



Versatility of Palm Oil and Its Products

Sime Darby Plantation Berhad

25 May 2021

Presentation Outline

- Overview of Sime Darby Plantation
- Palm Oil Processing
- Palm Oil – Food Applications
- The Future Direction





More Than 100 Years of Presence

Pioneering Plantation Growth



1890s

The group's first 500 acres of rubber in Malaya



1960s

Development of Oil Palm



1980s – 2000s

Strengthening Global Downstream Capacities



2007

Merger that Created the World's Largest Listed Oil Palm Plantation Company

BORNEO POST online
THE LARGEST ENGLISH NEWS SITE IN BORNEO

Business

Analysts laud Sime Darby demerger, plantations likely to be listed first

February 1, 2017

KUALA LUMPUR: Analysts exercise plans first

REUTERS

UPDATE 1-Malaysia's Sime Darby to spin off plantation, property businesses

UPDATE 1-Malaysia's Sime Darby to spin off plantation, property businesses

Jen 26 Sime Darby Bhd, the world's largest palm oil company by land size, will spin off its plantations and property businesses in separate listings on the local stock exchange, the Malaysian conglomerate said on Thursday.

The listing of the plantation business, which accounted for a major share of Sime Darby's 44 billion ringgit (\$9.9 billion) revenue last year, could be the largest plantations listing since Felds Global Ventures in 2012.



Saturday, 17 December 2016

Demerger exercise likely option for Sime Darby Plantations

SIM ADIAN

Plantation arm of Sime Darby Bhd - Sime Darby Plantations

THE EDGE PROPERTY Malaysia

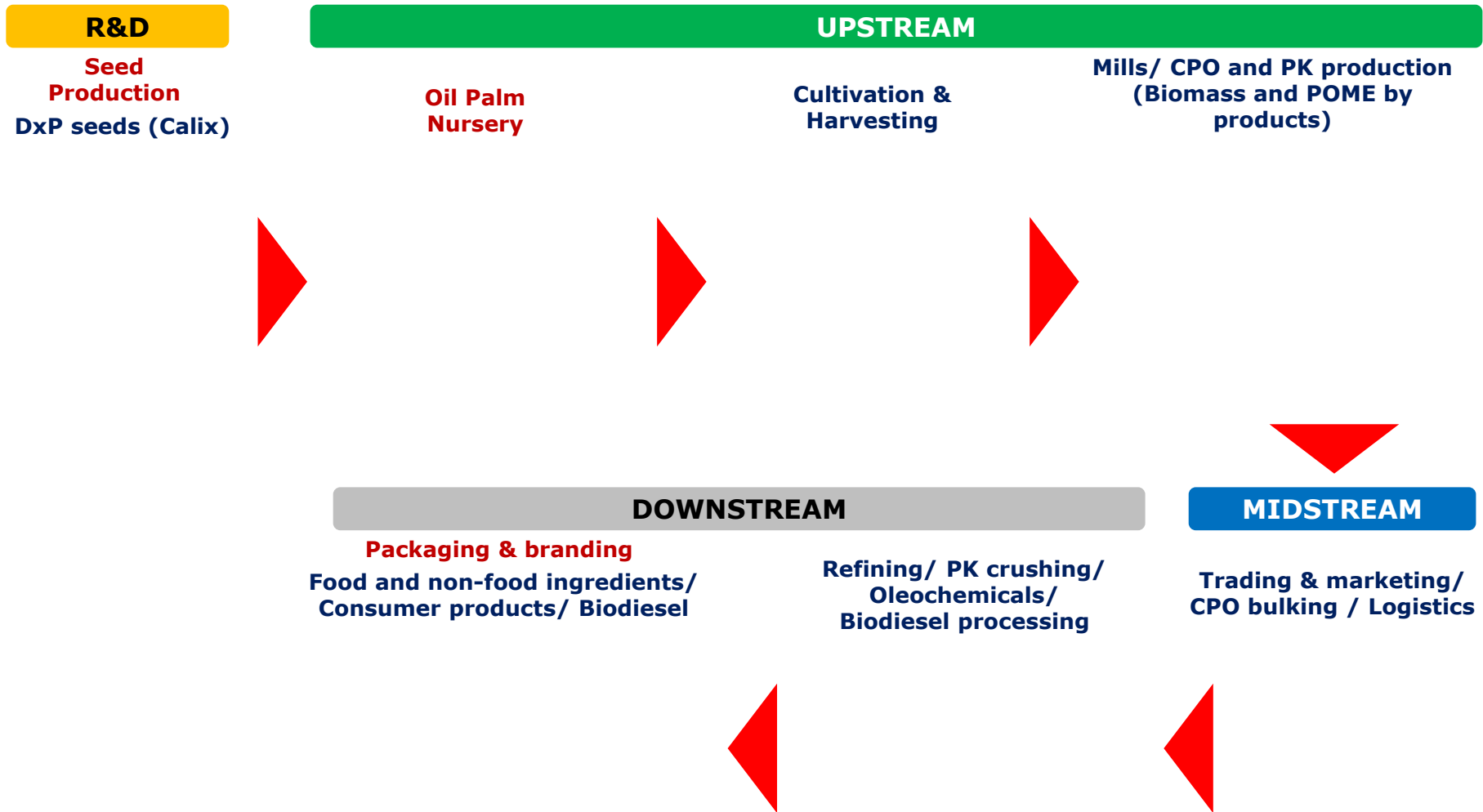
Analytics Calculators New Launches News 新聞

Sime Darby rolls out demerger exercise plans

By PublicInvest Research | February 2, 2017 2:29 PM MYT

Maintain outperform call with an unchanged target price of RM9.50: Sime Darby Bhd has finally rolled out its long-awaited demerger exercise plans last Thursday, which will divide the group into three entities — Sime Darby Plantation Bhd, Sime Darby Property Bhd and Sime Darby Bhd.

