

International Symposium on

Superfruits:

Myth or Truth?

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Food and Agriculture
Organization



International Tropical
Fruits Network



Ministry of Agriculture and
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Commercialization of Clarified Salak Fruit Juice Using Microfiltration and Enzymatic Treatment Technology

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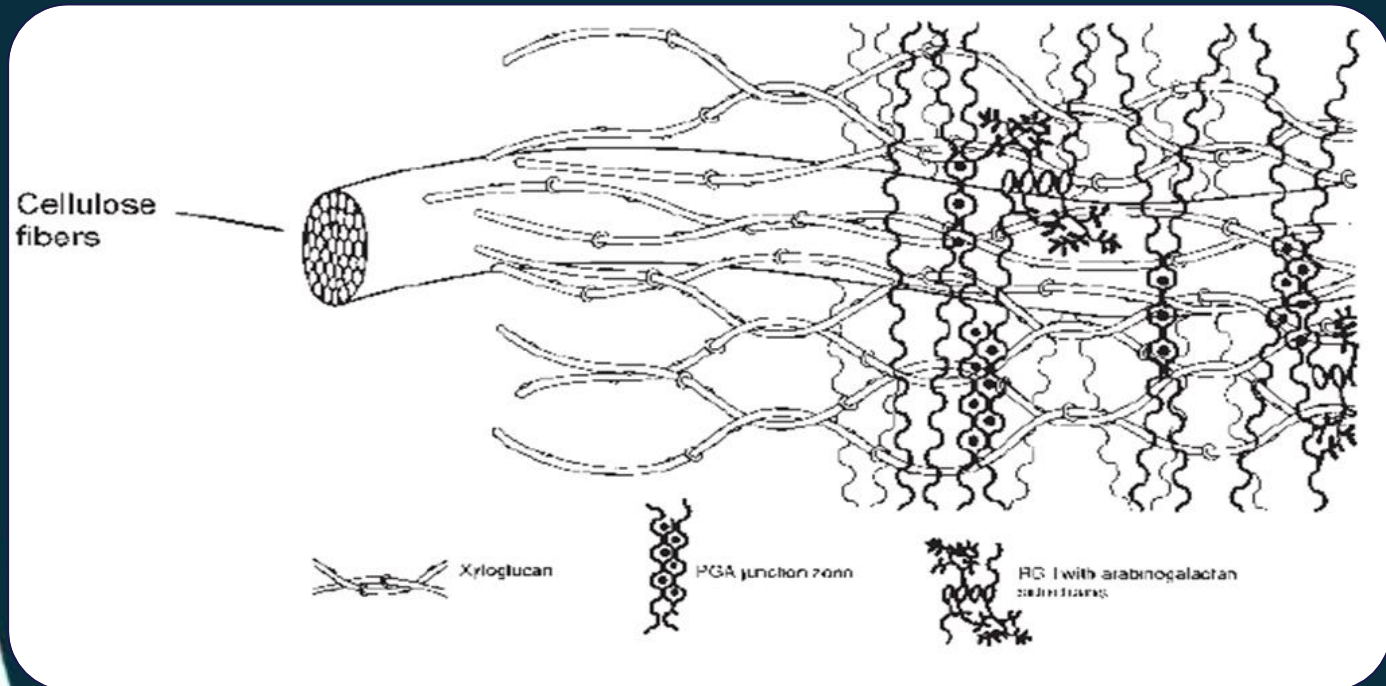
Salak (Salacca Zalacca)



SALAK



THE OBSTACLE: CELL WALLS



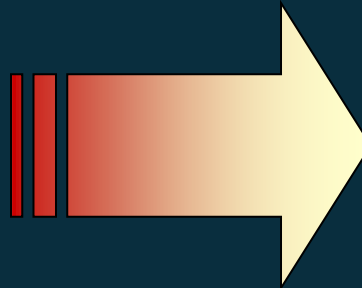
Fruit Cell walls consists of Cellulose microfibers embedded in aqueous gel of Hemicellulose & Pectins & Acid chains, etc which causes cloudiness & haze in the juice.

