



Utilization of Cashew Apple (*Anacardium occidentale* L.) for Preparing Cashew Apple Syrup by Using Different Varieties

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ABSTRACT

The focus of the present study is the utilization of cashew apple (*Anacardium occidentale* L.) for the preparation of cashew apple syrup by using eight distinct varieties viz., BPP-4, BPP-5, BPP-8, BPP-9, Dhana, Priyanka, VRI-1 and VRI-2. The varieties of cashew apple are studied for their physical parameters of fruit like fruit weight, fruit colour, fruit girth, fruit length, and fruit volume, juice colour and juice recovery percentage. The chemical parameters like TSS ($^{\circ}$ Brix), total titrable acidity (%), TSS/Acid ratio, ascorbic acid (mg/100 g), reducing sugars (%) and tannins (mg/ml) for juice, clarified juice and syrup were recorded. The physical parameters of juice like colour of product, product recovery from 100 fruits and microbial spoilage, Organoleptic evaluation and storage behaviour of the cashew syrup were also evaluated. Among the varieties studied, significantly highest fruit weight (76.84g), fruit girth (5.79 cm), fruit length (7.53 cm), fruit volume (58.11cm³) and juice recovery percentage (79.43%) were recorded in the variety Priyanka followed by BPP-8. Among the varieties, significantly highest quantity of syrup was obtained in variety Priyanka (7.44 Kg) followed by BPP-8 (4.56 kg) from 100 fruits on weight basis. Organoleptic evaluation of syrup, the overall acceptability ranged from 5.41 to 5.79, 5.86 to 6.08 and 6.26 to 6.47 at 0, 30 and 60 days after storage respectively in increasing manner and the highest in Priyanka followed by BPP-5, BPP-8 and the lowest in BPP-4 variety.

Key words : Acidity, Cashew, Fruit weight, Reducing sugars, Syrup, TSS.

Cashew (*Anacardium occidentale* L.) belongs to family Anacardiaceae is one of the important dry land plantation crop cultivated in an area of 9.23 lakh hectares with an annual nut production of 6.13 lakh tons with an average productivity of 695 Kg/ha in India and in Andhra Pradesh cashew is cultivated in an area of 1.83 lakh hectares with an annual nut production of 1.0 lakh tons with an average productivity of 544Kg/ha (DCCD, 2010). Apart from the cashew kernel, the main by-product of the cashew is its peduncle (false fruit) called "cashew apple". For every ton of cashew nut about 10-15 tons of cashew apple is produced but without its much use it gets spoiled left in the orchards under the trees. The wastage of cashew apple is a great economical loss both in terms of nutrients as well as national wealth. Since, food shortages are regularly occurring in our country, we cannot afford to waste such a valuable food material. Cashew apple is enriched with sugars, minerals and vitamins. Cashew apples are highly valued for their nutritive components particularly

ascorbic acid (260 mg/100 ml), moisture (87.8%), protein (0.3%), fat (0.01%), carbohydrate (11.6%), crude fiber (0.9%), calcium (0.01%), phosphorous (0.01%), iron (0.2 mg/100 ml), minerals (0.2%) and tannins (0.33%) (Augustin, 1984).

The apple juice can be utilized for the preparation of different non-fermented and fermented products. The juice is astringent due to the presence of tannins and 'anacardic acid' which causes bitter sensation on tongue and throat when the apples are eaten as such. Because of very high tannin content in cashew apple juice, it is not possible to ferment the same without treating the juice with fining substances like gelatin or other agents. After fining, cashew apple products like juice, squash, clarified juice, blended juice, candy and syrup can be prepared and utilized throughout the year. The present investigation was carried out for the estimation of juice and syrup preparation from cashew apple juice extracted from eight different varieties of cashew cultivated in Andhra Pradesh.

Table 1. Physical parameters of cashew apple and its juice of cashew (*Anacardium occidentale* L.).

