



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; 11(6): 1875-1880
© 2022 TPI

www.thepharmajournal.com

Received: xx-03-2022

Accepted: xx-04-2022

Santha S

Department of Crop Improvement, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Kudumiyamalai, Pudukkottai, Tamil Nadu, India

Jhansirani P

Department of Spices and Plantation Crops, Horticultural College and Research Institute, Tamil Nadu Agricultural University, Periyakulam, Tamil Nadu, India

Swaminathan V

Department of Vegetable Science, Horticultural College and Research Institute, Tamil Nadu Agricultural University, Periyakulam, Tamil Nadu, India

Arumugam T

Department of Plant Protection, Horticultural College and Research Institute, Tamil Nadu Agricultural University, Periyakulam, Tamil Nadu, India

Corresponding Author:

Santha S

Department of Crop Improvement, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Kudumiyamalai, Pudukkottai, Tamil Nadu, India

Morphological and seed yield traits of coriander (*Coriandrum sativum* L.) local land races of Tamil Nadu

Santha S, Jhansirani P, Swaminathan V and Arumugam T

Abstract

In the present investigation, a total of twenty two coriander genotypes were evaluated along with four released varieties CO 1, CO 2, CO 3 and CO (CR) 4 under both rainfed and irrigated conditions during November 2017 (*rabi* season) at Horticultural College and Research Institute, Periyakulam. Among the collections, under rainfed condition, leaf yield per plant was observed to be the highest in Kanakkanpatti local as 5.50g per plant followed by Virudhunagar local (5.35 g) per plant which have excelled the released varieties CO 2 and CO (CR) 4. The estimated leaf yield per hectare was also found to be the highest in Virudhunagar local as 1390 kg/ha followed by Vathirairuppu local (1364kg/ha). The seed yield per plant was found to be the highest in Virudhunagar local; 3.88g followed by Kanthasampuram local (3.50g). The highest seed yield per plot was registered by CO 2 (307.3g) followed by Virudhunagar local (267.3g). The highest seed yield per hectare (514kg/ha) was recorded by CO 2 followed by Virudhunagar local (445kg/ha). Under irrigated condition, among the collections, leaf yield per plant was observed to be the highest in Vathirairuppu local as 6.00 g per plant followed Virudhunagar local (5.40 g) per plant which have excelled the released varieties CO 2 and CO (CR) 4. The leaf yield per hectare was also observed to be the highest in the Vathirairuppu local (1559 kg/ha) followed by the Virudhunagar local (1404 kg/ha). It was noted that the seed yield per plant was found to be the highest in Virudhunagar local (3.85 g) followed by Kanthasampuram local (3.57g). The highest seed yield per plot was registered by Vellaimalaipatti local (149.0g) followed by CO 2 (147.0 g). Similar trend was observed in seed yield per hectare also as the highest seed yield (495 kg) was recorded by Vellaimalaipatti local followed by CO 2 (490 kg).. These genotypes can be exploited successfully for further breeding programmes.

Keywords: Coriander, evaluation, seed yield, leaf yield

Introduction

Coriander (*Coriandrum sativum* L.) is generally called as “Dhania” belongs to the family Apiaceae. (Diedrichsen and Hammer (2003).It is a *rabi* seed spice crop even though it is grown for leaf throughout the year. Coriander fruit is an important spice of many countries of Europe, Northern Africa, West, Central and South Asia. In the Mediterranean region, coriander cultivation dates back to ancient Egypt. In Europe, coriander is known since the Middle Ages. It is mainly used as condiment in the preparation of curry powder, pickles, sausages and seasonings. Seeds are also used in the preparation of confectionary and liquors. Due to its pleasant aroma, tender shoots and leaves are used in chutney, soups and salads. Besides condiment, coriander also has medicinal values. The dry seeds are said to have carminative, diuretic, stomachic and aphrodisiac properties. Green leaves of coriander are also used for culinary purposes. The content of essential oil in ripe fruit is comparably low (typically, less than 1%); the oil consists mainly of linalool (50 to 60%) and about 20 per cent terpenes [(pinenes, α - terpinene, myrcene, camphene, phellandrenes, β -terpinene, limonene, and cymene) (Diedrichsen, 1996)]. Due to mild sweet taste of the essential oil, it can be used as starting material in many products (Diedrichsen, 1996) which produces huge amount of nectar (Romanenko *et al.* (1991). In addition, coriander crop can be used in honey bee production due to its reproductive biology. India exports 10 to12 thousand tonnes of coriander seed valued at Rs.15 to 30 crores and 700 to 1300 tonnes of powder valued Rs.2.1 crores to 2.6 crores. However, the productivity of this important annual seed spice crop in India is very low (350-650 kg/ha). In India, it is being cultivated in an area of 3.40 lakh hectares with an annual production of 2.23 lakh tonnes (Anonymous, 2006) ^[1]. In Tamil Nadu, coriander is being cultivated in 7527 hectares with the production of 2614 tonnes. Thoothukudi ranks first in area (2237 ha) followed by Krishnagiri, Ramanathapuram and Virudhunagar.