Fully Integrated Operations Across the Palm Oil Value Chain



Sime Darby Plantation Global Footprint



Plantation



Palm Oil Process



Oil Palm



Palm Fruit



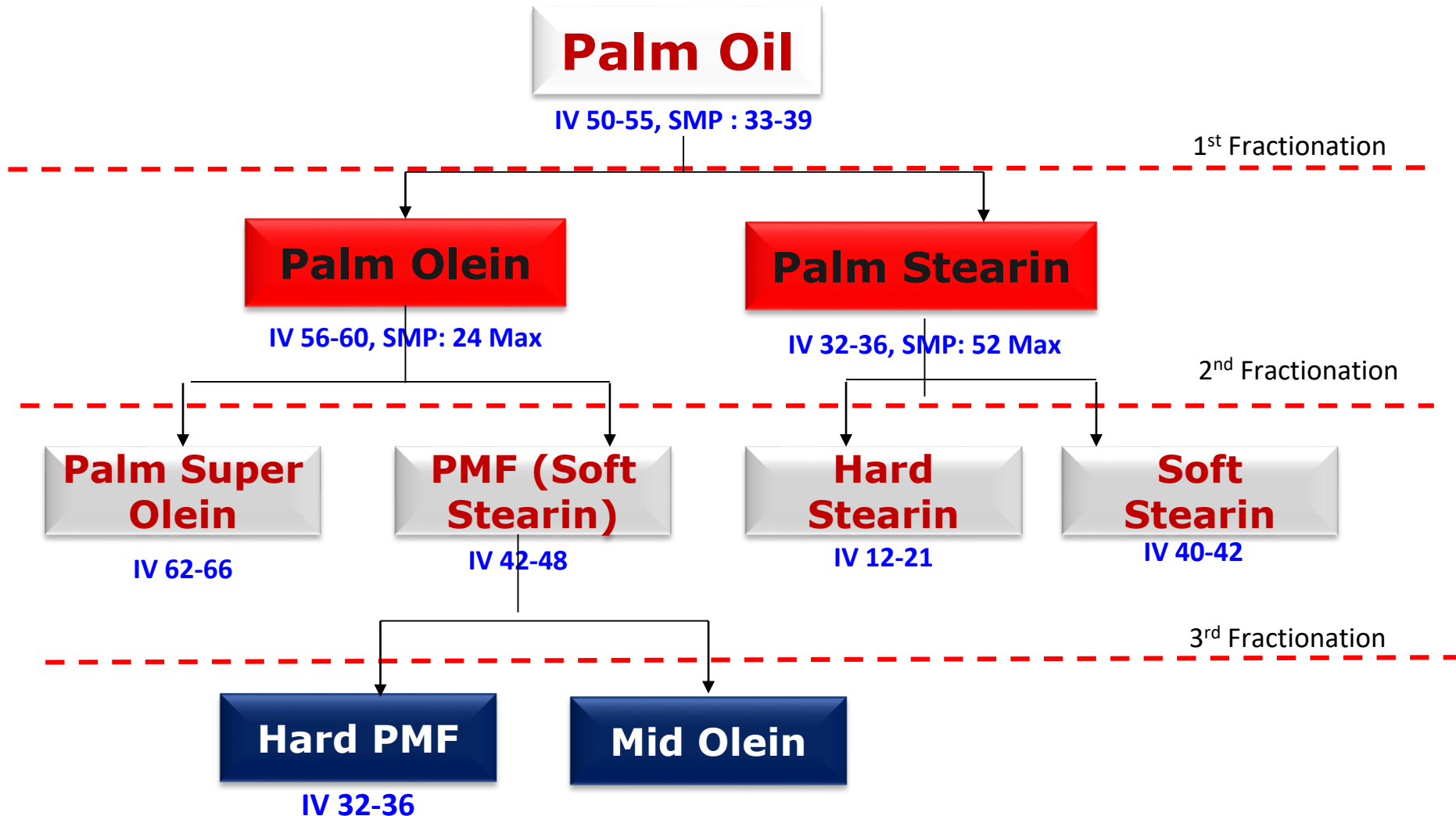
Crude Palm Oil



Refined Palm Oil



Palm Oils & Fats Fraction



Palm Oil – Food Application

Frying

Infant Nutrition

Confectionery

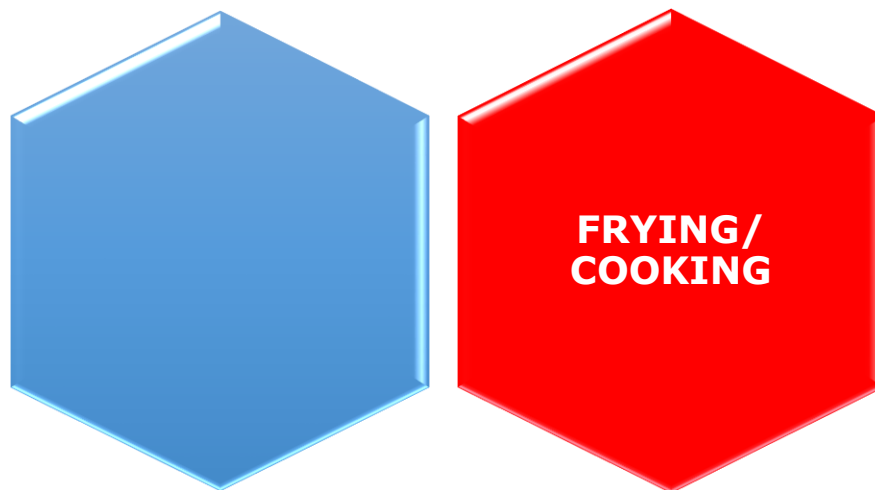
Bakery

Culinary

**Dairy Fat
Replacer**

**Functional
Ingredients**

**Animal Nutrition
& Non Food**



Palm Oil in Frying Industry

**French Fries
& Chicken**



**Instant
Noodles**



Potato Chips

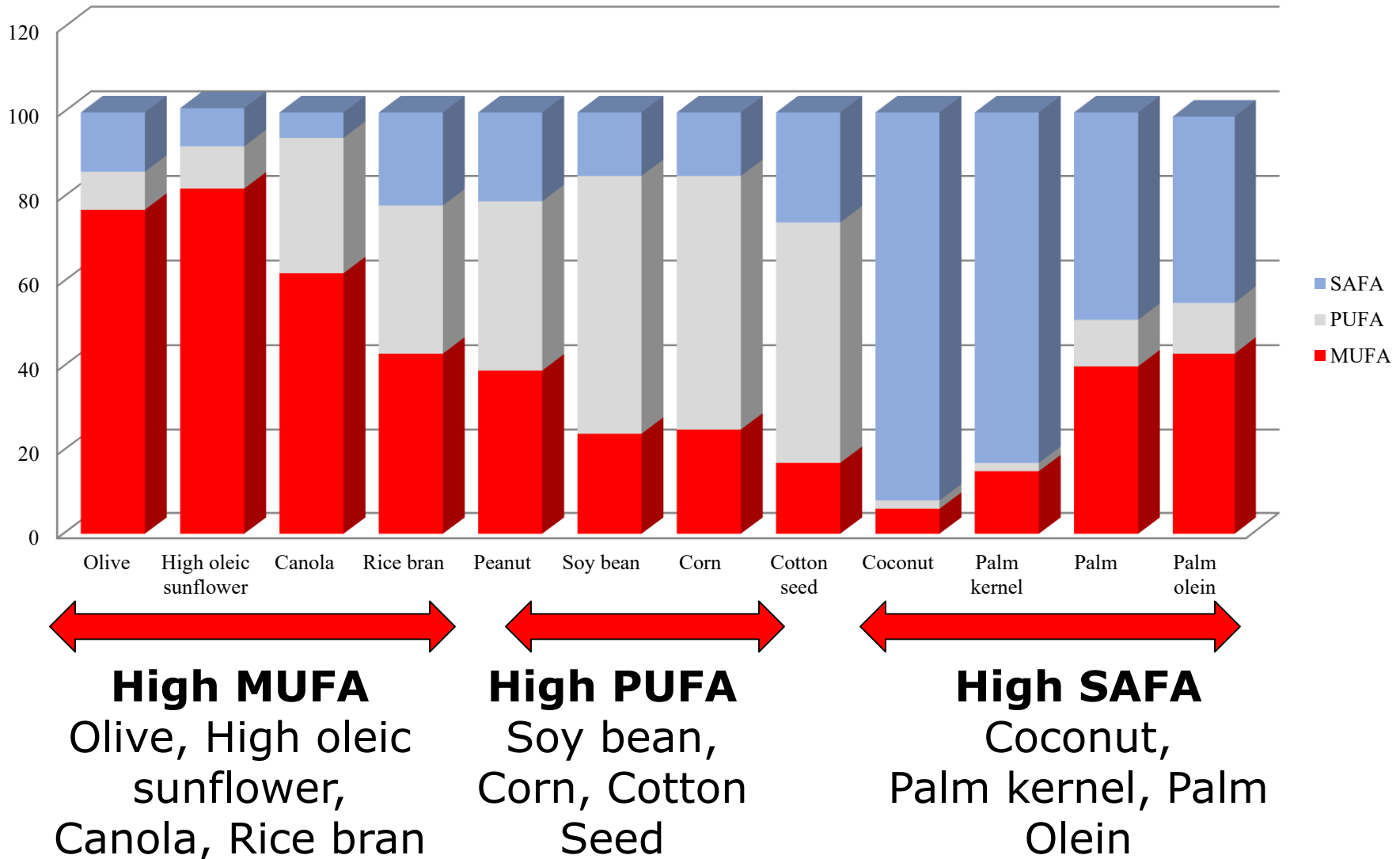


Doughnut



Customers prefer frying oil with good oxidative stability that extends the shelf life of end products

Comparison of SAFA, MUFA and PUFA levels



Cooking and frying oils/fats available in market

Cooking Oil, Blended Cooking Oil & Healthy Functional Oil

