In South India, jackfruit is used both as a fruit and vegetable. Go to any Jackfruit growing area of the country. The crop is available only for four to five months. Is there a simple method to make raw (unripe) jackfruit available as vegetable for off-season?

There are many ways. Dehydration, freezing etc. But the easiest is brining. That is dipping it in salt solution. Whenever required, the brined arils (carpels) are taken out, rinsed and used.

During heavy monsoon, villagers don’t get enough fresh vegetables. On such occasions, this brined raw jackfruit comes in...
City of Brined Jackfruit

In the coastal district of Udupi, is a taluk city by name Karkala. Karkala is an exception for noncommercialisation of brined jackfruit. Hundreds of people from around bring small quantities of *Uppad Pachchil* to this city for sale. The present buying rate is anything in the range of 20 to 25 Rs a kg.

The raw jackfruit brining is done in a very crude and unsystematic manner. Businessmen don’t keep it for long. Every once in a few days it is sent to Mumbai, Bangalore and Goa through night buses. ‘Mangalore Stores’ and ‘Udupi Stores’ in Bangalore and Mumbai are the next links in the trade. Through these Stores, brined jackfruit reaches the final consumers.

Brined Raw Jackfruit industry has a history of half a century at Karkala. Decades ago, this town was a major value addition centre for Jackfruit. Recalls Veivekananda Shenoy who is associated with such activities, “During those days, in jackfruit season, if there was day long sunshine, it invariably ensured that one and half lakh jackfruit papads were produced in our town.”

If the raw jackfruit brought for papad making starts ripening, immediately, it used to be dipped in salt solution. This way the capital invested was not allowed to go waste. Second reason is that Karkala is a big centre of Gouda Saraswat Brahmins.
In good olden days, monsoon was vegetable scare month. Brined raw jackfruit was a sort of ‘ready to cook’ vegetable that was handy for the housewife when guests paid surprise visits.

Harischandra Tendulkar with his raw brined jackfruit stock

or GSBs. GSB community has a great liking for jackfruit and its products. Apart from producing Jackfruit papads and brined raw jackfruit; they themselves are good consumers of any jackfruit products.

Take for example Dinesh Bhat. He is in the trade since a couple of decades. He buys raw brined jackfruit for 25 Rs per Kg. After fine-tuning its processing, he sells it for 40-45 Rs a Kg. This way, he handles about one and half to two tones of this product every year.

Dinesh Bhat washes the carpels after buying. Then he puts it into the drums and adds a few handful of salt. He is not interested in sending the product very far. He has a band of local buyers who buy half or one Kg from him. “Customers have to use the lose product in a day or two. If they keep it in open for more days, the color changes though taste remains unaffected. Those who want to keep it for long have to preserve it in a jar by filling it’s the top portion with salt”, he cautions.

Twenty tonnes per Annum

Karkala has more than a dozen traders who buy brined raw jackfruit in retail. Ananth Shenoy’s is the leading name. He is the only one trader who offers ready cash to those who bring the product to him. However, his rate, say the farmers, is relatively lower. Shenoy doesn’t reveal the total quantity he handles in a year. According to observers, Karkala must be procuring anything in the range of 15 to 20 tonnes of raw brined jackfruit every year.

Mala village is adjacent to Karkala. Harischandra Tendulkar of this village has started raw jackfruit brining trade five years ago. Unlike all others, he buys fresh raw carpels separated from jackfruit. This is bought for 13 to 16 Rs per kilo depending on season. There are about hundred persons who sell raw carpels to Harishchandra. Sprinkling of middle class farmers and good number of labourers do this for earning some side income.

In the beginning, Harischandra used another method to collect fresh raw carpels. He had built up a team that would visit farms, harvest and separate the carpels there itself. The minimally processed carpels are finally brought to Harishchandra’s shop. But due to labor scarcity, he has to stop this system.

There are certain guidelines to people bringing raw jackfruit carpels. The jackfruit must be well grown and freshly harvested. Separated carpels shouldn’t be artificially moist.