Variety	Fruit colour	Fruit weight (g)	Fruit girth (cm)	Fruit length (cm)	Fruit volume (cm ³)	Juice colour	Quantity of juice fruit ¹ (g)	Quantity of clarified juice fruit ¹ (g)	Juice recovery (%)
V ₁ (BPP-4)	Yellow	26.77	3.61	4.76	16.14	White	20.07	12.04	74.12
V ₂ (BPP-5)	Yellow	44.71	4.67	5.56	30.79	Light yellow	25.41	15.24	56.54
V ₃ (BPP-8)	Yellow	38.35	5.26	6.06	42.89	Light yellow	38.35	23.01	76.34
V ₄ (BPP-9)	Yellow	40.70	3.60	5.10	17.30	White	28.02	16.18	68.77
V ₅ (Dhana)	Yellow	36.78	4.46	5.06	25.64	White	28.66	17.19	77.32
V ₆ (Priyanka)	Red purple	76.84	5.79	7.53	58.11	White	62.12	37.27	79.43
V ₇ (VRI-1)	Red	40.52	5.16	6.60	44.90	Light yellow	25.71	15.42	63.11
V ₈ (VRI-2)	Yellow	31.33	4.24	4.81	22.09	White	19.34	11.60	61.45
SE(d)	---	0.72	0.22	0.09	1.79	---	1.81	1.86	1.71
CD at 5%	---	2.02	0.64	0.20	3.84	---	4.98	3.99	3.66

MATERIAL AND METHODS

The study of the utilization of cashew (*Anacardium occidentale* L.) apple for preparation of value added product was carried out at Post Harvest Technology Laboratory of Horticulture College and Research Institute, Venkataramannagudem, West Godavari district of Andhra Pradesh under Dr Y.S.R Horticultural University for quality, quantity and storage behaviour of the product. The experiment was carried out during the year 2011-2012 with eight distinct varieties viz., BPP-4, BPP-5, BPP-8, BPP-9, Dhana, Priyanka, VRI-1 and VRI-2 for their physical parameters viz., fruit weight, fruit colour, fruit girth, fruit length and fruit volume, juice colour, quantity of juice per fruit, quantity of clarified juice and juice recovery percentage of the fruit, chemical parameters viz., total soluble solids, acidity, TSS/acid ratio, ascorbic acid, reducing sugars and tannins of cashew apple juice as well as clarified juice and cashew syrup recovery percentage from the cashew apple juice of each variety and quality on storage were recorded. The experiment was conducted with Completely Randomized Design with Factorial concept with two factors viz., varieties (factor-1) and storage period (factor-2) with 8 treatments replicated thrice separately for each treatment.

RESULTS AND DISCUSSION

Cashew (*Anacardium occidentale* L.) is more valued for its nuts in the international market,

the cashew apple utilization was not properly given attention. It is a strange phenomenon that the highly nutritious cashew apple is getting wasted in the developing country like India where, the nutritional problems are considered and varied. At present, cashew apple is not being utilized anywhere in India except in Goa, where it is completely utilized for the production of feni. For its utilization as a value added product, the cashew apple syrup was prepared by using different cultivars studied. Different quality parameters on storage has been studied and discussed for cashew apple, cashew apple juice and cashew apple syrup on storage separately.

Cashew apple:

Among the varieties, the highest fruit weight (76.84 g), fruit girth (5.79 cm), fruit length (7.53 cm) and fruit volume (58.11 cm³) were observed in the variety Priyanka and the lowest fruit weight (26.77 g), fruit girth (3.61 cm), fruit length (4.76 cm) and fruit volume (16.14 cm³) were recorded in the variety BPP-4. This variation in fruit characters might be due to genetical and physiological factors that influence the growth of the cashew apple. Similar results were also reported by Mathew *et. al* (1999) and Santos *et. al* (2010) in cashew and by Lodh *et. al* (1974) in mango. Among the varieties, the variation in colour was observed and the yellow colour was dominant and the highest fruit weight was shown by red purple variety when compared with yellow and red colour

Table 2. Chemical parameters of cashew apple juice and clarified juice of cashew (*Anacardium occidentale* L.) .