In other districts coriander is cultivated in small pockets. Nearly 90% of the area is under rainfed condition in Tamil Nadu (Crop scenario, TNAU Agri Portal, 2017) [4]. The average seed yield is low even though it is cultivated widely in India. Because of the development of many varieties productivity was improved. Very few studies have been done on evaluation of coriander genotypes pertaining to its performance on seed yield and quality. Since for many years, valuable local land races are available with the farmers, selection of potential plant type can be of immense value to the breeder for further improvement and development of the crop. Therefore, the present investigation was undertaken in order to evaluate the morphological traits and yield performance of the collected coriander genotypes and to select the promising genotype (s) for higher seed yield and leaf yield.

Materials and Methods

The present investigation was carried out during November 2017 during *rabi* season at Horticultural College and Research institute, Periyakulam. A total of twenty local coriander genotypes were collected from the different geographical locations of Tamil Nadu and were the materials chosen for the present study (Table 1). Seeds were soaked in water for 12 hours and presoaked seeds after draining water and shade drying were used for sowing. Sowing of twenty two coriander genotypes along with four released varieties *viz.*, CO 1, CO 2, CO 3 and CO 4 were taken up both in rainfed as well as in irrigated conditions with the spacing of 25 x 15 cm in Randomized Block Design with two replications. Row length is 6m and 3m contains 60 and 30 plants in rainfed and irrigated trials respectively. The plot size is 6 x 1 m² and 3 x 1 m² in rainfed and irrigated conditions respectively in Randomized Block Design with two replications. All the recommended agronomical package of practices were well adopted to keep the plants uniformly good throughout the crop growth period. Five plants were randomly selected in each replication and observations on 12 quantitative traits *viz.*, days to flowering, plant height (cm), number of primary branches/plant, leaf yield (g/plant), estimated leaf yield (kg) / ha, number of umbels per plant, number of umbellets per umbel, days to seed maturity, number of seeds per umbel, seed yield per plant (g), seed yield per plot (g) and estimated seed yield (kg) / ha, were recorded according to the National Plant Genetic Resource Institute's Minimal descriptors for Coriander. Collected data were subjected to statistical analysis using AGRES Statistical Software.

Results and Discussion

Under rainfed and irrigated condition, twenty two coriander genotypes were evaluated along with four released varieties CO 1, CO 2, CO 3 and CO (CR) 4 (Table 2, 3, 4 and 5). Analysis of variance showed significant differences for all the genotypes for all the 12 quantitative traits studied both under rainfed and irrigated conditions. Similar significant results for quantitative traits for seed and leaf yield were reported by Beemnet Mengesha *et al.* (2010) [3]. The days to first flowering showed significant variation and it ranged from 32 to 48 days both under rainfed and irrigated condition. Under rainfed condition, the early flowering was observed in Vellaimalaipatti local (32 days) followed by Veppanthattai local, Vanampatty local and Palayakannivadi local (35 days). Under irrigated condition the shortest days to first