Tendulkar uses fiber drum of two quintal capacity for processing the brined jackfruit. To start with, about one quintal raw carpel is put inside. Fifteen Kg common salt is poured over it. He doesn’t add water or make salt solution in advance. After covering with a plastic sheet, a few big stones are place at the top. This is to drive out the moisture from carpels.

Within two days, the whole mass of salt dissolves completely. By this time,
the weight of carpels gets reduced by half. A fresh batch of carpels and salt on its top is now added. In a fortnight’s time, carpels lose most of the moisture and get ready for the market. This, kept well packed in an air-tight non corrosive container, can last for a year and more.

“If you keep the lid open or permit air to come in touch, the brined jackfruit gets spoiled”, points out Dinesh Bhat. According to Harishchandra Tendulkar, “If the product needs to be kept for a very long time, all the salt water has to be removed. Fresh salt water has to be replaced.”

A good number of housewives adopt slightly different method. They make a salt solution by boiling the water with common salt. After cooling, carpels are dipped in this solution. Only crockery or earthen pots are used for brining. Now plastic cans or drums have replaced these breakable vessels.

**GSBs favorite**

GSB’s who originated from Konkan area of Maharashtra is also known as Konkanis. Lions-share of the end consumers of brined jackfruits are GSBs. GSBs make a variety of preparations from brined raw jackfruit. 'Sukka', a type of stir fry, roti, spicy dosa, gasi, sendige and chutney are the important among them. Gasi made out of brined raw jackfruit and brined mango is a specialty. They also make papads and a very popular fry item called 'undluka' from brined jackfruit. Opines Annappa Pai of Ace Foods, Mangalore, a leading food products exporter, and “If someone provides us well-made undluka in large scale, we can export it. It has good demand.” A few self-help groups of DK and Udupi districts make undluka in small scale and sell it in exhibitions and food fairs.

Brined raw jackfruit is a favorite of Jains too. On the eve of weddings and auspicious celebrations, they prepare a special type of stir fry from this.

In good olden days, monsoon was vegetable scare month. Brined raw jackfruit was a sort of ‘ready to cook’ vegetable that was handy for the housewife when guests paid surprise visits. In DK and Udupi districts, even families of farm laborers were preserving raw jackfruit this way. In middle class farmers houses, brining jackfruit was a routine in summer that none of them avoided. But times have changed now. Though quantity and number of families that preserve jackfruit in brine has lessened, it is still practiced widely.
Canning in Maharashtra

Traditional practice of brining raw jackfruit is there in some parts of Kerala too. But what is not done so far is brining the tender jackfruit. This, if done has tremendous market potential. One exception for this is Maharashtra. In Maharashtra, tender jack is brined and canned. Pawas Canning Company of Ratnagiri Maharashtra has been producing this product since the last two decades. Though there is good demand, since the preparation time competes with that of Alphonso Mango pulp processing, they aren’t able to produce more.

One more company that produces tender jack in brine – this is called ‘phanas baji’ in Marathi Gogate Foods of Devgadh. Two more players, Kedar Patawardhan of Ratnagiri and Arun Deshmukh of Pawas are also producing canned tender jack in brine in small quantities. In canning process, they make do with a very small percentage of salt in the solution.

Though Maharashtra is producing tender jack in brine, almost all these industrialists are helpless in producing more. April May being the season for many fruits, mango being the highest income earner, they don’t get time and labour to concentrate on Jackfruit. But Maharashtra’s loss can be Kerala or Karnataka’s gain. Enterpruners from these states can learn the technology and experience from their Maharashtra brothers.

Research needs

How much is the percentage of salt that has to be put? Each one goes by the thumb rules practiced in their respective families by way of tradition. Is it necessary to make salt solution in water and boil it? None has a clear answer. There were no attempts to standardize the method.