Variety	Juice					Clarified juice						
	TSS (°Brix)	Acidity (%)	TSS/ Acid Ratio	Ascorbic Acid (mg/100g)	Reducing Sugars (%)	Tannins (mg/ml)	TSS (°Brix)	Acidity (%)	TSS/ Acid Ratio	Ascorbic Acid (mg/100g)	Reducing Sugars (%)	Tannins (mg/ml)
V ₁ (BPP-4)	11.00	0.65	17.50	155.10	9.60	4.80	10.00	0.55	18.51	135.00	9.20	3.95
V ₂ (BPP-5)	11.00	0.80	12.50	158.46	9.60	3.24	10.00	0.67	14.92	138.00	9.20	3.24
V ₃ (BPP-8)	10.50	0.60	17.50	156.71	8.82	3.73	9.60	0.54	17.70	134.00	8.65	3.26
V ₄ (BPP-9)	10.00	1.20	8.33	160.36	9.30	4.82	9.00	0.90	10.00	133.00	9.16	3.60
V ₅ (DHANA)	12.00	0.80	15.00	157.45	9.30	3.69	11.00	0.71	15.40	132.00	9.30	3.60
V ₆ (PRIYANKA)	8.00	1.60	5.00	160.64	7.50	3.71	7.00	1.48	5.72	132.00	7.40	3.56
V ₇ (VRI-1)	9.00	1.60	5.62	159.36	8.30	3.20	8.00	1.42	5.63	134.00	8.20	3.16
V ₈ (VRI-2)	11.50	1.20	9.16	162.46	11.70	3.19	10.50	0.82	12.80	139.00	11.69	2.53
SE(D)	0.58	0.32	1.08	0.18	1.41	0.31	0.64	0.14	2.13	1.30	1.28	0.44
CD AT 5%	1.64	0.92	3.19	0.49	4.01	0.87	1.91	0.40	6.21	3.78	3.72	1.28

varieties (Table 1). The variation in colour is due to their genetic constitution, and it might be responsible for its expression as it is a pleiotropic effect as reported by Santos *et. al* (2010) and Causse *et. al* (2002) in cashew (Table 1).

Cashew apple juice:

The colour of cashew apple juice is 'white' in varieties BPP-4, BPP-9, Dhana, Priyanka and VRI-2 and 'light yellow' in the varieties BPP-5, BPP-8 and VRI-1. This might be due to genetical variation among the varieties. Quantity of juice per fruit of 62.12 g was recorded in the variety Priyanka followed by BPP-8 (38.35 g). However, the juice recovery percentage was 79.43% in Priyanka followed by Dhana (77.32%) is due to highest fruit weight and volume. For the preparation of cashew apple syrup, the clarified juice is the base material. Among the varieties, the highest quantity of clarified juice per fruit of 37.27 g was recorded in the variety Priyanka followed by BPP-8 (23.01 g). This may be due to highest volume and weight of the fruit which is a genetical character of the varieties. Similar result of the highest clarified juice recovery was also reported by Singh *et.al* (2008) in cashew (Table 1).

The fresh cashew apple juice contains highest total soluble solids of 12.00 (°Brix) in the variety Dhana and the lowest TSS (8.00 °Brix) in the variety Priyanka, highest acidity of the juice with the varieties Priyanka and VRI-1 (1.60 %) and the lowest in BPP-8 (0.60) were recorded. However, the highest TSS/Acid ratio (17.50) was recorded in the varieties BPP-4 and BPP-8. This may be due to genetical variation among East Coast varieties. Similar results were also reported by Sujatha (1994). Highest ascorbic acid (162.46 mg/100g), reducing sugars (11.70%) and the lowest tannins (3.19 mg/ml) were recorded in the variety VRI-2 in the cashew apple juice (Table 2).

Highest total soluble solids of 11.00 (°Brix) with the variety Dhana and the lowest TSS (7.00 °Brix) in the variety Priyanka, highest acidity (1.48 %) in the variety Priyanka and the lowest acidity (0.54%) in the variety BPP-8 were recorded. However, highest TSS/ Acid ratio 18.51 in BPP-4 and the lowest of 5.63 in VRI-1 were noticed. The variety VRI-2 having highest ascorbic acid (139 mg/100 g), highest reducing sugar (11.69%) and lowest tannins of 2.53 mg ml⁻¹ were recorded in clarified juice. Similar results were also reported

Table 3. Chemical parameters of cashew apple syrup at different days of storage (*Anacardium occidentale* L.).