- Palm olein, blended palm olein, groundnut oil, coconut oil, canola oil, sunflower oil, soybean oil, & corn oil
- Healthy functional oil – Fortified with Tocotrienol

Frying fats

❖ Liquid oil blend with solid fats

- Doughnut Frying Shortening
- Certio Shortening
- Frying Shortening
- Modified Palm Oil (with PMF and stearin)

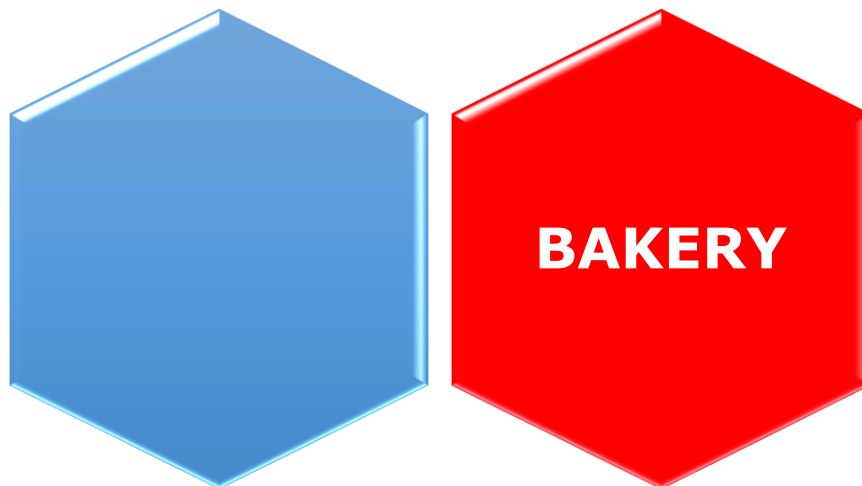
Frying oil

❖ Liquid oil blend

❖ Blended seed oil

- Palm oil
- Palm Olein
- Blended Palm and seed Oil
- Coconut Oil

- Box fat :
Convenience in handling
- Has higher oxidative stability
- Extended fry life
- Better shelf life for end product
- Trans Free
- Cholesterol Free



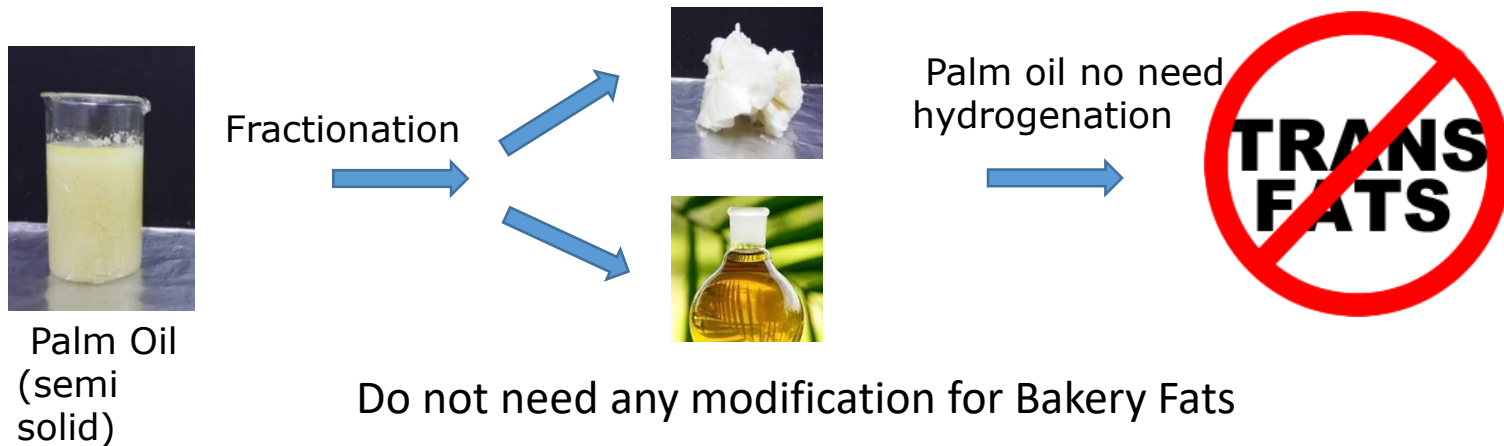
Palm Oil in Bakery Industry



- ☐ Shortening
- ☐ Margarine
- ☐ Pastry Margarine
- ☐ Vegetable Ghee
- ☐ Pan Release Agent
- ☐ Hardstocks (Ingredient for margarine and shortening production)

