



Identification of genetic diversity, Production and Marketing of Jackfruit (*Artocarpus heterophyllus*) through Jackfruit Growers Association



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Introduction - Jackfruit tree :

- Medium size evergreen tree
- Edible fruits; leaves and fruit waste as fodder
- Bark, roots, leaves, fruit and latex have medicinal value
- Good timber value
- Wind tolerant and good windbreaker



Jack tree



Jack tree with fruits

Problems :

- Non-identification of genetic diversity
- Limited production capability
- Currently, the use of the products of the tree does not match its economic potential
- Sales to middle men, 45% lesser income
- No processing and value addition



Sales to middle men



Wastage of jack fruits

Objectives :

- Livelihood support for farmers from jackfruit through identification of its genetic diversity
- Production, Value addition and Marketing through Jackfruit Growers Association (JGA)

Methodology :

- Survey in Tubagere Hobli area, Bengaluru Rural district, Karnataka, India
- Identification of elite seedling progenies of jackfruit
- Formation of Jackfruit Growers Association

Table 1: Number of trees sampled in different villages of Tubagere hobli, Doddaballapur taluk, Bengaluru Rural district

Sl. No.	Name of the sample village	No. of trees sampled	Sl. No.	Name of the sample village	No. of trees sampled
1	Melekote	4	9	Sonnapura	2
2	Kachahalli	8	10	Doddarayappanahalli	2
3	Chikkarayappanahalli	1	11	Yaddalahalli	1
4	Kurubarahalli	2	12	Kamala	1
5	Chogondahalli	2	13	Tapasihalli	1
6	Mukkanahalli	2	14	Hadonahalli	2
7	Channapura	3	15	Gudlahalli	1
8	Gandarajapura	2	TOTAL		34

Results and discussion :

Genetic diversity :

- Identification of variability in 34 elite seedling jack progenies
- Identification of 300 year old tree with promising characteristics
- About 30% of the sampled trees were in the age group of more than 60 to 70 years with average height of 35 to 45 ft, the fruit yield / tree ranged from 81 to 298 and the fruit weight was 8-13 kg.



300 year old Jack tree



Jack fruits of elite progenies

Diversity in jack bulbs



Orange bulbs

Dark yellow bulbs

Yellow bulbs

Table 2 : Observation on growth, yield and bulb characters of elite seedling progenies of jack (*Artocarpus heterophyllus* L) in Bengaluru Rural district

Sl. No.	Age of the tree	Height (ft)	Spread (ft.) E-W, N-S	Yield / tree		Bulb Characters			
				Number	Weight (kg)	Bulb size	Colour	Firmness	Seed size
1	>300 years (n=1)	45	19X17 35X32	311	20	Bold	Red	Firm	Medium
2	>60-70years (n=10)	30-45	21X20 30X27	81-298	8-13	Medium-Bold	Red to Yellow	Firm	Medium
3	>40-50 years (n=5)	25-35	20X18 27X24	79-231	7-10	Medium	Red to Yellow	Firm	Medium-small
4	<20 years (n=18)	18-30	15X13 26X22	32-196	6-8	Small Medium	Golden to Red	Firm	Medium-small

Jackfruit Growers Association :

To avoid

- dispersion of produce
- poor access to information & finance
- inconsistency in volume and quality

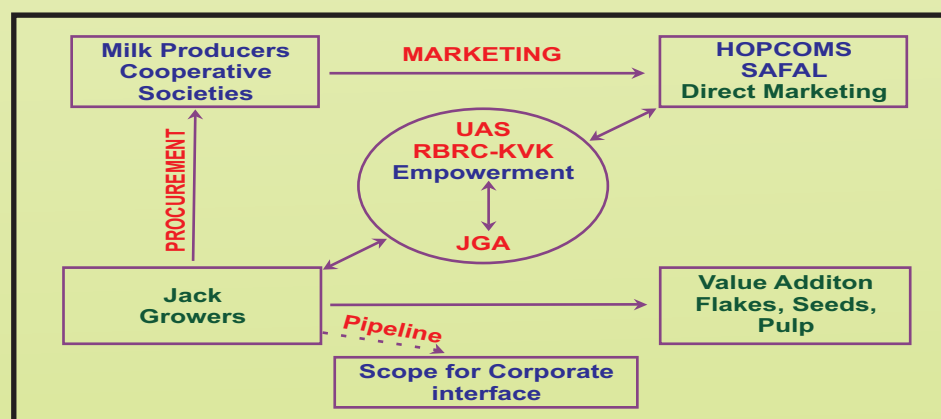


Fig.: Model of Jack Growers Association

Achievements of Jackfruit Growers Association :

- Skill training to youth in grafting and value addition
- Establishment of Jack nursery and sale of 100,000 grafts
- Establishment of Jack avenues in 70 ha
- Organization of 15 Jack exhibitions from 2007



Skill training in jack grafting



Avenue planting of jack



Jack exhibitions



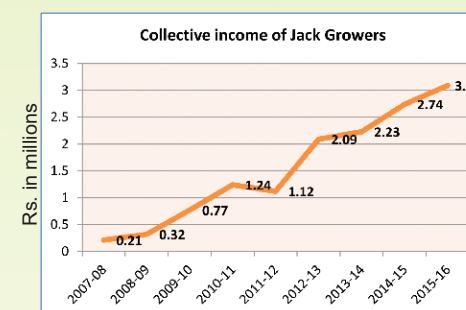
Women entrepreneurs

Vocational training to Women Self Help Groups (SHG) :

- Twenty five vocational training programmes to twenty SHG groups in processing and preparation of value added products like chips, papad, mixture, halwa, juice, peda, etc.
- Training in packing, labeling and branding
- Food Safety and Standards Authority of India (FSSAI) licence to six SHG groups
- Registration of six different brands of products



Training in value addition



Accomplishments :

- Direct sales of 40 t fruits/yr to consumers
- Wholesale supply of 150 t of fruits/yr to icecream companies
- Earnings of women entrepreneurs increased from Rs. 2,000 to 20,000/yr/person through value added products
- Collective income of Rs. 3.00 million (\$50,000)
- Three to five folds increase in income of jack grower from Rs. 2,000 to 6,000 - 10,000/tree/yr
- Registration of elite jack varieties with National Bureau of Plant Genetic Resources (NBPGR), New Delhi
- Initiation of 30 Jack Growers Associations in other parts of Karnataka and Kerala states

References :

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