THE CHALLENGES

- Pectin needs to be hydrolyzed
- Cellulose & Arabans need to be converted into soluble sugars
- Macromolecules need to be broken down
- Insoluble solids need to be removed and dissolved if possible



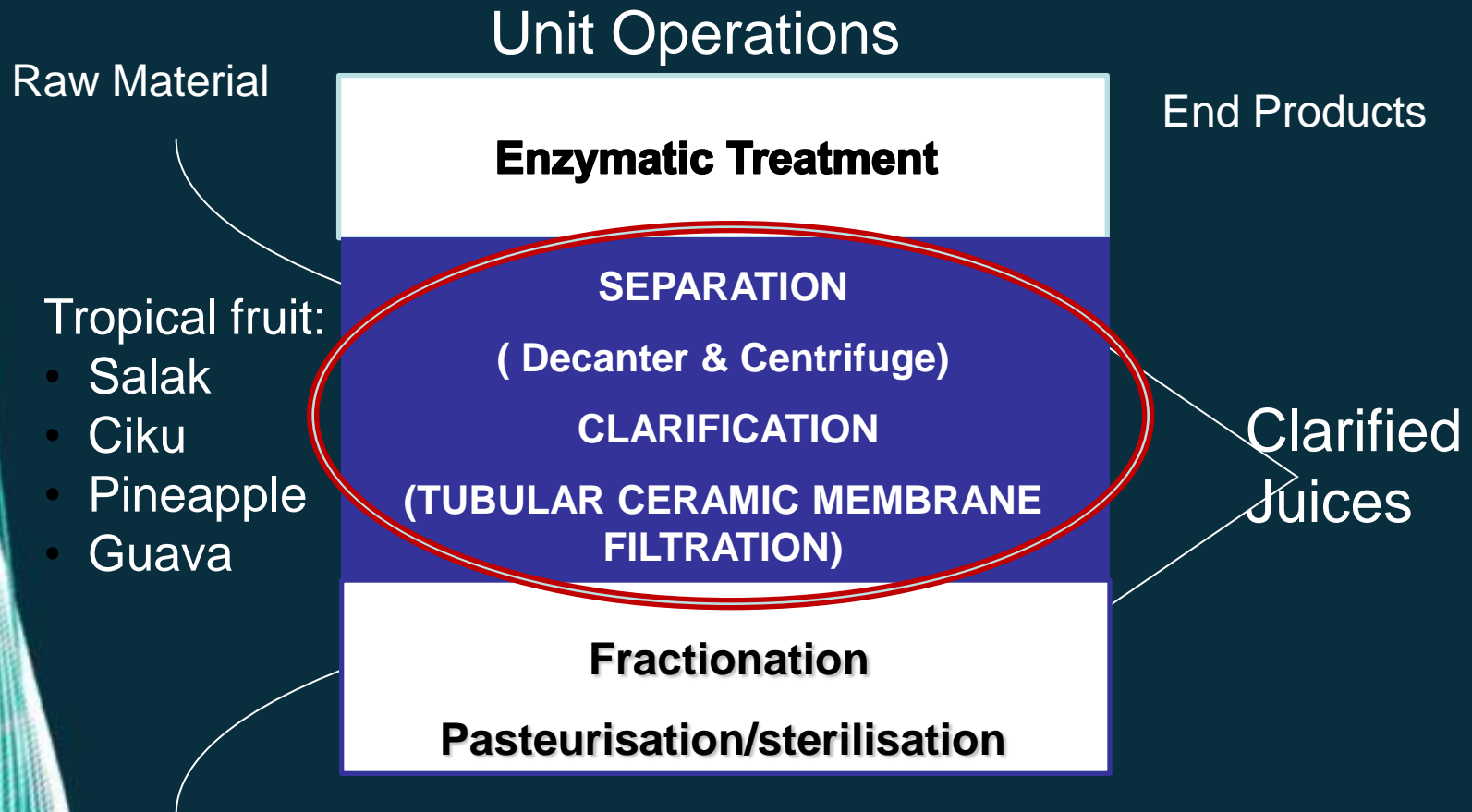
**THE SOLUTION
REQUIRED:
CLARIFICATION**