flowering was recorded in Vellaimalaipatti local (32 days). The next best genotypes showed shortest days to flowering are Veppanthattai local, Vanampatty local, Palayakannivadi local. Phurailatpam *et al.* (2016) [12] reported the range of 42.67 to 68.67 days. The range of plant height was 19.7 to 34.7 cm and 22.0 to 35.8 cm for rainfed and irrigated conditions respectively. Under rainfed condition, among the entries, the plant height was found to be the maximum in CO 2 (34.7cm). Next best genotype is Ariyalur local 2 (34.30 cm) followed by Poomparai local (30.6 cm). Under irrigated condition, the plant height was found to be highest in CO 2 (35.8 cm) followed by Kanakkanpatti local (33.80 cm). This is in correspondence with the findings of Moniruzzamam *et al.* (2013) and Akoijam Ranjita Devi and Sharangi (2019) and the plant height ranging from 60.40 to 100.40 was reported. Under rainfed condition, the highest number of branches per plant was recorded by Virudhunagar local, Kanthasampuram local and Karisalpatty local (6.00). Under irrigated condition, maximum number of branches per plant was recorded by Vathirairuppu local and Karisalpatty local as 6.6 number of branches. Meena *et al.* (2014) [10] also observed the similar results. Under rainfed situation, among the collections, leaf yield per plant was observed to be the highest in Kanakkanpatti local as 5.50g per plant while Virudhunagar local recorded 5.35 g per plant which have excelled the released varieties CO 2 and CO (CR) 4. The predicted leaf yield per hectare was also found to be the highest in Kanakkanpatti local 1429(kg)/ followed by ha Virudhunagar local as 1390 kg/ha and Vathirairuppu local (1364 kg/ha). Among the collections, under irrigated condition, leaf yield per plant was observed to be the highest in Vathirairuppu local as 6.00g per plant followed by Virudhunagar local (5.40 g) which have excelled the released varieties CO 2 and CO (CR) 4. The leaf yield per hectare was also observed to be the highest in the Vathirairuppu local (1559kg/ha) followed by Virudhunagar (1403 kg/ha) Under rainfed number of umbels per plant ranged from 4.0 to 36. Number of umbels per plant was found to be the maximum in CO 2 (36) followed by Kamuthi local as 34. Under irrigated situation, number of umbels per plant was found to be the highest in the variety CO 2 (36.2) followed by Kamuthi local (34.6). The results are in accordance with Malic and Teclan (2013) and Akoijam Ranjita Devi and Sharangi (2019) [2]. Under rainfed the range of number of umbellets per umbel was 3.0 to 11.0. Number of umbellets per umbel was observed to be the maximum in Sathur local as 11.0 followed by Vanampatty local 1. Under irrigated, the range of number of umbellets was 4.80 to 8.60. Number of umbellets per umbel was noticed to be the highest in Vathirairuppu local (8.60) followed by Virudhunagar local (8.00). Akoijam Ranjita Devi and Sharangi (2019) [2] had also reported the range of 3.75 to 7.02 for this trait Under rainfed number of seeds per umbel The highest number of seeds per umbel was recorded by Kamuthi local as 17.0 while minimum number of seeds per umbel was observed in 3.0. This result is in line with the results of Meena *et al.* (2010) and Akoijam Ranjita Devi and Sharangi (2019) [2]. It was noted that under rainfed condition, the seed yield per plant was found to be the highest in Virudhunagar local (3.88g) followed by Kanakkanpatti local (3.50g) and it was minimum in 0.88. The seed yield per plant was found to be the highest in Virudhunagar local (3.85g) followed by Kanthasampuram local (3.57g) under irrigated condition. Similar trend of seed yield per plant was reported by Kirubetta *et al.* (2017).

The highest seed yield per plot was registered by CO 2 (307.3g) followed by Virudhunagar local (267.3g). Similar trend was observed in seed yield per hectare also. The highest seed yield per hectare (513 kg) was recorded by CO 2 followed by Virudhunagar local 1 (445 kg/ha) (Table 3). Under irrigated condition, the highest seed yield per plot was registered by Vellaimalaipatti local (149.0g) followed by CO

2 (147.0 g). Similar trend was observed in seed yield per hectare also. The highest seed yield (495 kg/ha) was recorded by Vellaimalaipatti local followed by CO 2 (490 kg/ha) (Table 5). This result is in agreement with findings of Phurailatpam *et al.* (2016) [12] and Akoijam Ranjita Devi and Sharangi (2019) [2].

