




2. FOOD GRAIN PROCESS


i.	Name of the Technology	:	Mahua Flower Beverages
ii.	Application/ Use	:	Ready to Serve beverage, Squash, jam
iii.	Description of Technology :		<p data-bbox="267 535 1071 693">After removal of stigma from the dried flower it was cooked with water for 10 minutes. The pulp from the cooked mahua flower was prepared by wet grinder and utilized for preparation of jam and the clarified juice obtained after straining was used for preparation of ready o serve beverages.</p> 
iv.	Input/raw material	:	Dry mahua flower, sugar, KMS, citric acid,
	a) Overall dimension	:	Wet grinder, S. S. Utensils
	b) Weight	:	-
	c) Prime mover	:	-
	d) Man power	:	-
	e) Land	:	-
	f) Investment	:	-
v.	Output capacity	:	
vi.	Unit cost (per machine)	:	Ready to Serve : Rs. 5.00/- per 200 ml glass bottle Squash : Rs. 15.00/- per 750 ml glass bottle Jam : Rs. 20.00/- per 500g glass jar
vii.	Suitability for crops/commodity	:	Mahua
viii.	Efficiency	:	-
ix.	Unit cost of operation	:	-
x.	Patent obtained/applied	:	Nil
xi.	Commercialization status	:	Ready for commercialization
	(a) No. of Licensees to whom the technology has been transferred		Nil
	(b) Selected Addresses of Licensee / Manufacturer		
xii.	Contact Address	:	Research Engineer, AICRP on Post harvest Technology College of Agricultural Engineering and Technology, Orissa University of Agriculture and Technology, Bhubaneswar- 751 003

i.			
ii.	Name of the Technology	:	Utilization of Paddy Soaked for Days under Flood Water.
iii.	Application/ Use	:	Prevent loss of paddy due to flood
iv.	Description of Technology :		Paddy soaked under flood water up to 5 days should be washed for 2 minutes by hot water (60 ⁰ C). in a cauldron. Water is drained using siphon technique leaving 10 cm depth of water at the cauldron bottom. Paddy is steamed up to the point of husk splitting, unloaded and dried.
v.	Input/raw material	:	Paddy 30 kg / batch
	a) Overall dimension	:	-
	b) Weight	:	-
	c) Prime mover/Plant & Machinery	:	Cauldron & steaming device with lid.
	d) Power	:	Wood & other agro-waste
	e) Man power	:	One
	f) Land	:	-
	f) Investment	:	Rs. 500/-
vi.	Output capacity	:	30 kg per batch
vii.	Unit cost (per machine)	:	Rs. 30/- per batch
viii.	Suitability for crops/commodity	:	Paddy
ix.	Efficiency	:	-
x.	Unit cost of operation	:	-
xi.	Patent obtained/applied	:	No
xii.	Commercialization status	:	Ready for commercialization
	(a) No. of Licensees to whom the technology has been transferred		Nil
	(b) Selected Addresses of Licensee or Manufacturer	:	Nil
xiii.	Contact Address	:	PI and Asstt. Process Engineer AICRP on PHT; Deptt. of Agril Engg Assam Agricultural University, Jorhat-13

i	Name of the Technology	:	Storage of mechanical damaged grains using castor oil and stored in metal bin.
ii	Application/ Use	:	Tostore of mechanical damaged grain for food as well as seed purpose.
iii	Description of Technology with photograph attached		<p>Generally farmers adopt combine harvester for harvesting wheat crop. It results in damaged grain. Storage of damaged grain is a problem due to insect infestation. Castor oil with 15ml/kg quantity can be used for 9% damaged grain in a lot for the storage upto 8 month in metal bin with 3% grain damage due to infestation and 90% germination.</p>  <p>Wheat grains after 8 month of storage with 15 ml/kg castor oil treatment and stored in metal bin</p>
iv	Input/raw material		
	a. Overall dimension		Not applicable
	b. Weight		Not applicable
	c. Prime mover		Not applicable
	d. Man power		Not applicable
	e. Land		Not applicable
	f. Investment		Not applicable
v	Output capacity		Not applicable
vi	Unit cost		Rs. 0.90/kg
vii	Suitability for crop/ commodity		Wheat
viii	Efficiency		NA
ix	Unit cost of operation		Rs. 0.90/kg
x	Contact Address		Research Engineer, AICRP on Post Harvest Engineering and Technology Department of Processing & Food Engg. College of Agril. Engg. & Technology Junagadh Agricultural University Junagadh -362001 Phone: 0285-2672080-90 Ext 479

