



# Juli Coffee (Instant Coffee)

## Technology Description

Technology for processing *P. juliflora* pod based blended instant coffee "Juli coffee" was developed, refined and perfected. Perfected technological innovation: Ripe pods of *P. juliflora* are thrashed in a specially designed plot thresher and epicarp+ mesocarp and endocarp is separated. The epicarp+ mesocarp mixture is sieved by 20 mesh fine sieve.

By threshing and sieving 20 kg pods, approximately 5kg fine mesocarp is obtained which is used for processing "Juli coffee". This fine mesocarp powder is roasted at 250°C for half an hour in a pre-heated oven with intermittent mixing. The powder thus obtained is matched with a score card develop to determine end point. Roasted powder thus obtained is blended with 20% original roasted coffee powder. After mixing original roasted coffee powder, 10 % chicory powder is mixed in this mixture. Thus, 70%: 20%: 10% combination of *P. juliflora* roasted mesocarp powder, original coffee powder and chicory powder is obtained, which give taste, colour and aroma of normal instant coffee.

For obtaining best and highly soluble "Juli coffee" the mixture obtained as above is dissolved in water @ of 100g mixture in 200 ml water and filtered. In this way 90 g "Juli coffee" powder is obtained which is freeze dried for 9-10 hours. After completing this process 70g best quality "Juli

Name Of institute: CAZRI, Jodhpur

Stage of development:  
Ready for Commercialization  
Patent status: No

Scientific Experts:  
Dr. (Mrs) Pratibha Tewari

## Background

*P. juliflora* is found in abundance in arid and semi arid tropic of India. The plant is locally known as Angrezi Babool /Vilati Bawaliya in Rajasthan; Ganda Bawal in Gujarat; Vilati Kikar in Haryana and Karuvali / Velikaruvi in Tamil Nadu. The species produce pods from December to May which are highly liked by livestock. Once introduced in Rajasthan as a "Royal tree" in early 1930s, today it is considered disaster in many quarters. ago.

## Benefits / Utility

It gives the same taste, color and aroma as instant coffee (Arabica or Robusta) but with reduced caffeine content.

## Country Context

India

## Scalability

Yes, technology has all the elements of scalability however, current scale of operation is limited to production from laboratory of NAIP sub- project "Value chain on value added products derived from

## Business and Commercial Potential

Business Potential: It is estimated that minimum one third of Indian population likes coffee as a beverage ie around 40 crore people. Considering 25% of these would like to have low caffeine coffee, market available=10 crore people. Considering 2 gm per day consumption by each of these people translates into =365\*2=730 gm per year. Total likely consumption=0.73\*10 Cr=73000MT Average capacity of coffee processing plant=500Kg per hour/4000 Kg per day/1460 MT per year (assuming plant runs 365 days, 8 hrs a day). Average number of players, the market can sustain=73000/1460=50 Market Response:The market response has been very Consumers



Dr. J.C. Tewari  
drjctewari@gmail.com,  
9460106536

## Financials

VALUE OF THE TECHNOLOGY: Project cost 194.04 lakhs Innovating team/organization's margin 15%=29.11 lakhs Revenue to be generated by tech commercialization= 194.04 lakhs+29.11lakhs=223.15 lakhs Tech commercialization fee to be charged from one licensee=223.15/50=4.46 lakhs

ITMU CAZRI is also in the process of cost finalization of the technology as per guidelines and it will be informed in a day or two. Financial Required: Fix assets (Land and Building)= for 1200 sq.m Rs 7000- 10,000 sq.m ( as per Rajasthan Industrial Development Corporation, Jodhpur present land rate, depending on location), Machinery = Rs. 50,00,000- Rs 70,00,000, Others= Rs 20,00,000 Cost: At the present rate of *P. juliflora* raw pods, conventional coffee bean and chicory powder, the completely processed and packed instant " Juli coffee" will cost only Rs. 45/ 100g. Our cost estimate are based by taking the cost of raw material to much higher rate in comparison to present real rates. Energy Requirement: Electricity =

## Target Market / Customer

Potential Clients: § Only micro, small and medium enterprises will be key players in "Juli coffee" processing. § Small time beverage processing units § Local and Regional Food Processing Players

## Limiting factors for large scale commercialization

§ As the product is for human consumption therefore, all the necessary clearance required for processing food items will be essential. § If State Governments follow a policy of managed plantations of *P. juliflora* on otherwise un-cultivable lands, the abundant raw material could be available after 5-6 years of the initial plantations dates. § The Charcoal production for which the species is being used in many states will convert good plantation stands in to weedy growth, which will have very negative effect on pod production and as well as on environment. This is an issue to be looked very serious.

## Social impact of the technology

§ Pod collection and selling will provide an alternative source of livelihood to farmers. § If machinery for primary value addition technology in form of threshing and grinding of pods can be provided to the farmers that would generate extra employment to farmers in their own villages. § In waste lands the species can be grown (Rajasthan state Government has already made policy in this respect) for environmental amelioration and as well as for pod production. § Ample opportunities will be available from unskilled to skilled workers in "juli coffee" processing units.