Palm Oil Naturally Semi Solid -Do not need any modification for Bakery Fats

Palm Oil (Semi solid) -----> Fractionated -----> Palm Olein and stearin(Solid fat) -----> No trans



Soft oils-----> Liquid oil -----> Partially hydrogenated to get semi solid -----> 30-40% Trans fat



Trans Fat on Health

↑ LDL

↓ HDL

↑ Blood Triglycerides

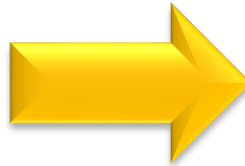
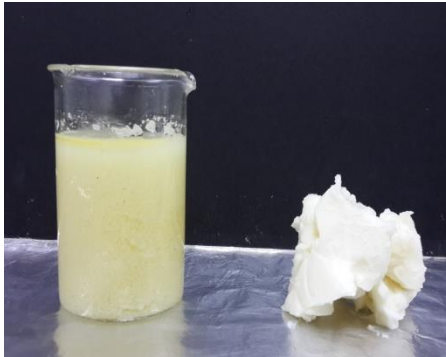


Coronary Heart Disease

Shortening

- What is Shortening?

- Name of 'Shortening' came from the term used to describe the function of fat in bakery products which shorten the gluten
- It is a 100% Texturized Fat



Shortening Applications

- Cake & Cream
- Bread
- Biscuits
- Biscuit Creams
- Wafers
- Crackers
- Doughnuts

MARGARINE



- Margarine & Butter

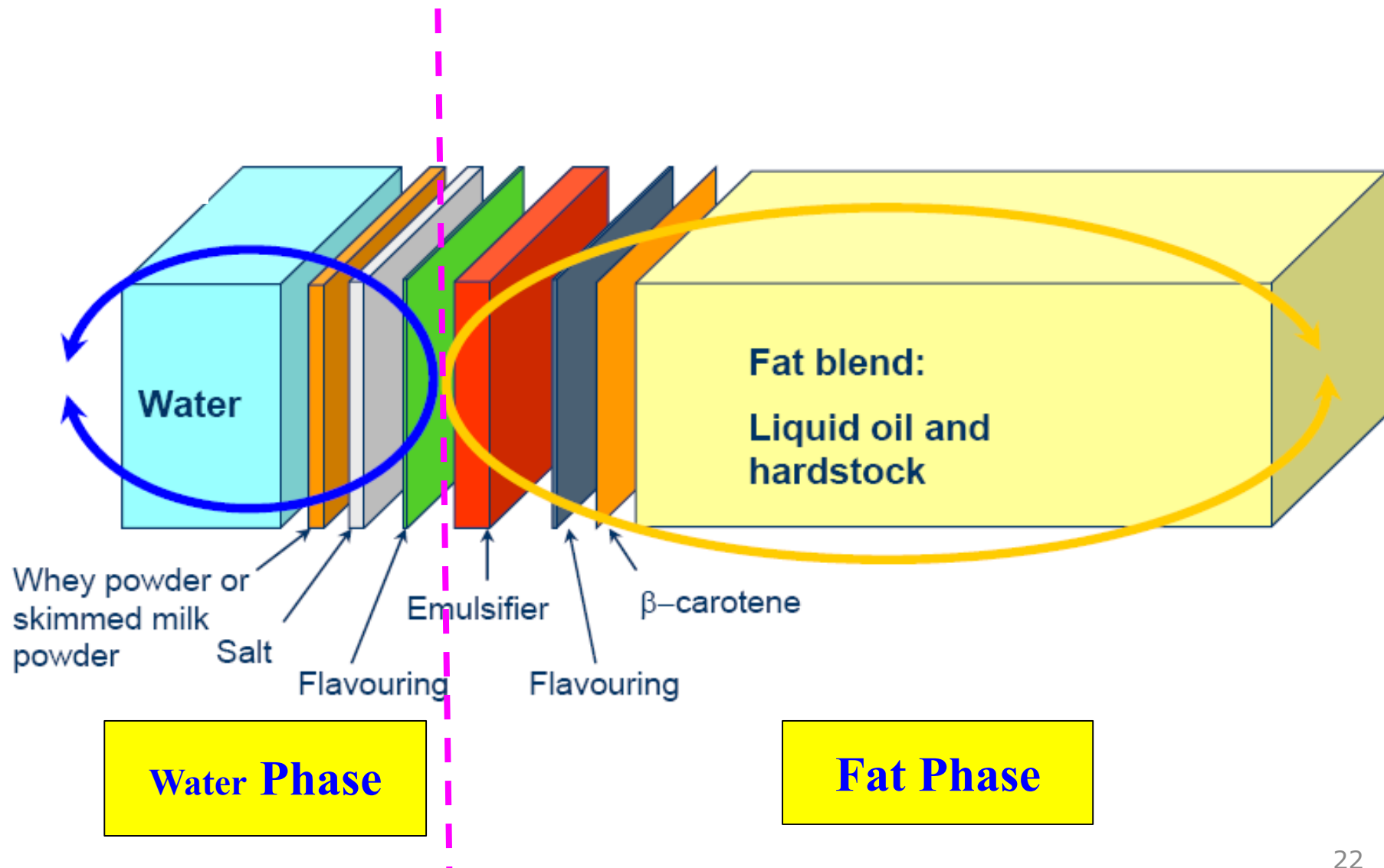
Butter

- Made from milk fat
- Contain not less than 80% of fat and Max 18% water
- Contain cholesterol

Margarine

- Made from vegetable oils
 - *Partial Hydro fats*
 - *Palm oil and stearin*
 - *Palm kernel Oil*
- Contain not less than 80% of fat, and not contain more than 16% water and 4% of salt
- Cholesterol Free
- Cheaper Alternatives

