

## Economics of Sugarcane Juice 'Rasawanti'

C. B. GAIKWAD<sup>1</sup>, S. D. PATIL<sup>2</sup>, H. J. TEMGIRE<sup>3</sup> and S. B. JADHAV<sup>4</sup>

In Urban areas, number of sugarcane juice Rasawanti (Sugarcane juice Stalls) is increasing, not only because of the liking of sugarcane juice among the people but also due to its substitutive value for costlier drinks processed from citrus fruits, pine-apples, mangoes, grapes and even other soft drinks. Running a sugarcane juice Rasawanti though is a seasonal and small scale concern, brings in good returns to the owner. Agricultural College, Pune (Maharashtra) Sugarcane Juice Rasawanti gave a net profit of Rs. 10241.69 and Rs. 13301.98 during the years 1975 and 1976 respectively. When the selling of sugarcane in rasawanti was compared with selling it to the sugar factory, an additional net receipts of Rs. 10671.85 and Rs. 13575.30/ha were obtained during first and second year respectively. The quantum of net profit resulted into very high rates of returns to capital and proved that the investment in this small scale business was highly paying. The present state of this small scale agro-industry offers good potentiality for bottling the juice on commercial lines.

In Urban areas running of sugarcane juice Rasawanti is attracting the attention of many people. This small scale business is expanding day by day, not only due to good response in respect of liking for sugarcane juice from the consumer but also due to greater realization of its food value and cheaper substitute as a common man's drink. Sugarcane juice contains sucrose (11.32 to 14.92 per cent), reducing sugar (0.52 to 0.73 per cent), nonsugary substances (1.92 to 2.68 per cent), ashes (0.40 to 0.60 per cent) and water (81.00 to 85.00 per cent). Sugarcane juice is also a good source of Vitamins such as Thiamine, Riboflavin, Niacin and Vitamin - D. The drinks prepared out of citrus fruits, mangoes,

pine-apples, grapes etc. are manufactured by big companies and are costly. The calorific values of different juices and their market rates are given in Table - I.

From the above data, it could be said that a common man can not afford to have costlier drinks for his family members. Sugarcane juice in a Rasawanti is sold loose i. e. without bottling and at a comparatively cheaper rate. As a result, it commands a good demand during the period from January to June and especially during the summer months. This small scale agro-industry also provides employment and income to a substantial number of people in towns and cities. Running a

1. Assistant Professor of Agronomy 2. Associate Professor of Agril. Economics  
3. Associate Professor of Agronomy 4. Professor of Agronomy

College of Agriculture, Pune - 411005.

sugarcane juice Rasawanti is a profitable concern and pays good returns to the owner, even though it is run for a short period of the year.

#### MATERIAL AND METHODS

The College of Agriculture, Pune in Maharashtra runs a Sugarcane Juice Stall (Rasawanti) with a view to serve the consumers with good quality sugarcane juice at a reasonable rate. During the years 1975 and 1976, the selling rate of sugarcane juice was Rs. 1.25 per litre as against the rate of Rs. 2.00 per litre in other private Rasawanties in Pune City. The Pune Agril. College Sugarcane juice Rasawanti was run for about four months during the year 1975 and for about three months during 1976. The economic analysis of the data of these two years was carried out to determine the level of profitability of this concern.

TABLE I Calorific values and per litre prices of different juices in the year 1975-76.

Name of Juice	Calorific value/100 gm	Price/litre (Rs)
Grape	45	12.50
Mango	50	15.00
Lemon	57	3.00
Orange	49	10.00
Mosambi	49	10.00
Pine-apple	50	15.00
Tomato	21	7.50
Sugarcane	30	1.25

#### RESULTS AND DISCUSSION

Sugarcane required for this Rasawanti was grown in an area of one hectare on the college Farm during both the years. It is the general practice that the harvesting and transportation of sugarcane are done by the sugarcane juice Rasawanti owner as and when required, the labour cost required for harvesting and transportation of sugarcane from field to Rasawanti was considered as a cost of running the Rasawanti. Labour charges required for crushing the cane and supplying the juice to the consumers were accounted separately for both the years. These two types of labour charges along with physical units are presented in Table II.