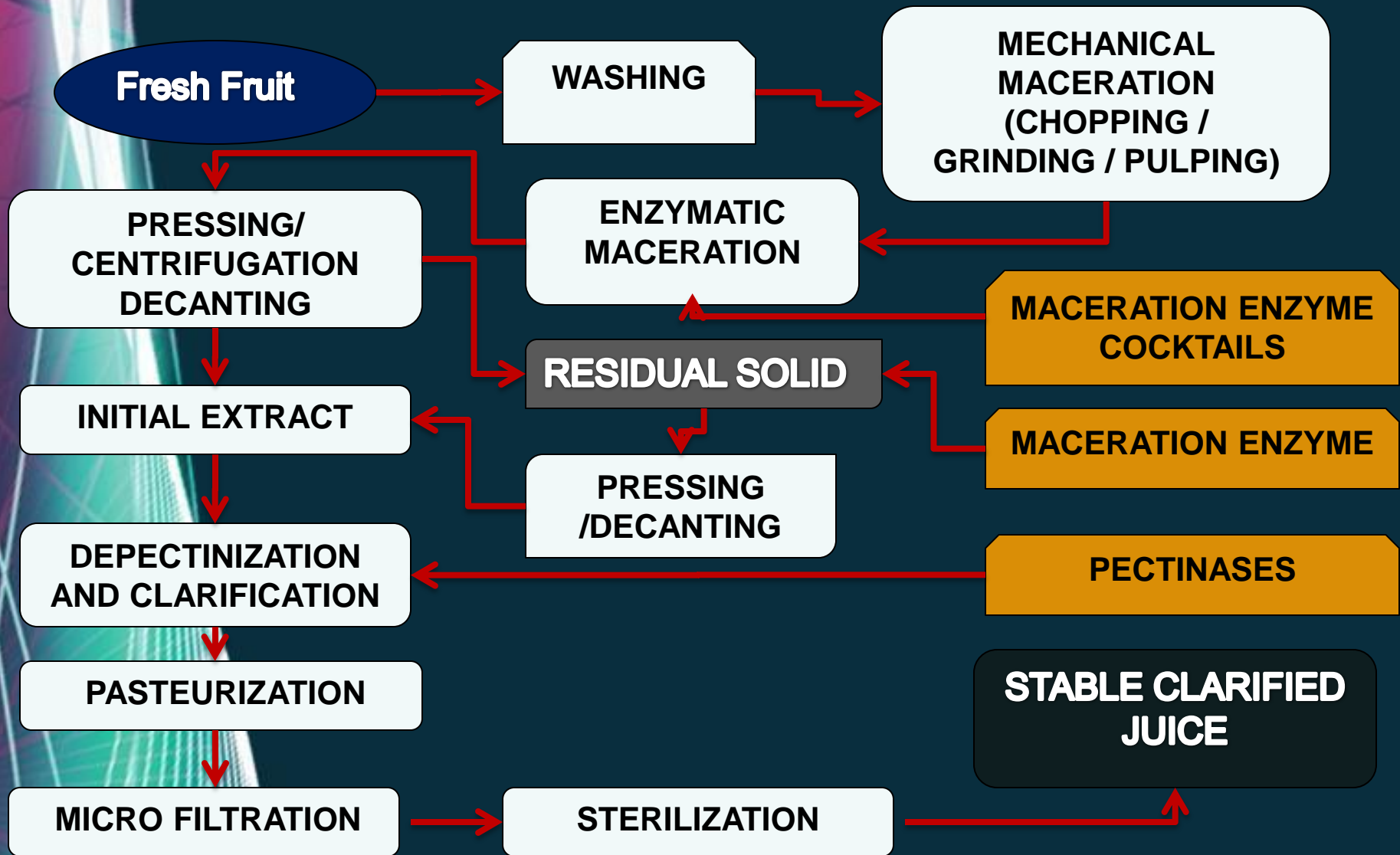
THREE STAGES SOLUTION

FIRST STAGE	SECOND STAGE	THIRD STAGE
Mechanical Removal of Macromolecules and Insoluble Solids: ➤ Blanching, Maceration & Homogenization	Breakdown of Macromolecules Using Biochemical Means ➤ Enzymatic Reactions (single / cocktails)	Vacuum filtration, Pasteurization, Microfiltration