Ingredients in margarine



Type of Margarine

Margarine

CONSUMER MARGARINE	INDUSTRIAL MARGARINE
• Can be inclusive of margarine and spreads • Formulated for direct customer consumption and cooking & bakery application • Formulated to spread directly and to maintain a solid consistency at room temperature • Contain a lot of Nutritional Value • Targeted customer: Direct home consumers, Small Bakers, Restaurants and Small Food Services • Packaging size: 2.5kg, 1kg, 500g, 250g • Examples of Margarine & Spreads: ❖ Table Margarine ❖ Soft Table Margarine ❖ Low Fat Spread ❖ Low Salt Spread ❖ Vegetable Fat Spread	• Prepared in high volume for Industrial Usage • Formulated for specific application and based on customer requirement. • Formulation can be vary based on customer request, application and region. • Targeted customer: Bakers, Industrial Bakers, Food Services • Packaging size: 16kg, 20kg, 25kg in carton • Example of Industrial Margarine: ❖ Cake Margarine ❖ Whipped/Creaming Margarine ❖ Pastry Margarine ❖ Frying Margarine

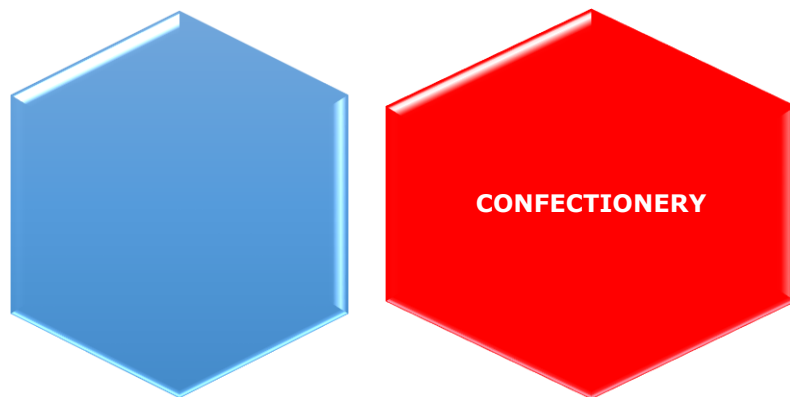
Cakes, Muffins, Cream, and Seasonal cookies

- Good Volume, soft in texture
- Gives good buttery aroma and taste
- Gives crunchiness

Spread

- Imparts a good taste and mouth feel
- Spreadable





Palm Oil in Confectionery Industry

Product : Sugar Confectionery

- Chewing gum
- Hard candy
- Toffee
- Fudge
- Fondant
- Jellies
- Others not covered (with chocolate)

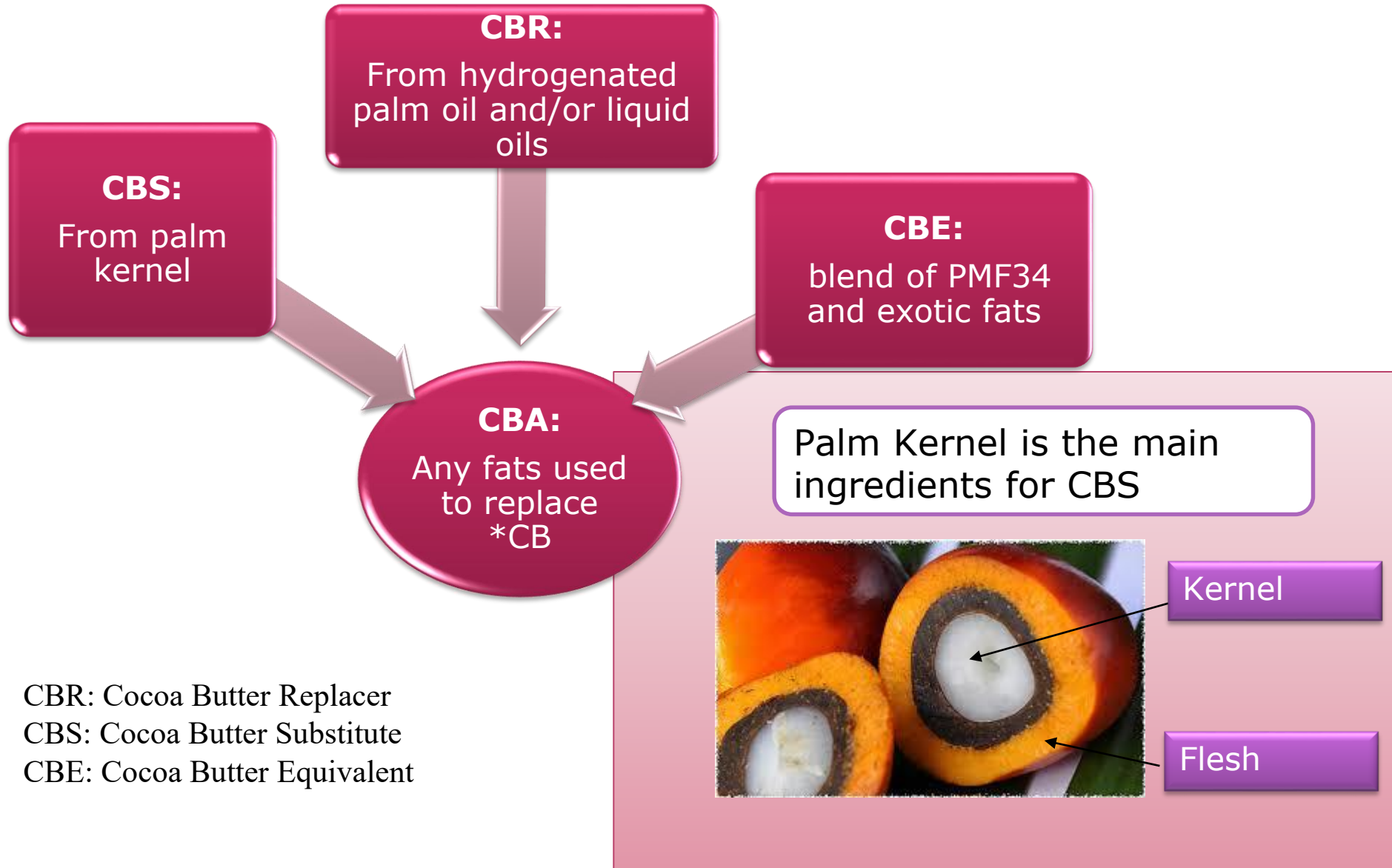
Product : Chocolate Confectionery

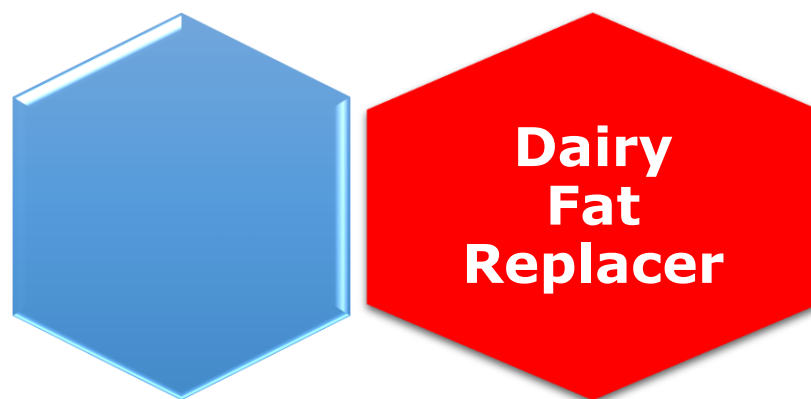
- Sugar confectionery covered with chocolate
 - Chocolate countline : filled bars, mini bars
- Chocolate bars
- Chocolate block
- Chocolate coated biscuits

