S. No	Name	Botanical Name	Parts which are used	Addition gm per quintal juice	Brief method of useng
1.	Deola	Hibiscus ficulneus	Stem and roots	40-45	Dipped in water for about 2 - 4 hrs,Pound and rubbed. Thus mucilaginous liquid obtained is added
2.	Bhindi	Hibiscus esculentus	do	45-50	do
3.	Phalsa	Grewia asiatica	Green bark	50-55	do
4.	Semal	Bombax malabaricum	Green bark	55-60	do
5.	Sukalai	Kydin calycina	Dry bark	45-60	do
6.	Castor	Ricinus communis	Seed	70-75	Soaked, decorticated & ground with water is mixed offer straining
7.	Groundnut	71 0	Seed	70-75	do
8.	Soybean	Glycine max	Seed	30-40	do

thoroughly mixed with the laddle. The slurry is then poured into the moulding frames of desired shapes and sizes (2.5 cm cubical shape weighing 20 -22 gm or 2.5 cm x2.5 cm x 1.25 cm square shaped weighing 10 -11 gm) developed by IISR, Lucknow.

After about 45 minutes, these frames are dismantled and jaggery is removed and spread for shade drying. Depending upon the interest dry fruits and broken groundnut and *sonth* etc. are sometimes mixed in the slurry prior to moulding.

Storage of Jaggery

Thus made value added jaggery is stored in IISR designed drying-cumstorage bin made of Galvanized Iron it sheets wherein it is dried in dry weather and protected in wet climate.



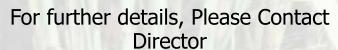
Attractive Packaging

The cubical and rectangular shaped jaggery is then packed in the attractive polyester- polyethylene packets each weighing about 250 gm and sold to the customers.

The Jaggery so prepared and packed has a great potential for export.



Quality Jaggery Manufacturing and its Storage



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Quality Jaggery Manufacturing and its storage

Selection of Sugarcane

Selection of good quality matured sugarcane is an important first step towards manufacturing quality jaggery. Such cane should be harvested close to the ground and cleaned off dry leaves, trashes, green tops, roots and mud clods. The cleaned sugarcane should be immediately transported to the crushing yard and crushed. Delay in crushing may cause inversion losses.

Recommended sugracnae varieties having good jaggery quality

C NI	01.1		NAC 1	
S.No.	State	Early maturing	Mid season and late	
		varieties	maturing varieties	
1.	Uttar Pradesh	CoS 687, CoS 8436	Co 1148, CoS 767, BO 91	
		Co 95255, CoS 94257	CoS 92254, CoSe 92423	
			CoS 8432, UP 39	
2.	Bihar	BO 136, BO 137,	CoS 767, BO 91, BO 106,	
		Co 87263	Co 1148	
3.	West Bengal	BO 90	CoS 1148	
4.	Orissa	Co 7704, Co 62175,	Co 7219, CoJ 8201,Co 7706	
		Co 740	Co 62175	
5.	Assam	-	Co 8315	
6.	Punjab	CoS 8436, Co 89003	CoJ 67	
7.	Haryana	Co 89003, Co 7717,	Co 1148, CoS 767	
		CoJ 64		
8.	Rajasthan	Co 997, Co 527	Co 419, Co 1007	
9.	Madhya	Co 775, CoC 671	Co 419, Co 62175,	
	Pradesh		CoLK 8001, Co 1148	
10.	Gujarat	Co 775, CoC 671,	Co 7527, Co 8021,	
	-	CoLK 8001	Co 62175, Co 8011, Co740	
11.	Maharashtra	Co 419, Co 775,	Co 740, Co 7219, CoM 7125	
		Co 7219, CoC 671	Co 7527, Co 86032	
12.	Karnataka	CoC 671, Co 85002	Co 62175, Co 740, Co 8014,	
			Co 8021, Co 8011, Co 86032	
13.	Andhra	Co 6907, CoT 8201,	Co 62175, CoA 7602,	
	Pradesh	Co 8014, CoC 671	Co 7219	
14.	Tamil Nadu	CoC 671, Co 7704,	Co 6304, Co 8021, Co 86032	
		Co 8208		

For crushing of cane, power crusher of repute, which

is able to extract 60 to 70% juice, should be procured, installed and used. Horizontal roller crusher yields 2-4% more juice compared to vertical roller crusher. Always, before and after



juice extraction, one should wash rollers and juice pipe line with hot water or steam to avoid microbial contamination.

Juice Filtration

The extracted juice should be filtered with three layered wire mesh or thick cloth to separate undissolved impurities like trashes, pieces of bagasse, and roots etc. The juice is then collected through underground PVC pipeline into the juice tank covered with thick layered cloth where small particle impurities are filtered from the juice. The clean juice is then pumped into the specially designed open pans kept on furnace.

• Proper Furnace Selection

A furnace, which utilizes lesser bagasse and time for boiling and concentration of juice, should be selected for



construction. The two and three pan furnaces, designed and developed at Indian Institute of Sugarcane Research, Lucknow, work satisfactorily as they utilize waste heat for preheating



fresh juice up to 60 - 70°C and consume relatively lesser time.

• Juice Clarification

Clarification of juice loaded in pans is very important for making light yellow coloured, crystallized and impurities free jaggery, which is suitable for storage also. The dissolved impurities in the juice are removed with the help of herbal / vegetative clarificants. Some of these are mentioned below:

Among all the above clarificants Deola gives the best results. A realy to use herbal clarificent in powdered form has been prepared by this Institute. Coagulated scum is removed with the help of long perforated spoon and kept in the scum-settling tank. The settled juice is mixed in the boiling juice.

• Juice Concentration and Moulding in frame

When boiling and concentrating juice reaches the striking point temperature, it is removed from the pan and kept in the wooden cooling pan. It is