Variety	Total soluble solids (°Brix)						Acidity (%)						TSS/Acid ratio						Ascorbic acid (mg/100g)						
	0		30		45		0		30		45		0		30		45		0		30		45		
	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days	Days		
V ₁ (BPP-4)	22.33	21.33	20.00	21.22	0.74	0.68	0.65	0.69	30.21	30.47	32.78	31.15	118.00	117.66	116.00	117.22	118.00	117.66	116.00	117.22	118.00	117.66	116.00	117.22	
V ₂ (BPP-5)	22.10	19.66	19.00	20.25	0.76	0.61	0.60	0.65	25.87	30.25	37.92	31.35	119.00	118.66	116.00	117.88	119.00	118.66	116.00	117.88	119.00	118.66	116.00	117.88	
V ₃ (BPP-8)	22.13	21.56	21.06	21.58	0.71	0.70	0.62	0.67	30.08	32.09	33.96	32.04	119.00	118.66	116.00	117.88	119.00	118.66	116.00	117.88	119.00	118.66	116.00	117.88	
V ₄ (BPP-9)	22.20	22.00	21.46	21.88	0.73	0.69	0.49	0.64	29.70	33.13	45.00	35.94	118.56	118.00	117.00	117.88	118.56	118.00	117.00	117.88	118.56	118.00	117.00	117.88	
V ₅ (Dhana)	22.00	22.63	22.00	22.21	0.63	0.58	0.50	0.57	35.02	37.69	44.66	39.12	118.00	117.33	116.00	117.11	118.00	117.33	116.00	117.11	118.00	117.33	116.00	117.11	
V ₆ (Priyanka)	20.26	20.10	19.66	20.01	0.75	0.70	0.60	0.68	25.68	28.88	31.08	28.55	119.00	119.00	115.96	118.00	119.00	119.00	115.96	118.00	119.00	119.00	115.96	118.00	
V ₇ (VRI-1)	22.96	20.96	20.30	21.41	0.76	0.67	0.65	0.69	29.65	30.65	33.08	31.13	119.00	118.00	116.00	117.66	119.00	118.00	116.00	117.66	119.00	118.00	116.00	117.66	
V ₈ (VRI-2)	23.20	22.46	21.80	22.48	0.63	0.58	0.51	0.57	37.15	38.72	42.18	39.35	120.66	119.00	117.00	118.88	120.66	119.00	117.00	118.88	120.66	119.00	117.00	118.88	
Mean	22.22	21.26	20.62		0.71	0.65	0.58		30.67	32.48	37.58		118.91	118.29	116.25		118.91	118.29	116.25		118.91	118.29	116.25		
	SEd±	CD (0.05)		SEd±	CD (0.05)		SEd±	CD (0.05)	SEd±	CD (0.05)		SEd±	CD (0.05)	SEd±	CD (0.05)		SEd±	CD (0.05)		SEd±	CD (0.05)		SEd±	CD (0.05)	
Varieties	0.48	0.98		Varieties	0.01	0.03		Varieties	0.36	0.72		Varieties	0.83	1.62		Varieties	0.36	0.72		Varieties	0.83	1.62		Varieties	0.83
Days of storage	0.30	0.60		Days of storage	0.01	0.02		Days of storage	0.22	0.44		Days of storage	0.51	1.03		Days of storage	0.22	0.44		Days of storage	0.51	1.03		Days of storage	0.51
Days x Varieties	0.84	N.S.		Days x Varieties	0.03	0.06		Days x Varieties	0.62	1.26		Days x Varieties	1.45	2.09		Days x Varieties	0.62	1.26		Days x Varieties	1.45	2.09		Days x Varieties	1.45

Table 4. Chemical parameters of cashew apple syrup, colour and spoilage at different days of storage (*Anacardium occidentale* L.).