Product : Flour Confectionery

- Baked fancy cakes
- Iced or chocolate covered

Confectionery Fats



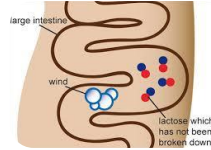


Dairy Fat Replacer

Why need a substitute for milk fat -



Milk allergy



Lactose intolerance



Cholesterol



Economic reason

BOS	To substitute butter oil. Have sharp melting profile, shiny texture, colour and butter aroma.
MFR	To substitute milk fat, melting profile matches milk fat , to replace the milk fat in butter and cream products
Coffee Creamer	To substitute anhydrous milk fat.
Ice Cream Fat	To substitute milk fat in ice creams
Cheese Fat	To substitute milk fat in cheese products
Vegetable Ghee	To substitute pure cow ghee. Added with colour and flavour

Dairy Fat Replacer : Application in food



Recombined liquid milk, cream, cultured milk products, cheese and butter



Milk fat replacer to substitute some portion of milk fat which gives the desired mouthfeel; economical



Coconut oil and PKO based on oil to replace the milk fat in Ice cream



Coffee Roasting; use BOS to give buttery aroma and shiny texture to the coffee beans



Substitute the milk fat with butter oil substitute; economic reason



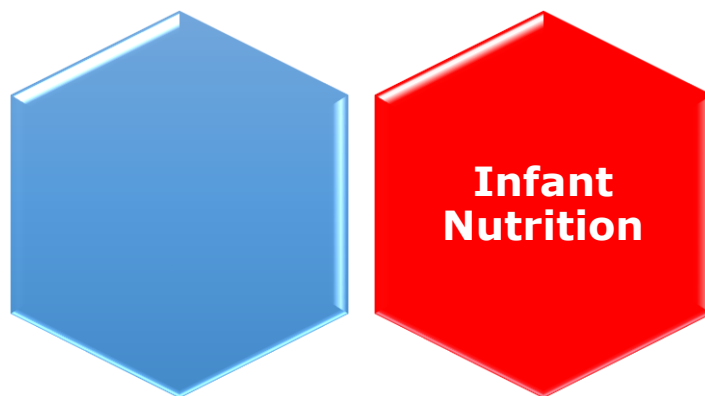
Coffee Creamer; to substitute milk powder and better shelf life; economical



Vegetable Ghee to substitute cow ghee with similar aroma and flavor; economical



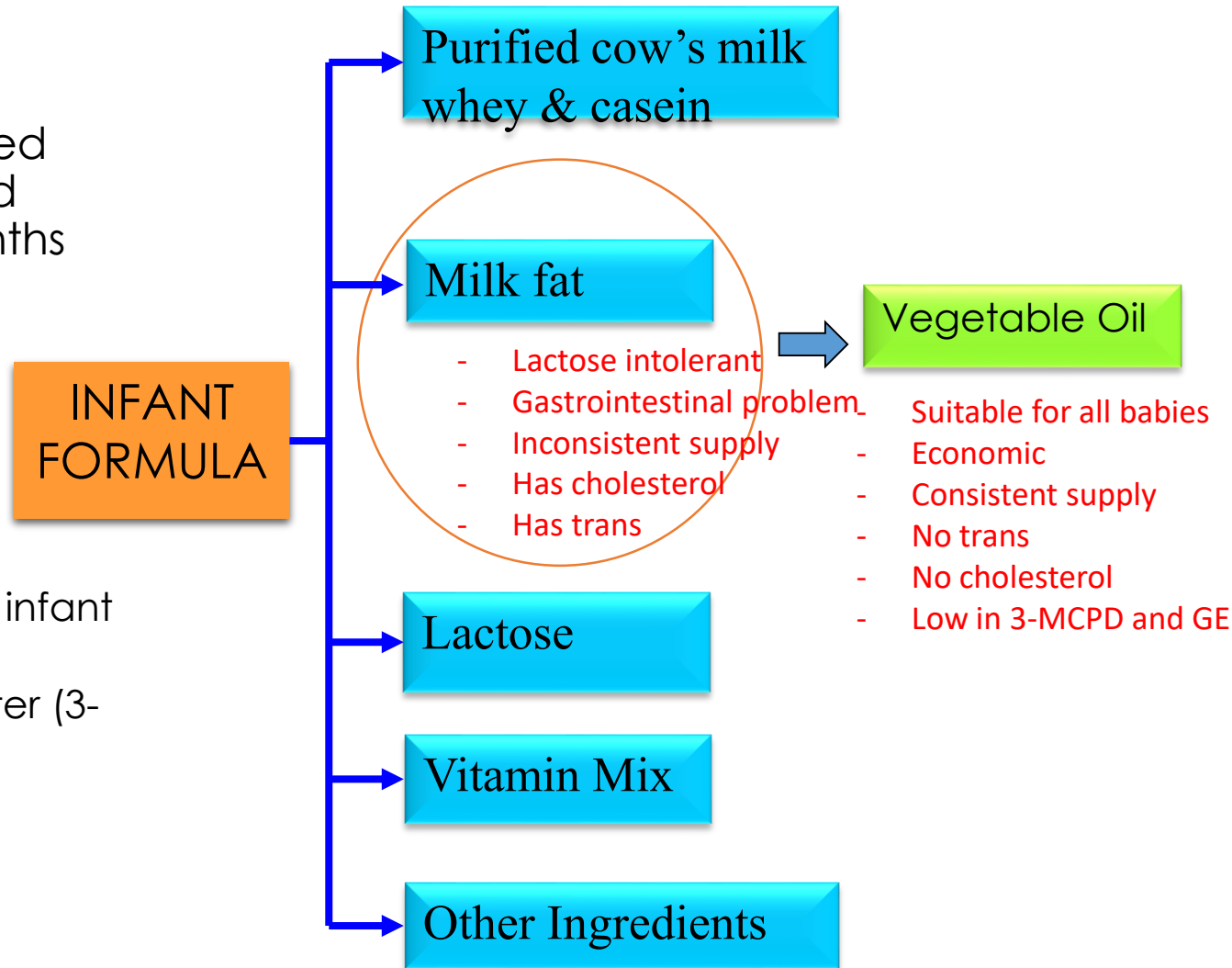
Condense milk and evaporated milk using palm oil and plam olein to substitute milk fat; economical

