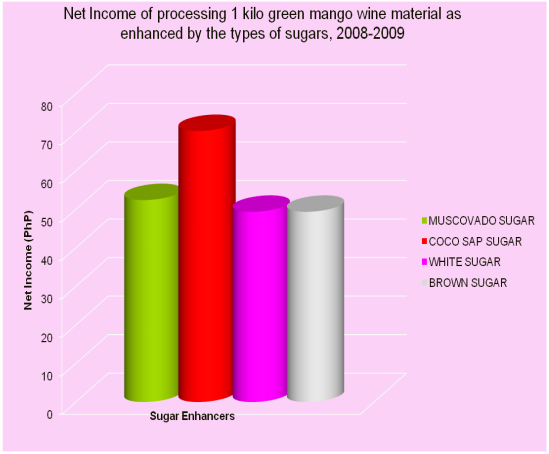

Value adding to green mango fruit rejects through processing as sugar enhanced raw mango wine mash. 2008-

ITEMS	Carabao Mango	Indian Mango**	Hawaiian Mango**	TOTAL
Volume of total rejects (Kg)*	229,767	*229,767*	*229,767*	689,301
Price per kilo reject (Php)	5	*5*	*5*	15
Value of total rejects(Php)	**1,148,835**	***1,148,835***	***1,148,835***	**3,446,505**
Volume of raw materials for mango wine at 4 li/kg(li)				2,757,204
Value of labor cost generated				**53,021,033**
Labor generated (Man Days)				**212,084**
Value added from processing (Php)				
As raw mango wine mash				35,705,792
Wine aged for 1 year				112,190,631
Wine aged for 2 year				**323,171,881**

**Volume of total rejects in Region 1, BAS 2007*

*** assumed data- no available information or data for the two mango varieties*

Chemical Content,elements & Nutrients of the green mango fruit,4 types enhanced man-

Green mango Fruit	Element/ Nutrient Ppm or mg/lit muscovado	Element/ Nutrient Ppm or mg/lit Coco sap	Element/ Nutrient Ppm or mg/lit Brown	Element/ Nutrient Ppm or mg/lit White	Enhanced Mango wine
edible portion%	boron 0	boron	boron	boron	Ethanol %(v/v)
water (g)	Ca 150 Chl 0	Ca Chl	Ca Chl	Ca Chl	total ash g/100ml
energy kcal	Copper 0 Iodine	Copper Iodine	Copper Iodine	Copper Iodine	Chl g/100ml
protein (g)	Iron Mg	Iron Mg	Iron Mg	Iron Mg	Sucrose g/100ml
fat	Mn	Mn	Mn	Mn	Methanol ppm
carbohydrates (g)	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Iron ppm
crude protein (g)	Phosphorous	Phosphorous	Phosphorous	Phosphorous	Copper ppm
ash (g)		Potash	Potash	Potash	
ca ((mg)	Sodium	Sodium	Sodium	Sodium	
phosphorous (mg)	Sulfur	Sulfur	Sulfur	Sulfur	
Iron (mg)	Zinc	Zinc	Zinc	Zinc	
total vitamins (mg)	Mineral salts	Mineral salts	Mineral salts	Mineral salts	
ascorbic acid(mg)					

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Department of Agriculture - Regional Field Unit 1
ILIARC

ENRICHED WINE FROM CARABAO, INDIAN & HAWAIIAN MANGOES

Lydia M. Valdez
Luciana T. Cruz
Paz L. Mones
Angel O. Padilla

Why Enriched Mango Wine?

Muscovado sugar

- *From sugarcane used in baking recipes and making whiskeys*
- *Moist with strong molasses flavor natural and nutritious product a good source of sucrose and desirable vitamins and minerals like iodine, mineral salts and calcium*
- *Free from harmful chemicals and toxic agents*

Coconut sap sugar

- *Derived from the toddy/sweet sap (tuba) unopened inflorescence of coconut*
- *Contains 12-18% sugar with invert sugar glucose and fructose*
- *Low G.I food of 35 which can be used as a natural sweetener of diabetics*
- *Rich in vitamins and minerals with beneficial functions in the human body balance alcoholic changes in human nervous system*
- *Helpful in treating high blood pressure*

Steps in mango wine processing with muscovado and coco sap sugar as enhancers

Sorting and washing
sort, clean and wash the fruits and washing to remove traces of impurities and other organ isms that can possibly cause contamination of the mash in the succeeding activities.

Weighing and mixing
measure all the needed ingredients before mixing to come up with an exact equivalent proportion of the ingredients for attaining a good wine mash results

Peeling
Remove the peels of the fruits to avoid Contamination of bacterial and fungal organism present in the outer covering of the fruits.

Shredding/slicing
shred or slice the pulp into finer forms to have easier juice extraction

Boiling/Cooling
Boil the mixture to destroy harmful agents and other organism present in the mixture.
Cool the boiled mixture before pouring the pulverized fine yeast as a fermenting material of the mango wine mash.

Covering of the mixture
Cover the mixture with fine mesh cotton cloth.

Adding of the pectin
Add pectin source like banana to attain a quality taste and aroma of the wine.

Straining of the wine mash
Strain the mixture to filter sediments settled at the bottom of the con tainer

Transferring the wine mash into a fermenting bottle
Transfer the clear wine into a container for final fermentation and ageing.

Fermentation/Siphoning
Fermentation allow the wine mash to be ferment-ed
for the production of wine alcohol necessary for the retention of the alcoholic taste of the wine.
Siphon the clear liquid to another clean bottle
so that the remaining sedi-ments at the bottom
of the containers will be removed for ageing
of the wine mash.

Ageing
Store and keep the wine for a year or longer
to reduce the harsh taste and blend-ing occurs
which later provides the wine better taste and