Table 1: Details of coriander genotypes collected for the study

Sl. No.	Name of the Genotype	Place of Collection (District)
1	Vannampatti local 1	Dindigul
2	Vathirairuppu local	Virudhunagar
3	Veppanthattai local	Perambalur
4	Aruppukottai local 1	Virudhunagar
5	Virudhunagar local	Virudhunagar
6	Kanthasampuram local	Dindigul
7	Vanampatty local 2	Dindigul
8	Palayakannivadi local	Dindigul
9	Kanakkanapatty local	Dindigul
10	Thoothukudi local 2	Thoothukudi
11	Poomparai local	Dindigul
12	Thoothukui local 2	Thoothukudi
13	Karisalpatty local	Dindigul
14	Kamuthi local	Ramanathapuram
15	Vellaimalaipatti local	Dindigul
16	Sathur local	Virudhunagar
17	Aravakuruchi local	Coimbatore
18	Chandan	Private
19	Aruppukottai local 2	Virudhunagar
20	Ariyalur local 1	Ariyalur
21	Ariyalur local 2	Ariyalur
22	Ariyalur local 3	Ariyalur
23	CO 1	TNAU, Coimbatore
24	CO 2	TNAU, Coimbatore
25	CO 3	TNAU, Coimbatore
26	CO (CR) 4	TNAU, Coimbatore

Table 2: Performance of coriander genotypes under rainfed condition for leaf yield

Sl. No.	Genotypes	Days to first flowering (days)	Plant height (cm)	Number of primary branches per plant	Leaf yield/Plant (g)	Estimated leaf yield per hectare (kg)	No. of umbels per plant
1	Vannampatti local 1	42.0	19.7	4.0	1.90	493	10.2
2	Vathirairuppu local	38.0	25.8	8.0	5.25	1364	17.0
3	Veppanthattai local	35.0	23.0	5.0	3.65	948	13.2
4	Aruppukottai local 1	39.0	26.6	5.0	3.15	818	12.0
5	Virudhunagar local	43.0	23.5	6.0	5.35	1390	18.0
6	Kanthasampuram local	45.0	25.2	6.0	3.10	805	12.0
7	Vanampatty local 2	35.0	22.2	4.0	2.35	610	11.0
8	Palayakannivadi local	35.0	28.2	5.2	2.95	766	21.0
9	Kanakkanapatty local	38.0	30.6	4.0	5.50	1429	21.0
10	Thoothukudi local 2	45.0	23.3	5.2	3.10	805	21.0
11	Poomparai local	48.0	25.2	4.4	2.90	753	21.4
12	Thoothukudi local 1	44.0	23.5	4.0	3.25	844	15.2
13	Karisalpatty local	45.0	25.7	6.0	2.35	610	24.0
14	Ramanathapuram local (Kamuthi)	44.0	23.7	5.0	1.40	363	34.0
15	Vellaimalaipatti local	32.0	19.3	4.0	1.80	467	21.8
16	Sathur local	44.0	22.2	4.0	1.80	467	11.0
17	Aravakuruchi local	48.0	20.3	3.0	3.95	1026	4.0
18	Chandan	39.0	27.6	4.0	2.75	714	10.2
19	Aruppukottai local 2	38.0	20.0	5.0	2.05	532	12.0
20	Ariyalur local 1	37.0	24.1	4.0	1.40	363	13.0
21	Ariyalur local 2	37.0	34.3	4.0	1.80	467	12.0
22	Ariyalur local 3	38.0	24.0	3.0	1.80	467	11.0
23	CO 1	46.0	24.2	5.2	3.55	922	9.0
24	CO 2	46.0	34.7	11.6	4.05	1052	36.0

25	CO 3	43.0	20.0	5.0	3.75	974	13.6
26	CO (CR) 4	43.0	23.7	5.0	2.50	649	8.0
Mean		41.03	24.63	4.98	2.97	773	15.86
SE(d)		0.53	0.33	0.09	0.06	3.43	1.10
CD(0.05)		1.13	0.772	0.176	0.145	7.01	2.26

Table 3: Performance of coriander genotypes under rainfed condition for seed yield