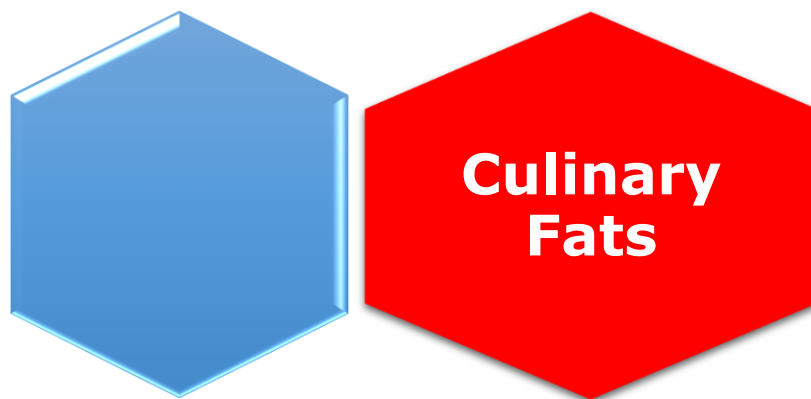


Palm Oil in Infant Food Industry

Infant formula is a manufactured food designed and marketed for feeding babies and toddlers under 36 months of age

- Rapidly growing segment
- Global market
 - Vegetable based infant formula
 - Low in 3-mcpd ester (3-mcpd known as carcinogenic)
 - Trans free and cholesterol free
 - Mimic breast milk
 - Economic Reason
 - Lactose-intolerant





Palm Oil in Culinary Fats

Vegetables oils and fats for **savoury applications** or **added directly to food products**.

Most of the products are tailor made for below applications in order to meet the customer requirement.

Palm Oil and Palm Products	Pre-cooked canned food, sauces and paste products. Using olein as one of the cooking medium.
Flaked Fats	To produce bouillon cubes, seasoning powders, Soup powders, soup creams.
Animal Fat replacer	To replace the animal fat especially in burger, nuggets and sausages.
Margarine	For aromatic rice and soups
Hard Fats	To produce bouillon cubes, seasoning powders, Soup powders, soup creams, pre-frying of French fries and frozen foods

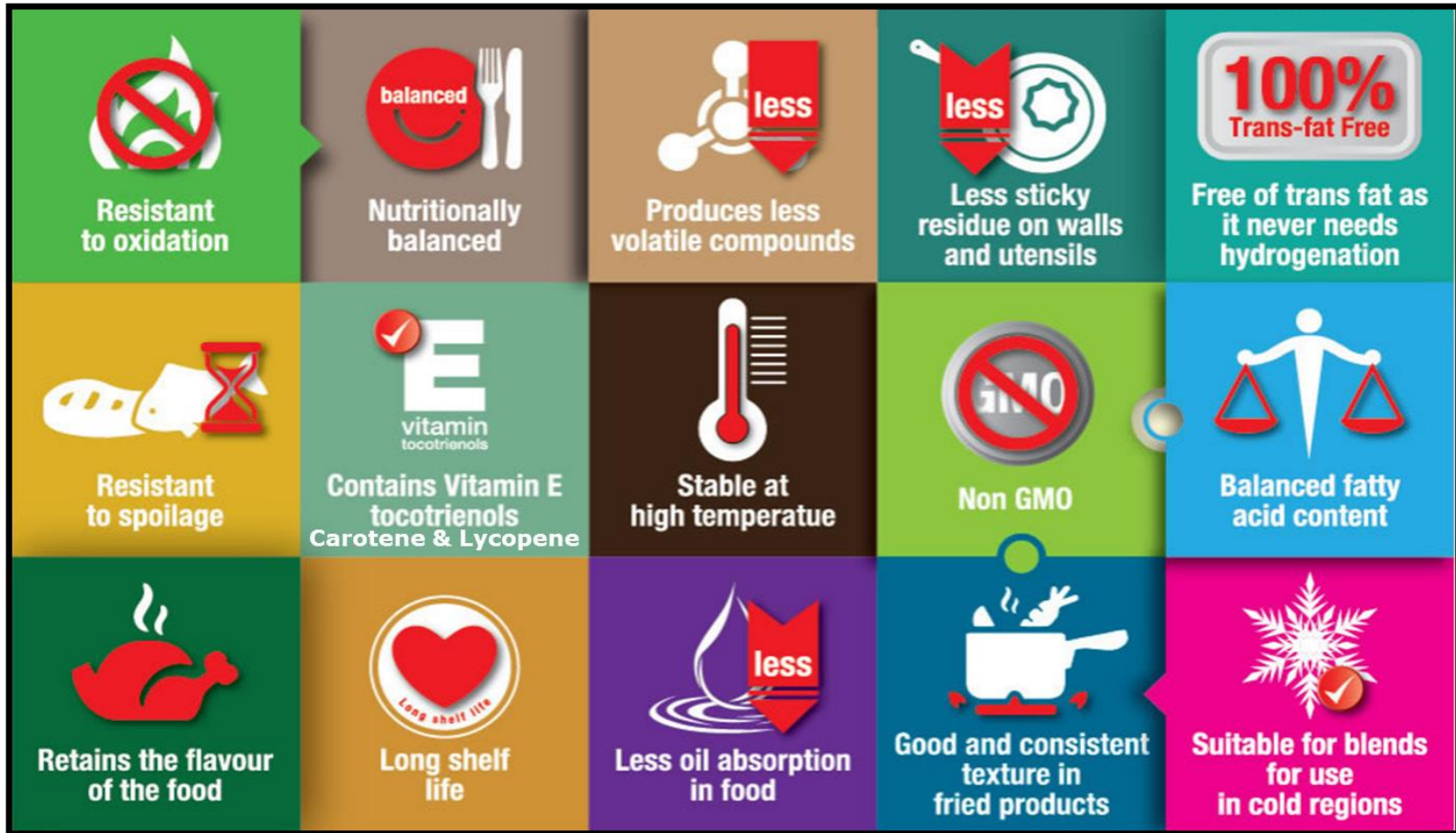
Phytonutrients of palm oils

- Carotene
- Tocopherols & tocotrienols
- Squalene
- Phytosterols
- Lycopene
- Co-enzyme 10

Nutritional Information (per serving, 14 g)	
Calorie	126 kcal
Protein	0 g
Carbohydrates	0 g
Total fat	14 g
SAFA	5.4 g
MUFA	6.7 g
PUFA	1.9 g
Cholesterol	0mg
Vitamin E	11.0 mg
Phytosterols*	
β-sitosterol*	4.43 mg
Campesterol*	1.89 mg
Stigmasterol*	0.94 mg
Delta-5-Avenasterol*	0.17 mg
CoQ10*	0.7 mg
Squalene*	3.7 mg
Carotenoids*	
Tocopherols*	

Immense Health Benefits of Palm Oil

A healthier, high-carotene & trans-fat free alternative



Versatile Palm Oil...