From Table II, it could be seen that the labour charges required for harvesting and transport of sugarcane were Rs. 1542.85 and Rs. 1554.05 during the year 1975 and 1976 respectively, while labour charges required for running the Rasawanti worked out to Rs. 7240.00 and Rs. 6279.00 respectively. Thus the total labour charges worked out were Rs. 8782.85 and Rs. 7833.05 during the year 1975 and 1976 respectively. From the units of labour required for running the Rasawanti, it is seen that this small scale industry provides employment for a good number of persons for about three months during the year.

Costs on various items involved in running of Rasawanti are presented in

Table III. These items have been presented as cash cost and non-cash costs.

From Table III, it is seen that during the year 1975 total cost of running the Rasawanti amounted to Rs. 28656.81. The cash cost and the non-cash cost worked out Rs. 22047.36 and 6609.45 respectively. The proportions of cash cost and non-cash cost to the total cost were 76.93 and 23.07 per cent respectively. Among the different items, cost of sugarcane, labour charges, cost of ice, lemon ginger etc. were the major items of cash costs contributing 30.90, 30.64 and 9.02 per cent respectively.

During the year 1976, the scale of business was increased due to more production of sugarcane from the same area of one hectare. During this year cash costs, non-cash costs and total costs were Rs. 25213.80, 7420.43 and 32634.27 respectively with less number, of days of running a sugarcane juice Rasawanti as compared to the previous year. Cash costs and non-cash costs were 77.26 and 22.74 per cent of the total cost.

The costs and returns of the Rasawanti are presented in Table IV.

From Table IV, it is seen that the percentage of juice obtained to the quantity of cane crushed worked out to 42% and 40% during the year 1975 and 1976 respectively. In the year 1975 30773.00 litres of juice worth Rs. 38470.00 was sold. In the year 1976,

36389.00 litre of juice worth Rs. 45486.25 was sold. The total receipts including the value of Bagasse worked out to Rs. 38898.50 and Rs. 45886.25 in the respective years. Net receipts over cash cost and total cost worked out to Rs. 16851.14 and Rs. 10241.69 respectively for the year 1975. The respective net receipts for the year 1976 were Rs. 20722.41 and Rs. 13301.98. The rate of percentage return to capital for the year 1975 and 1976 worked out to 45.60 and 46.10 respectively proving thereby that the investment made in Rasawanti was very much profitable during both the years.

Per hectare comparative economics of selling sugarcane to the factory and selling it as a juice in the Rasawanti is given in Table V.

From the figures in Table V, it is seen that if sugarcane would have been sold to the sugar factory, per hectare net profit of Rs. 3423.51 and Rs. 4445.05 would have accrued during 1975 and 1976 respectively. But by crushing the sugarcane and selling it as juice in the Rasawanti, the net profit could be increased to Rs. 14095.39 and Rs. 18020.35 during these two years respectively. Crushing the sugarcane and selling it as juice has resulted into net additional receipts of Rs. 10671.85 and Rs. 13575.30 respectively during these two years. Thus, running a sugarcane juice Rasawanti offers good encouragement to the sugarcane growers in the vicinity

of towns and cities for investment in this small scale business and there by to earn more profits than those received from selling sugarcane to the sugar factory.

This small scale business being highly paying, needs further research in exploiting the potentiality for bottling of sugarcane juice on commercial basis. The research workers in the field of food and nutrition may develop a suitable formula for bottling the sugarcane juice and the sugar-factories in the country may undertake manufacture and bottling of sugarcane juice on commercial lines. If the

bottled sugarcane juice with sweetish cum salty pleasant taste and attractive colour under the trade name 'Gannola' (prepared from gunna i. e. sugarcane) comes in market, it will surely compete with 'Mangola' and 'Coco - Cola'.

The authors are thankful to Dr. K. S. Pharande, Associate Dean, College of Agriculture, Pune : 411 005 for his guidance and encouragement in undertaking and completing this study. The authors are also thankful to Shri B. S. Shitote and Shri V. S. Jadhav for the services rendered in collecting the data.