Sl. No.	Parents	No. of umbellets per umbel	Days to maturity	No. of Seeds perumal	Seed yield per plant (g)	Seed yield Per plot (g)	Estimated seed yield /hectare (kg)
1	Vannampatti local 1	7.2	91.0	8.0	1.74	153.4	255
2	Vathirairuppu local	8.5	90.0	10.0	2.17	236.0	393
3	Veppanthattai local	3.0	90.0	7.0	2.80	191.8	319
4	Aruppukottai local 1	3.0	90.0	7.0	1.74	245.3	408
5	Virudhunagar local	7.0	92.0	5.0	3.88	267.3	445
6	Kanthalasamypuram local	5.0	92.0	6.0	3.50	213.9	356
7	Vanampatty local 2	5.0	87.0	6.0	2.10	138.7	230
8	Palayakannivadi local	5.0	90.0	11.0	1.54	87.4	145
9	Kanakkannapatty local	4.0	90.0	11.0	2.23	236.2	393
10	Thoothukudi local 2	5.0	92.0	10.0	2.66	175.0	291
11	Poomparai local	7.0	92.0	9.0	0.88	160.4	420
12	Thoothukudi local 1	6.0	92.0	8.0	1.96	252.2	253
13	Karikalpatty local	4.0	93.0	14.0	2.80	152.4	238
14	Kamuthi local	5.4	92.0	17.0	2.38	143.0	318
15	Vellaimalaipatti local	5.0	87.0	10.0	2.38	191.3	432
16	Sathur local	11.0	87.0	6.0	2.62	259.5	277
17	Aravakuruchi local	5.0	86.0	3.0	1.99	166.6	396
18	Chandan	5.0	86.0	6.0	2.03	238.0	349
19	Aruppukottai local 2	5.0	85.0	7.0	2.48	209.5	288
20	Ariyalur local 1	5.0	87.0	7.0	1.96	173.0	275
21	Ariyalur local 2	5.0	89.0	6.0	2.10	165.5	294
22	Ariyalur local 3	5.0	87.0	6.0	1.82	177.0	363
23	CO 1	5.8	95.0	5.0	3.43	218.3	421
24	CO 2	6.0	96.0	19.0	3.09	307.3	514
25	CO 3	5.6	95.0	8.0	2.70	248.6	414
26	CO (CR) 4	5.6	83.0	5.0	2.13	202.4	343
Mean		5.54	89.84	8.34	2.35	196.10	339
SE(d)		1.99	0.42	1.10	0.11	1.14	1.87
CD(0.05)		4.10	0.871	2.28	0.238	2.36	3.86

Table 4: Performance of coriander genotypes under irrigated condition for leaf yield

Sl. No.	Genotypes	Days to first Flowering (days)	Plant Height (cm)	Number of Primary branches per plant tillers/plant	Leaf yield /plant (g)	Estimated leaf yield /ha (kg)	No. of umbels per plant
1	Vannampatti local 1	42.0	22.0	4.4	1.95	506	11.2
2	Vathirairuppu local	38.0	27.7	6.6	6.00	1559	18.0
3	Veppanthattai local	35.0	25.0	5.0	3.69	901	13.0
4	Aruppukottai local 1	39.0	27.3	5.0	3.28	852	14.4
5	Virudhunagar local	43.0	24.6	6.0	5.40	1404	8.6
6	Kanthalasamypuram local	45.0	26.6	6.2	3.35	870	14.2
7	Vanampatty local 2	35.0	25.2	4.6	3.00	779	12.4
8	Palayakannivadi local	35.0	29.3	4.6	3.10	805	23.2
9	Kanakkannapatty local	38.0	33.8	4.4	5.25	1364	24.2
10	Thoothukudi local 2	45.0	25.0	5.6	3.40	883	24.2
11	Poomparai local	48.0	26.7	5.0	3.00	779	23.8
12	Thoothukudi local 1	44.0	25.5	4.4	3.40	883	19.2
13	Karikalpatty local	45.0	26.9	6.6	2.40	623	25.6
14	Kamuthi local	44.0	24.4	5.6	1.60	415	34.6
15	Vellaimalaipatti local	32.0	26.4	6.0	2.00	519	24.4
16	Sathur local	44.0	24.2	5.0	2.10	545	11.8
17	Aravakuruchi local	48.0	21.3	3.0	4.00	1039	4.0
18	Chandan	39.0	29.0	5.0	2.95	766	12.0
19	Aruppukottai local 2	38.0	23.6	5.6	2.20	571	13.4
20	Ariyalur local 1	37.0	24.4	4.0	1.45	376	13.0
21	Ariyalur local 2	37.0	34.0	4.0	1.75	454	12.0
22	Ariyalur local 3	38.0	24.0	3.0	1.85	480	11.0
23	CO 1	46.0	25.4	5.0	3.60	935	11.2

