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To Work out the Economics of Various Recipes of R.T.S.

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A B S T R A C T

The fruits of Lucknow-49, red fleshed variety and apple guava were collected from the orchard of the College of Agriculture Jabalpur (M.P.). The fruits were collected from the winter season crop (2007). Fully matured fruits were picked up and sorted, washed, cutted into pieces, mixing with water (1:1) then passed through – pulper to get guava pulp preparation after that guava pulp mixed with strained syrup solution recipe (sugar+ water +acid and heated just to dissolve according to recipe), homogenization, cooling (at 40°C addition of sodium benzoate 750 ppm), filter, bottling, crown corking, pasteurization (82°C for 15 min), cooling for RTS product. Physico - chemical characters [sensory quality characters (color, flavor, Taste, overall acceptability), total soluble solids, pH, percent acidity, ascorbic acid content (mg/100mg)] for $0^{th,}$ 30^{th}, 60^{th} days of observation were recorded. In experiment recipe 1 was 10% pulp, 11% T.S.S., 0.3% acidity, recipe 2 was 10% pulp, 11% T.S.S., 0.4% acidity. And recipe 3 was 10% pulp, 12% T.S.S., 0.3% acidity, recipe 4 was 10% pulp, 12% T.S.S., 0.4 % acidity. Recipe 5 was 10% pulp, 13 % T.S.S., 0.3 % acidity, recipe 6 was 10% pulp, 13% T.S.S., 0.4% acidity was used. After work out the economics, the comparative cost of 1 lit RTS prepared by guava pulp, from recipe 1 cost 6.02 Rs. and second best recipe 5 was cost 6.52 Rs. However, its cost was high as compared to recipe 2, 4 and 3. Among the cultivars Lucknow-49 were found good for RTS preparation.

Introduction

Guava (*Psidium guajava L.*) is one of the most nutricious fruit. It is richer source of vitamin" C" than Ber, Citrus and apple. Guava is grown commercially in North India because of its higher yielding capacity and good economic returns. In India, Uttar Pradesh the largest grower produces best quality of Guava Bihar, Madhya Pradesh, Andhra Pradesh, Tamil nadu, West Bengal, Punjab, Assam, Karnataka, Maharashtra are chief producers of quality guava. India occupies nearly 150.9 lakh hectares of area with a production of 1710.6 million tonnes and with a productivity of 10.77 tonnes fruit per hectare per year(Yadav 2002).

The storage of fruit is very difficult for longer period because of its perishable nature especially under tropical condition. It is common experienced that 20-25% of the fruit is completely damaged and spoiled before it reaches to the consumers (Yadav, 1997). Therefore it is necessary to develop technology for better utilization of such a

perishable fruits. In the state also it is grown large scale and often it causes glut in the local market. To overcome these problems there is need to find out suitable low cost processing techniques.

Therefore to utilize the produce at the time of glut and to save it from spoilage the development of low cost processing technology of guava fruit is need of time it will also generate enough opportunities of self employment by starting small scale processing unit or cottage industry which will be renumerate to the growers thus the preparation of guava RTS beverage have a great scope. Now a day, the beverage is becoming popular comparison to synthetic or aerated drinks.

Materials and Methods

The fruits of Lucknow-49, Red fleshed guava, apple guava were collected from the orchard of the college of Agriculture J.N.K.V.V. (M.P.). The fruits were collected from the winter season crop (2007) fully matured fruits were picked up and sorted out for the preparation of RTS. Fruits were cut into small pieces, it can be sieved to get pulp, small pieces of guava were mixed with water 1:1 and straining pulp, pulp was taken and dissolved with water after that TSS (11, 12 and 13° brix) and acidity (0.3 and 0.4 percent) were maintained with help of sugar and citric acid as per recipe. The workout of economics of the treatment by the cost of sugar, KMS, fuel, labour, and fruit etc was calculated.

Results and Discussion

The cost of one litre product was estimated and presented in tables 1 and 2. The best cultivar Lucknow-49 was chosen and the cost of all expenses was worked out. The total expenditure for preparation of RTS for 6.75 for recipe R_6 followed by recipe R_5 (6.52), recipe R_3 (6.48), recipe R_4 (6.30), recipe R_2 (6.25) and recipe R_1 (6.02).

It was evident from the preparation that the cost involvement in the preparation of RTS different recipes is different. The total cost of RTS from recipes R_1 is less overall other recipes and declared best recipes for RTS preparation according to cost and for RTS preparation according to cost and quality, recipe R_5 was second best recipe however, the cost of recipe R_5 was high as compared to recipe R_2, R_4 and R_3. The cost of involvement in various recipes used in preparation of guava RTS.

Table.1 Economics of pulp (10 kg pulp)

Economics of treatments

Sr.no.	Particulars	In Rupees
1	Cost of 20 Kg guava	160.00
2	Labour charge	50.00
3	KMS	8.00
4	Fuel	10.00
Total expenditure		228.00
Cost of 1 Kg pulp		22.80

Table.2 Economics of RTS prepared by various recipes

Sr.no.	Particulars	R_1	R_2	R_3	R_3	R_4	R_5
1	Cost of pulp 1 kg	22.80	22.80	22.80	22.80	22.80	22.80
2	Cost of sugar	16.50	18.00	19.50	16.50	18.00	19.50
3	Cost of Citric acid	12.00	13.00	14.00	15.00	16.00	17.00
4	Labour charge	15.00	15.00	15.00	15.00	15.00	15.00
Total expenditure(Rs)		66.30	68.00	71.30	69.30	71.00	74.30
Total expenditure (RTS in litres)		11.00	11.00	11.00	11.00	11.00	11.00
Cost of production Rs/lit		6.02	6.25	6.48	6.30	6.52	6.75

In conclusion a study on the comparative cost of 1litre RTS prepared by guava pulp from recipe R_1 cost Rs 6.02 and second best recipe R_5 was cost 6.52. However its cost was high as compared to recipe 2, 4 and 3 among the cultivars Lucknow-49 were found good for RTS preparation.

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