	66.74	65.67	16.10	14.35	15.23
T ₆ (PSM-3)	20.49	20.34	20.42	36.62	34.52	35.57	16.09	15.10	15.60	72.26	71.61	71.94	18.28	15.79	17.04
T ₇ (PSM-4)	21.88	21.75	21.82	43.79	41.93	42.86	16.64	15.97	16.30	63.22	62.84	63.03	22.52	21.21	21.87
T ₈ (PSM-6)	22.78	22.72	22.75	50.90	49.25	50.80	15.48	14.94	15.21	72.79	72.45	72.62	23.86	22.48	23.17
T ₉ (Arka Karthik)	24.73	24.37	24.55	52.27	51.23	51.75	18.64	14.47	15.56	76.51	73.47	74.99	25.77	24.59	25.18
T ₁₀ (Arka Apoorva)	23.66	22.79	23.23	48.70	50.95	49.83	16.24	15.29	15.77	71.76	70.11	70.94	23.90	20.52	22.11
T ₁₁ (Arka Uttam)	20.19	20.08	20.14	46.29	45.30	45.80	14.37	15.87	14.85	55.86	53.66	54.76	21.10	24.14	22.62
T ₁₂ (Kashi Samridhhi)	21.67	21.54	21.61	44.25	42.33	43.29	16.40	14.39	15.39	54.91	55.84	55.37	21.02	22.15	21.59
T ₁₃ (Kashi Shakti)	22.68	22.57	22.63	47.52	48.00	47.76	14.32	15.29	14.81	52.76	53.73	53.24	10.53	13.43	11.98
T ₁₄ (Pant Uphar)	20.69	20.62	20.66	41.78	40.70	41.24	18.71	15.83	17.29	67.61	62.55	65.08	21.56	21.46	21.51
T ₁₅ (Magadi Local)	19.11	16.34	17.73	34.05	35.57	34.81	13.36	12.28	12.82	52.84	51.14	51.99	10.57	11.70	11.14
S.Em (+)	0.10	0.12	0.15	2.19	1.69	1.69	0.57	0.73	0.53	1.36	1.31	1.27	0.67	0.75	0.59
C.D.@ 0.5%	0.48	0.38	0.54	6.35	4.90	4.89	1.65	2.11	1.55	3.93	3.80	3.68	1.94	2.18	1.69

CONCLUSION

Among the 15 varieties evaluated, Arka Karthik was found to outperform with an yield of (217.75 q ha⁻¹), followed by Kashi Uday (181.50 ha⁻¹) and Arka Apoorva (170.75 ha⁻¹) and these Varieties could be commercially explored as being one of the most suitable vegetable crops for rabi cultivation in this region.

FUTURE SCOPE

Identification of varieties with superior characters for quality and yield in Garden peas.

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