24	CO 2	46.0	35.8	6.4	4.10	1065	36.2
25	CO 3	43.0	21.2	6.0	3.90	1013	15.0
26	CO (CR) 4	43.0	25.1	6.0	2.60	675	8.6
Mean		41.03	26.31	5.11	3.12	810	16.89
SE (d)		0.55	0.35	0.09	0.07	1.89	0.33
CD(05) (0.05)		1.14	0.782	0.178	0.146	3.912	0.677

Table 5: Performance of coriander genotypes under irrigated condition for seed yield

Sl. No.	Genotypes	No of umbellets per umbel	Days to maturity	No. of Seeds per umbel	Seed yield per plant (g)	Seed yield per plot (g)	Estimated Seed Yield/ha (kg)
1	Vannampatti local 1	7.6	91.0	7.0	1.89	76.0	253
2	Vathirairuppu local	8.6	90.0	10.0	2.17	84.7	282
3	Veppanthattai local	3.0	90.0	7.0	2.80	95.0	316
4	Aruppukottai local 1	3.8	90.0	7.0	2.14	113.0	379
5	Virudhunagar local	8.0	92.0	7.0	3.85	118.0	395
6	Kanthasampuram local	5.8	92.0	6.0	3.57	120.0	400
7	Vanampatty local 2	5.8	87.0	6.0	2.17	71.0	237
8	Palayakannivadi local	5.4	90.0	11.0	1.53	135.5	451
9	Kanakkanpatti local	4.8	90.0	11.0	1.60	118.0	396
10	Thoothukudi local 2	5.0	92.0	10.0	2.66	80.8	269
11	Poomparai local	7.8	92.0	9.0	1.79	117.0	390
12	Thoothukui local 1	7.0	92.0	8.0	1.89	80.8	269
13	Karisalpatty ocal	5.0	93.0	14.0	1.89	76.0	254
14	Kamuthi local	5.8	92.0	11.0	2.45	76.0	254
15	Vellaimalaipatti local	5.6	87.0	16.0	2.59	149.0	495
16	Sathur local	5.6	87.0	6.0	2.35	87.4	291
17	Aravakuruchi local	5.4	86.0	3.0	2.03	130.2	396
18	Chandan	5.3	86.0	6.0	2.03	102	345
19	Aruppukottai local 2	5.2	85.0	7.0	2.48	83.7	279
20	Ariyalur local 1	5.0	87.0	7.0	2.04	83.0	278
21	Ariyalur local 2	5.0	89.0	6.0	2.10	90.0	299
22	Ariyalur local 3	5.0	87.0	6.0	1.82	105.0	353
23	CO 1	5.0	95.0	5.0	3.43	93.0	312
24	CO 2	6.4	96.0	19.0	3.13	147.0	490
25	CO 3	5.8	95.0	8.0	2.70	150.0	450
26	CO (CR) 4	6.0	83.0	5.0	2.13	120.5	402
Mean		5.81	89.86	8.38	2.35	106.27	343.65
SE(d)		0.28	0.42	0.61	0.08	9.78	3.93
CD(.05)		0.578	0.871	1.25	0.16	20.150	8.100