Variety	Reducing sugars (%)			Tannins (mg ml ⁻¹)			Colour of syrup			Microbial spoilage					
	0 Days	30 Days	60 Days	0 Days	30 Days	60 Days	0 Days	30 Days	60 Days	0 Days	30 Days	60 Days			
	Mean	Mean	Mean	Mean	Mean	Mean	0 Days	30 Days	60 Days	0 Days	30 Days	60 Days			
V ₁ (BPP-4)	15.74	17.50	17.77	17.00	3.69	3.63	3.52	3.61	3.61	Yellowish white	Yellowish white	Light brown	NO	NO	NO
V ₂ (BPP-5)	18.58	19.32	19.35	19.08	3.23	3.22	3.13	3.19	3.19	Light yellow	Light yellow	Light brown	Spoilage	Spoilage	Spoilage
V ₃ (BPP-8)	19.74	19.67	20.39	19.93	3.20	3.18	3.17	3.18	3.18	Light yellow	Light yellow	Light brown	NO	NO	NO
V ₄ (BPP-9)	20.64	21.20	21.42	21.08	3.58	3.49	3.43	3.50	3.50	Yellowish white	Yellowish white	Light brown	Spoilage	Spoilage	Spoilage
V ₅ (Dhana)	22.42	20.68	20.69	20.59	3.49	3.47	3.42	3.46	3.46	Light yellow	Light yellow	Light brown	NO	NO	NO
V ₆ (Priyanka)	19.54	20.81	21.16	20.50	3.51	3.49	3.43	3.47	3.47	Light yellow	Light yellow	Light brown	Spoilage	Spoilage	Spoilage
V ₇ (VRI-1)	18.64	19.02	20.82	19.49	3.16	3.08	3.01	3.08	3.08	Yellowish white	Yellowish white	Light brown	NO	NO	NO
V ₈ (VRI-2)	21.20	22.76	22.97	22.31	2.54	2.53	2.52	2.53	2.53	Light yellow	Light yellow	Light brown	Spoilage	Spoilage	Spoilage
Mean	19.31	20.12	20.57		3.29	3.26	3.20						Spoilage	Spoilage	Spoilage
					SEd±	CD (0.05)				SEd	CD (0.05)				
			Varieties		0.44	0.89				Varieties	0.05	0.10			
			Days of storage		0.27	0.54				Days of storage	0.03	0.06			
			Days x Varieties		0.76	1.56				Days x Varieties	0.09	0.21			

Table 5. Organoleptic evaluation of cashew apple syrup at different days of storage (*Anacardium occidentale* L.).

Variety	0 days				30 days				60 days						
	Colour	Aroma	Taste	Flavour	Overall acceptability	Colour	Aroma	Taste	Flavour	Overall acceptability	Colour	Aroma	Taste	Flavour	Overall acceptability
V ₁ (BPP-4)	5.34	5.12	6.20	5.23	5.47	5.58	5.62	6.80	5.46	5.86	5.92	6.12	7.10	5.92	6.26
V ₂ (BPP-5)	6.00	5.21	6.32	5.31	5.71	6.21	5.81	6.60	5.52	6.03	6.51	6.10	7.20	6.08	6.47
V ₃ (BPP-8)	6.00	5.36	6.32	5.11	5.69	6.18	5.74	6.52	5.70	6.03	6.46	6.12	7.15	6.12	6.46
V ₄ (BPP-9)	5.56	5.21	6.02	5.03	5.41	5.91	5.62	6.66	5.73	5.98	6.18	6.00	7.12	6.09	6.34
V ₅ (Dhana)	6.00	5.14	6.12	5.10	5.59	6.10	5.82	6.56	5.62	6.02	6.15	6.05	7.10	6.11	6.35
V ₆ (Priyanka)	6.00	5.18	6.14	5.25	5.79	6.22	5.84	6.51	5.76	6.08	6.56	6.10	7.05	6.18	6.47
V ₇ (VRI-1)	5.12	5.32	6.21	5.23	5.47	5.31	5.74	6.81	5.64	5.87	5.86	6.00	7.10	6.16	6.28
V ₈ (VRI-2)	5.36	5.20	6.30	5.22	5.52	5.78	5.92	6.82	5.65	6.04	6.12	6.15	7.25	6.19	6.42

Note: Hedonic rating scale

Like extremely	- 9	Dislike slightly	- 4
Like very much	- 8	Dislike moderately	- 3
Like moderately	- 7	Dislike very much	- 2
Like slightly	- 6	Dislike extremely	- 1
Neither like nor dislike	- 5		

by Mohanty *et al.* (2006), Singh *et al.* (2008), Vergara *et al.* (2010)(Table 2).

Cashew apple syrup and storage

Total soluble solids of the cashew apple syrup of all the varieties under study decreased 22.22 to 20.62 in TSS with increase in storage period (Table 3). It was evident from the results obtained that the decline in the TSS content could be attributed to the breakdown of sugars into non-sugar fractions by the process of hydrolysis. This hydrolysis might have greatly favoured by the presence of considerable amount of acidity present in the product. Similar observations were also recorded by Kalra and Tandon (1984) in guava and Khurdiya (1980) in ber. The acidity recorded 0.65 mg/100 ml on 30 days while 0.58 mg/100 ml on 60 days after storage. Thus reduction in the titrable acidity during the storage of cashew apple syrup is due to increased levels of sugars by hydrolysis and decreased levels of acidity. Similar results were also reported by Urmil and Satinder (1983) in citrus, Jain *et al.* (1984) in oranges, Palaniswamy *et al.*, (1974) in lemons and Sujatha (1994) in cashew. The TSS/acid ratio was increased from 30.67 to 37.58 during storage at 0, 30 and 60 days and it can be attributed to reduced levels of acidity during storage after the preparation of syrup. A similar result was also reported by Sujatha (1994) in cashew. Gradual decline in ascorbic acid 118.91 to 116.25 content was observed from the cashew apple syrup throughout the storage period under study. This might be due to denaturation of ascorbic acid during storage. Similar results for ascorbic acid content were also reported by Vijay (1985) in litchi, Kalra and Tandon (1984) in guava, Tripathi *et al.* (1988) in aonla and Sujatha (1994) in cashew (Table 3).