Before cooking, the brined jack carpels have to be rinsed with water 3 to 4 times. This preparation is laborious. More the amount of salt, efforts required to desalt is higher. Padmavathi Prakash, Subject Matter Specialist at Krishi Vijnana Kendra, Gonikoppal in Karnataka has done experiments on brining tender jackfruit. She recommends to add 20 percent salt and five gram citric acid to one litre of water. This solution has to be boiled and cooled before dipping the cut jackfruit pieces.

Practical Action, a voluntary organization with its headquarters at Srilanka has standardized the method of brining of tender jack. Their method is like

Brined tender jack canned – products of Maharashtra

There is tremendous scope for small household scale industry in brining raw jackfruit. This is low-tech, low investment affair and is suitable for SHGs.
this: “Select young green jack-fruit. Remove the skin, take out the fruit pieces and cut into uniform pieces (1.2 to 1.8 cm thick). Place the slices in a large (non-metallic) container with brine (8% salt solution). Weigh down the pieces of fruit to ensure they are submerged under the brine. Increase the strength of the brine solution by 2% every day until it reaches 15% (Add more salt to the brine each day to increase the concentration.) Leave to ferment for 8-10 days in the brine. Add vinegar and spices to the fermented fruit pieces. Package in clean, sterilised jars or polyethylene pouches.”

**Scope for household industries**

There is tremendous scope for small household scale industry in brining raw jackfruit. This is low-tech, low investment affair and is suitable for SHGs. But there are certain production issues that have to be resolved. It would be a good contribution if any of our KVKs (Krishi Vijnana Kendra) or Agriculture Universities or Regional research centers can develop a standardized method to brine raw jackfruit. Another research needs it to find out suitable method and material to pack the same. The packing should be such that it has to withstand long distance travel too.

Interestingly, though there is local demand, none has tried to sell raw jackfruit in brine locally in DK, Udupi and neighboring districts in a professional way. Hand counts of outlets sell it in poorly packed pearlpet jars or poly bags.

Maunish Mallya, a jack lover of BC Road near Mangalore is a digital designer by profession. Confides he, “With proper quality control, good packing, and presentation, brined raw jackfruit can very well marketed in our districts locally.” To show friends as to how the final presentation should be, he has designed a model brined jackfruit packet with attractive label and double poly-bag packing.

In fact, to cut jackfruit and to peel out its bulbs is quite a laborious task. So far no effort has been done to mechanise this or to employ labour saving devices. Only in recent years, a few jackfruit cutting devices are developed. At present the price offered to raw jackfruit carpel or for brined product covers only the labour costs. Unless the process is mechanized, it is difficult for any sort of mass production.

**Srilanka in forefront**

Both raw jackfruit in brine and tender jack in brine are industrial products in Srilanka. Minimum fifteen companies are bringing out these products either in cans or bottles. Institutions like Industrial Training Institute of Colombo and like Rural Enterprises Network (REN) are even giving training in commercial production of these and other jackfruit products. Srilanka has gone to extent of preserving even jackfruit seeds in brine and marketing Canned Jackfruit Seeds. All such company products are being exported to around 15 countries.

Brining and canning in not at all high end technology. If our National Horticulture Mission or State Horticulture Department acts seriously, we too can develop a few such industries for Jackfruit. Another option is to get our people trained in Srilanka which has lot of experience. Brined jackfruit packed in cans or bottles don’t require high percentage of salt. As such, this is easier to make it ready for cooking. It doesn’t need much rinsing.

Jackfruit brining industry is most suited to Malnad districts of Karnataka (Dakshina Kannada, Uttara Kannada, Udupi and Chickmagalore) and whole of Kerala. It is only in heavy rainfall areas that soft-fleshed jackfruit grows considerably. Compared to the firm-fleshed varieties that are ideal for table purpose, the soft-fleshed types are wasted more.

At present, Kerala is sending an estimated 50,000 tonnes of tender jackfruit to different parts of North India like Nagpur, MP, UP, Delhi and Kolkata. Even if a very small chunk of this can be value added in Kerala itself, it will change the fortunes of farming community and augment rural economy.