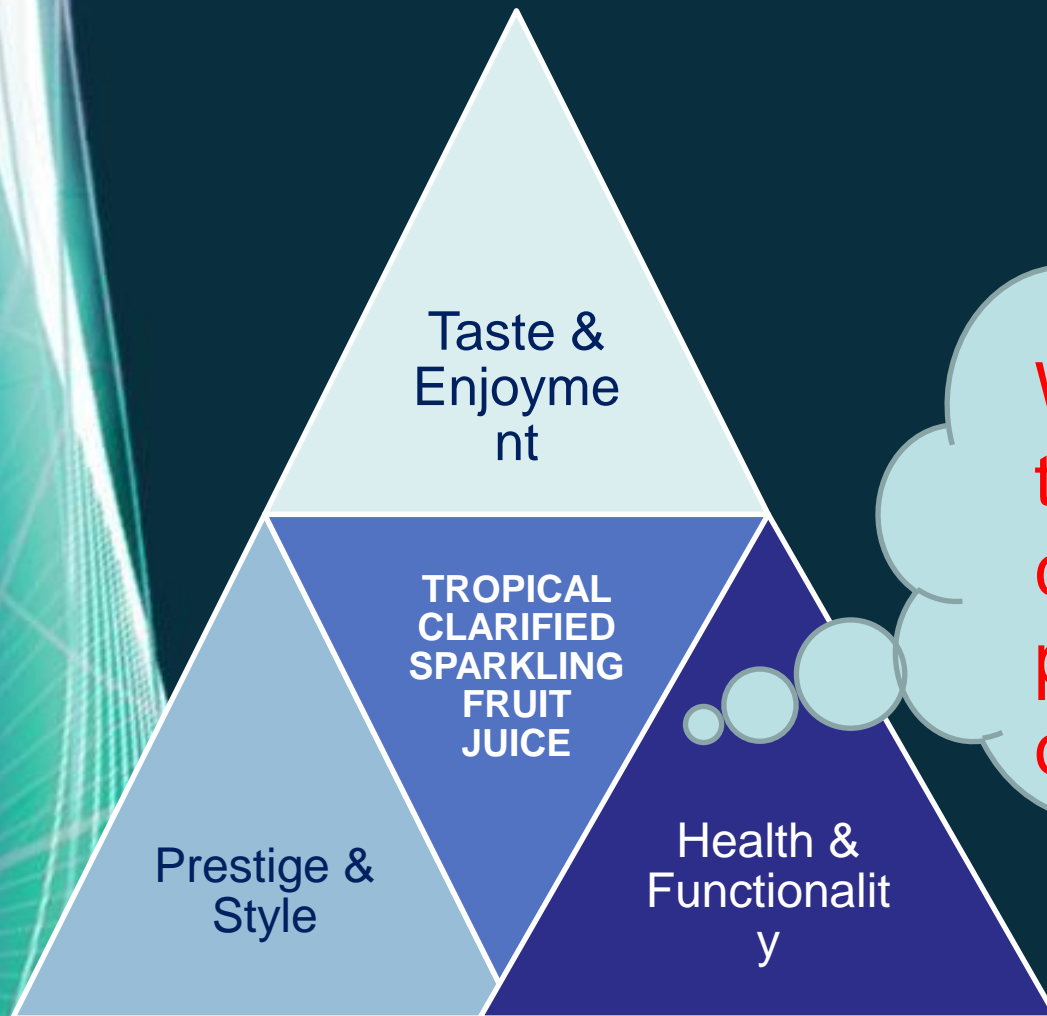
COMBINATION OF TECHNIQUES



Production Flows



THE BASIS OF CONSUMER PREFERENCES



We capture all three basis of consumer preferences in our product

CONSUMER PROFILES



Urban &
Sophisticated

- Prefer Natural
- Prefer Health

Young &
Vibrant

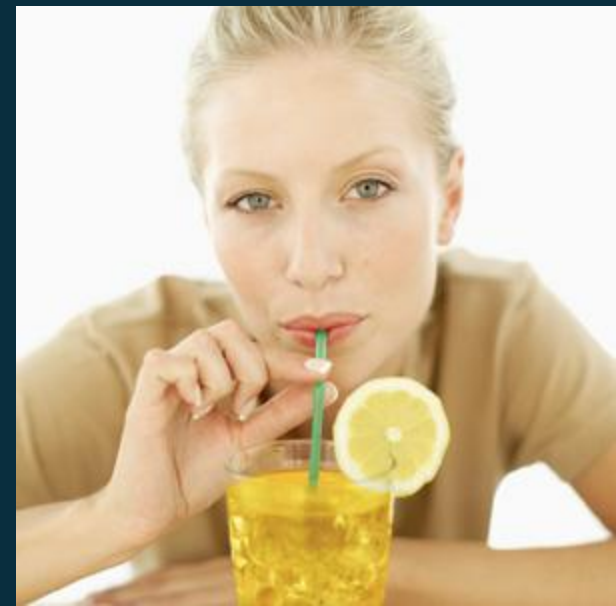
- Strong Sense of Pride and Self Identity

Chic & Trendy

- Dare to Challenge & Be Different

Enjoy &
Explore

- Extreme on Taste And Sensation



EVIDENCES OF FUNCTIONALITY

- ❖ Diet supplemented with Salak significantly hindered the rise in plasma lipids and increase in total liver cholesterol content in rats
- ❖ Excellent source of provitamin A Carotenoids
- ❖ Higher anti-oxidant potential than Mangosteen

Ref: Leontowicz et. al., Bioactive properties of snakefruits (*Salacca edulis*) and Mangosteen (*Garcinia mangostana*) and their influence on plasma lipid profile and anti-oxidant activity in rats fed cholesterol. *Eur. Food Res Technol* (2006) 223: 697 – 703.

OUR PRODUCTS





Thank You