TABLE II Labour charges required for running the juice Rasawanti

Particulars of labour	1975		1976	
	Units	Cost (Rs)	Units	Cost (Rs)
<b>Harvesting &amp; Transport of sugarcane</b>				
Man days	204	1250.00	205	1281.25
Bullock days	26	128.57	20	100.00
Truck at Rs. 0.60 per km.	274	164.28	288	172.80
<b>Total cost</b>		<b>1542.85</b>		<b>155.405</b>
<b>Labour cost for running Rasawanti</b>				
Man days	400	2500.00	414	2587.50
Women days	400	2500.00	276	1725.00
Mechanic days	80	1040.00	68	897.00
Manager days	80	1200.00	69	1069.00
<b>Total cost</b>		<b>7240.00</b>		<b>6279.00</b>
<b>Total labour charges</b>		<b>8782.85</b>		<b>7833.05</b>

TABLE III Itemwise cost of running the Rasawanti

Item of cost	1975		1976	
	Cost in Rs.	% to total	Cost in Rs.	% to total
<b>Cash Cost</b>				
Labour charges	8782.85	30.64	7833.05	24.00
Quantity of sugarcane crushed in kg	65689.00	—	82225.00	—
Cost of sugarcane at Rs. 135/tonne	8854.55	30.90	11100.37	34.02
Ice, lemon & ginger	2585.71	9.02	4413.80	13.52
Cost of coupons	915.00	3.19	974.00	2.98
Utensils	200.00	0.70	300.00	0.92
Licence fees	249.25	0.87	217.25	0.66
Electricity charges	172.58	0.60	155.37	0.48
Decorative materials	146.00	0.52	19.00	0.06
Miscellaneous requisites such as Vim powder, sops, dusters, brushes, canvas bags etc.	98.57	0.34	156.00	0.48
Water charges	42.85	0.16	45.00	0.14
<b>Total Cash cost</b>	<b>27047.36</b>	<b>76.93</b>	<b>25213.84</b>	<b>77.26</b>
<b>Non cash Cost</b>				
Depreciation of crusher, electric motor & utensils	1770.00	6.18	1942.60	5.96
Interest on working capital	2785.89	9.72	3291.33	10.08
Interest on fixed capital	1603.56	5.59	1736.50	5.32
Rent for the accommodation	450.00	1.57	450.00	1.38
<b>Total Non-cash Cost</b>	<b>6609.45</b>	<b>23.07</b>	<b>7420.43</b>	<b>22.74</b>
<b>Total Cost</b>	<b>28656.81</b>	<b>100.00</b>	<b>32634.27</b>	<b>100.00</b>

TABLE IV Cost and Receipts from the Rasawanti

Particulars	1975		1976	
	Quantity	Cost or value (Rs)	Quantity	Cost or (value Rs)
Total cane crushed in kg.	65569.00	—	82225.00	—
Juice obtained in litres	27548.00	—	32890.00	—
Percentage of juice obtained	42.00	—	40.00	—
Sale of sugarcane juice including ice in liters	30776.00	38470.00	36389.00	45486.25
Value of Bagasse in kg.	42850.00	428.50	40000.00	400.00
Total receipts	—	38898.50	—	45886.25
Cash costs	—	2247.36	—	25213.84
Total cost	—	28656.81	—	32634.27
Net receipts over cash costs	—	16851.14	—	20722.41
Net receipts over total cost	—	10241.69	—	13301.98
percentage return to capital	—	45.60	—	46.10

TABLE V Per hectare comparative economics of selling sugarcane to the sugar factory and selling it as a juice in the Rasawanti

Particulars	1975 Rs.	1976 Rs.
Per hectare yield of sugarcane in tonnes	66.760	82.225
Per hectare total cost of production of sugarcane (excluding cost of marketing)	5589.09	7466.00
Per hectare gross receipts of sugarcane if it would have been sold to sugar factory at Rs. 135 per tonne.	9012.60	11911.05
Per hectare net receipts of sugarcane if it would have been sold to sugar factory.	3423.51	4445.05
Per hectare gross receipts of sugarcane when it is crushed and sold as sugarcane juice in Rasawanti.	38898.50	45886.25
Per hectare cost of crushing the cane and selling it as juice in Rasawanti.	24803.14	27865.90
Per hectare net receipts of sugarcane when it is crushed and sold as juice in Rasawanti.	14095.36	18020.35
Additional costs involved in crushing the cane and selling it as juice over, selling it to sugar factory	19214.05	20399.90
Additional receipts due to selling sugarcane as a juice over selling it to the sugar-factory	28885.90	33975.20
Net additional receipts due to selling sugarcane as juice over selling it to sugar factory.	10671.85	13575.30