i.	Name of the Technology	:	Extrusion technology (Peanut blended)
ii.	Application/ Use	:	This extrusion technology has been used to produce a wide variety food products including snacks, ready to eat cereals, confectioneries, texturized, extruded crisp breads and pet food products
iii.	Description of Technology : In this technology, a single screw extruder is used with various dies for production of different types of peanut blended products. Partially defatted peanut flour (PDPF) was mixed with wheat, maida, rice and chickpea in different proportion and extruded products were developed. The optimum extrusion condition for the preparation of extruded products should be 25% PDPF and °C steam temperature for steaming the prepared dough.		
iv.	Input/raw material	:	Raw materials: Peanut, wheat, maida, rice and chickpea flour
	a) Overall dimension	:	N.A.
	b) Weight	:	N.A.
	c) Prime mover/ Plant & Machinery	:	-
	d) Man power	:	-
	e) Power	:	-
	f) Land	:	-
	g) Investment	:	-
v.	Output capacity	:	Maida extruded products were best extruded products followed by rice, chickpea and wheat
vi.	Unit cost (per machine)	:	-
vii.	Suitability for crops/commodity	:	-
viii.	Efficiency	:	-
ix.	Unit cost of operation	:	-
x.	Patent obtained/applied	:	No
xi.	Commercialization status	:	Ready for commercialization
	(a) No. of Licensees to whom the technology has been transferred	:	Nil
	(b) Selected Addresses of Licensee/Manufacturer and Contact addresses	:	Nil
xii.	Contact Address		Professor and Research Engineer, AICRP on PHT College of Agricultural Engineering, Junagadh Agricultural University, Junagadh - 362 001 (Gujarat)

i.	Name of the Technology	:	Extrudates of Minor Millets
ii.	Application/ Use	:	Extrusion cooking produce expanded ready-to-eat crispy products which can provide people with nutrients in the required quantity. Millets are highly nutritious, non-glutinous and non-acid forming foods.
iii.	Description of Technology : Based on organoleptic and overall acceptability scores, the extrudates prepared with the combination of 25 per cent <i>kodo/kutik</i> and 75 per cent maize along with 10 per cent fortification of soy floor is like very much by the panelists. The highest expansion of extrudates is obtain at 15 per cent moisture content of feed in case of <i>kodo</i> based extrudates and 12 per cent in case of <i>kutki</i> based extrudates,		
iv.	Input/raw material	:	Kodo, Maize and Soybean
	a) Overall dimension	:	-
	b) Weight	:	-
	c) Prime mover/ Plant & Machinery	:	Wenger X-5 extruder
	d) Man power	:	3
	e) Space requirement	:	20sqm
	f) Power	:	-
	g) Land	:	-
	h) Investment	:	-
v.	Output capacity	:	10 kg extruded product/h
vi.	Unit cost (per machine)	:	Rs. 120/kg
vii.	Suitability for crops/commodity	:	Minor millets
viii.	Efficiency	:	-
ix.	Unit cost of operation	:	-
x.	Patent obtained/applied	:	No
xi.	Commercialization status	:	Ready to commercialization
	(a) No. of Licensees to whom the technology has been transferred	:	Nil
	(b) Selected Addresses of Licensee/Manufacturer and Contact addresses	:	Nil
xii.	Contact Address	:	Research Engineer, AICRP on PHT Department of Agricultural Engg, Indira Gandhi Krishi Vishwa Vidyalaya RAIPUR - 492012 (Chhattisgarh)

i.	Name of the Technology	:	Process for Quick Cooking Maize Rab Powder
ii.	Application/ Use	:	The simple process technology developed has application for popularizing rab as quick cooking product.
iii.	Description of Technology :		<p>Rab is an ethnic product made by cooking maize grits in sour butter milk and used as a soup/appetizer and even as meal in hot and cold form by all class of people. A process has been developed and standardized for making instant rab powder. Traditionally rab is prepared in 2-3 h, but with the use of instant powder it can be prepared in 10-12 minutes, facilitating in adoption of product in fast moving urban and city conglomerates with ethnic taste. The process consists of pearling, soaking, boiling, drying and size reduction unit operations. The product has been found acceptable and generated alot of interest among individuals/caterers/hoteliers.</p> 
iv.	Input/raw material	:	Maize
	a) Overall dimension	:	NA
	b) Weight	:	NA
v.	c) Prime mover	:	NA
vi.	d) Plant & Machinery	:	Cleaner, pearler, pressure cooker, dryer, pulveriser
	e) Power	:	3 hp 3 phase power connection
	f) Man power	:	2 unskilled labours
	g) Land	:	200 Sq m
	h) Investment	:	Rs 2,00,000/=
	i) Operational efficiency	:	NA
vii.	Output capacity	:	-
viii.	Unit cost (per machine)	:	NA
ix.	Suitability for crops/commodity	:	Maize
x.	Efficiency	:	-
xi.	Unit cost of operation	:	Rs 7-8/ kg
xii.	Patent obtained/applied	:	Application filed (Patent application no 1718/DEL dtd 21.7.2008)
xiii.	Commercialization status	:	
	a) No. of Licensees to whom the technology has been transferred	:	NA
	b) Selected Addresses of Licensee / Manufacturer and contact person	:	-
xii	Contact address	:	Research Engineer, AICRP on PHT College of Technology & Argil. Engineering, Maharana Pratap University of Agricultural & Technology, Udaipur- 313 001 (Rajasthan)