Conclusion

The study revealed that under rainfed condition, among the 26 collections, leaf yield per plant was observed to be the highest in Kanakkanpatti local as 5.50g per plant followed by Virudhunagar local (5.35 g) per plant which have excelled the released varieties CO 2 and CO (CR) 4. The estimated leaf yield per ha was also found to be the highest in Kanakkanpatti local 1429(kg)/ followed by haVirudhunagar local as 1390 kg/ha and Vathirairuppu local (1364 kg/ha). The seed yield per plant was found to be the highest in Virudhunagar local; 3.88g followed by Kanthasampuram local (3.50g).The highest seed yield per plot was registered by CO 2 (307.3g) followed by Virudhunagar local (267.3g). The highest seed yield per hectare (514kg/ha) was recorded by CO 2 followed by Virudhunagar local (445kg/ha). Under irrigated condition, among the 26 collections, leaf yield per plant was observed to be the highest in Vathirairuppu local as 6.00 g per plant followed by Virudhunagar local (5.40 g) per plant which have excelled the released varieties CO 2 and CO (CR) 4. The leaf yield per hectare was also observed to be the highest in the Vathirairuppu local (1559 kg/ha) followed by the Virudhunagar local (1404 kg/ha). It was noted that the seed yield per plant was found to be the highest in Virudhunagar local (3.85 g) followed by Kanthasampuram local (3.57g). The highest seed yield per plot was registered by

Vellaimalaipatti local (149.0g) followed by CO 2 (147.0 g). Similar trend was observed in seed yield per hectare also as the highest seed yield (495kg) was recorded by Vellaimalaipatti local followed by CO 2 (490 kg). These genotypes can be used successfully for further breeding programmes.

References

- Anonymous. Area, production and yield of coriander in India. Spices Board, Ministry of Commerce and Industry and Ministry of Agriculture, Govt. of India. 2006.
- Akoijam Ranjita Devi, Sharangi AB. Morphological Character and Seed Yield Potential of Coriander Genotypes under Gangetic Alluvial Region of West Bengal. International Journal of Current Microbiology and Applied Sciences. 2019;8(04):775-782.
- Beemnet Mengesha, Getinet Alemaw, Bizu ayhu Tesfaye. Performance of Ethiopian Coriander (*Coriandrum sativum* L) Accessions in vegetative, Phenological Generative and Chemical characters Improving Quality Production of Horticultural crops for sustainable Development Proceedings, February 04-05, Jimma University College of Agriculture and Veterinary Medicine, Jimma, Ethiopia, 2010.
- Crop scenario, TNAU Agri Portal, 2017.

5. Diederichsen. Coriander (*Coriandrum sativum* L.) Promoting the observations and use of underutilized and neglected crops. Institute of Plant Genetics and Crop Plant Research, Gatersleben/International Genetics Resources Institute, Rome. 1996, 83.
6. Diederichsen, Hammer. The intraspecific taxa coriander (*Coriandrum sativum* L.). Genetic Resources and Crop Evolution 2003, 5033-63
7. IENICA Summary Report for the European Union, 2000.
8. Kurubetta KD, Venkatesh J, Mesta RK, Tatagar MH, Kareem MD. Performance Evaluation of Coriander Genotypes for Seed Yield in Northern Transitional Zone of Karnataka. Research Journal of Chemical and Environmental Sciences 2017;5(6):13-15.
9. Malik TP, Tehlan SK. Performance of coriander (*Coriandrum sativum* L.) varieties for growth and seed yield. International Journal of Seed Spices. 2013;3(2):89-90.
10. Meena RS, Kakani RK, Choudhary S, Singh B, Panwar A. Genetic Diversity Analysis in Coriander (*Coriandrum sativum* L.) Varieties. Indian Journal of Agricultural Sciences. 2014, 84(12).
11. Moniruzzaman M, Rahman MM, Hossain MM, Karim AJMS, Khaliq QA. Evaluation of coriander (*Coriandrum sativum* L.) genotypes for seed yield and yield contributing characters. Bangladesh Journal of Agricultural Research. 2013;38(2):189-202.
12. Phurailatpam AK, Geetha KA, Meena RS, Maiti S. Evaluation of coriander (*Coriandrum sativum* L.) cultivars for yield and yield contributing characters in Gujarat Journal of Spices and Aromatic Crops. 2016;25(1):7-12
13. Romamanenko L, NevK rytaja NV, Kuznecova EJU. Features of pollination in coriander, Russia, Moscow 1991, 38-39.