Increase in reducing sugars from 19.31 to 20.57 during storage of beverages is observed and it is due to

Table 6. Cashew apple syrup product recovery from 100 fruits of cashew apple (*Anacardium occidentale* L.).

Variety	No of fruits Kg ⁻¹	Weight of Juice from 100 fruits (Kg)	Weight of Clarified juice from 100 fruits (Kg)	Juice recovery percentage	Weight of syrup from 100 fruits (Kg)
V ₁ (BPP-4)	35.80	2.79	1.24	44.44	2.48
V ₂ (BPP-5)	22.42	4.46	1.52	34.08	3.04
V ₃ (BPP-8)	16.89	5.92	2.28	38.51	4.56
V ₄ (BPP-9)	24.86	4.02	1.68	41.79	3.36
V ₅ (Dhana)	26.91	3.71	1.78	47.97	3.56
V ₆ (Priyanka)	12.76	7.83	3.72	47.51	7.44
V ₇ (VRI-1)	24.65	4.05	1.53	37.78	3.06
V ₈ (VRI-2)	29.16	3.42	1.35	39.47	2.74
SE(D)	---	---	0.01	—	0.45
CD at 5%	---	---	0.03	—	0.96

higher level sugars in the variety and also addition of sugars in the syrup preparation might have increased during storage. Similar results were also reported by Urmil and Satinder (1983), Palaniswamy and Muthukrishnan (1974) in citrus and Sujatha (1994) in cashew. Gradual decrease from 3.29 to 3.20 in tannin content was recorded in the syrup prepared from cashew apple juice. The slight decrease found in tannins could be attributed to the sedimentation of tannins reaction with acids present in the product. Similar finding was also reported by Sujatha (1994) in cashew. Highest ascorbic acid and lowest tannin contents which determines the quality parameters to evaluate the final product in cashew as suggested by Ranganna, (1986). The change in colour of syrup from yellow to brown was observed under the storage period of 0, 30 and 60 days. This gradual change in the colour during storage might be due to the oxidation of the product leading to millard reaction as reported by Sastry *et al.*, (1963) and Palaniswamy *et al.*, (1974) and by the degradation of ascorbic acid in the product as reported by Raguramaiah and Ranganna (1970). The microbial spoilage was not noticed in all the prepared syrups during storage. This could be due to the addition of preservative and careful handling of the juice and syrup during storage as stated by Sujatha (1994) in cashew (Table 4).

For the organoleptic evaluation of cashew apple syrup, the highest overall acceptability of 6.47

in the variety Priyanka at 60 days of storage is preferable. It is due to prolonged days of storage, the reduction of tannins and increased levels of reducing sugars followed by 60 days of storage inferred that syrup of 60 days of storage is preferable for consumption (Table 5).

The product recovery from 100 fruits of 7.44 kg syrup from cashew apples recorded in the variety Priyanka and the lowest of 2.48 kg in the variety BPP-4. This might be due to higher fruit weight and higher quantity of clarified juice obtained from cashew apples of these varieties than other varieties. Similar results were also reported by Sujatha (1994) and Jayalakshmi *et al.* (2007) (Table 6). Based on the observations and the results of the present investigation, it can be concluded that utilization of cashew apple varieties Priyanka and BPP-8 are economical for large scale production of cashew apple syrup. Further, based on the exclusive quality of the syrup, the cashew apple syrup from the variety VRI-2 was found to be the best among different varieties studied.

ACKNOWLEDGEMENTS

The authors express their gratitude to the Dr. YSR Horticultural University, Venkataramanna-gudem, West Godavari district, Andhra Pradesh for providing financial assistance and facilities for undertaking the research work during post graduation studies during the year 2011-2012.

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