BAKERY

Our exclusive range of bakery fats are designed with an eye on results that satisfy.

- Shortening
- Margarine (Coko)
- Pastry Margarine
- Spray Oil
- Butter Oil Substitute
- Vegetable Cheo
- Dough Fat



DAIRY REPLACER

Tried and trusted formulations to replace dairy ingredients in food applications.

- Butter Oil Substitute
- Vegetable Cheo
- Milk Fat Replacer



FRYING OIL & FATS

We provide a range of choices and customised formulations tailored to suit your needs.

- Frying Shortening
- Frying Oil
- Low SFA Frying Oil
- Cooking Oil
- Healthy Functional Oil
- Vegetable Cheo



ANIMAL NUTRITION

PURAFEX is our high-grade palm kernel expeller and a patented first in the industry.

- Palm Kernel Cake
- Fatty Acids



CONFECTIONARY

Made from premium raw materials, our products can be tailored for flavour, texture and more.



CULINARY

A wide range of vegetable oils and fats with multi-purpose culinary applications.

- Animal Fat Replacer



SPREADS

Vegetable oils and fats for the makers of consumer margarine, spreads and vegetable oils.



FUNCTIONAL INGREDIENTS

Including Vitamin E in powder or liquid form for the powerful benefits of tocotrienols.

- Tocotrienol
- Red Palm Olein
- BOLEC
- SUNLEC



BIODIESEL

For the production of top-quality biolubricants and other non-food derivatives.

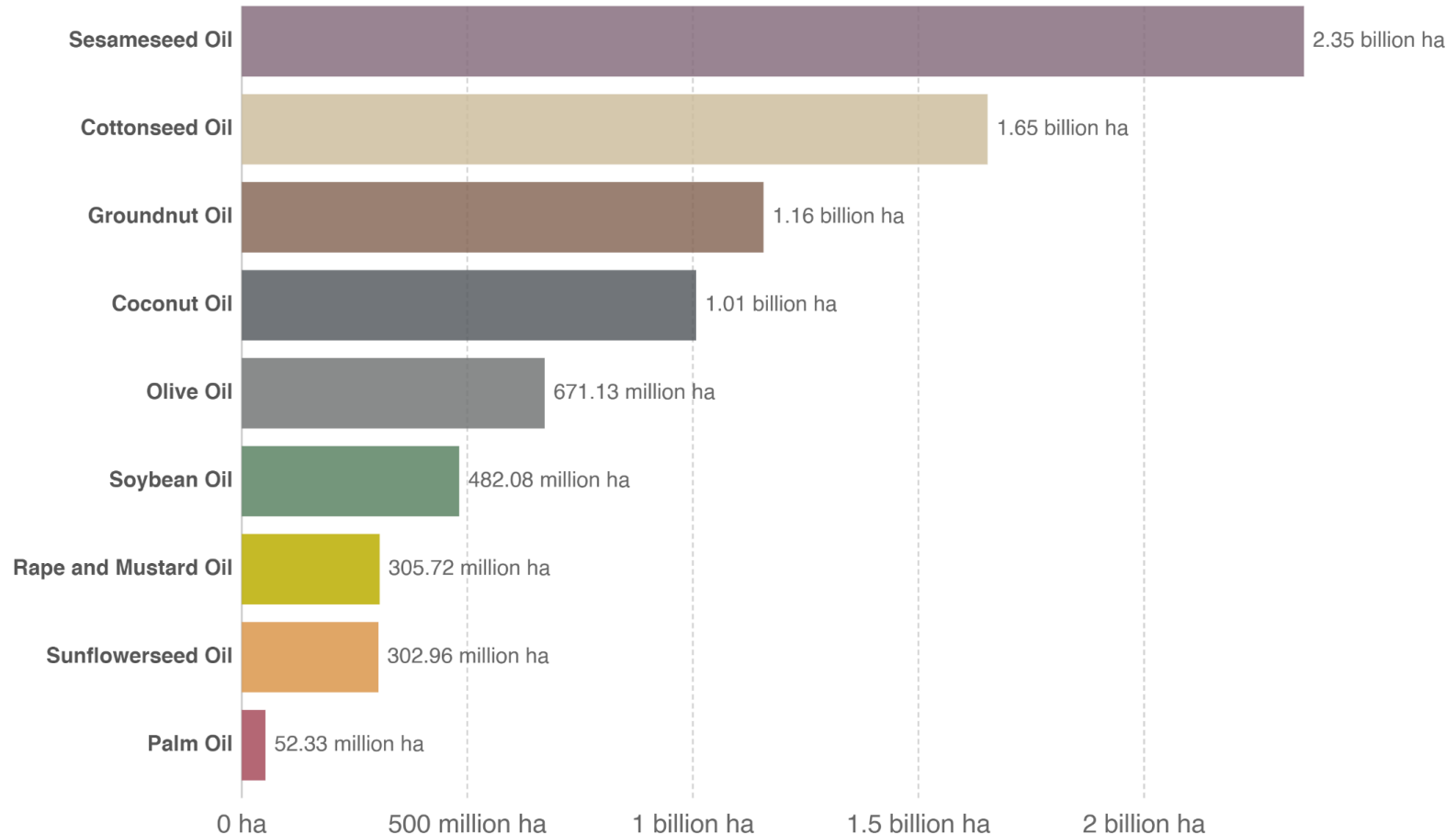
- Fatty Acids
- Acid Oil

Palm Oil – Land Sparring Crop

Area of land needed to meet global vegetable oil demand, 2017

This metric represents the amount of land that would need to be devoted to grow a given crop if it was to meet global vegetable oil demand alone. Global vegetable oil demand was 210 million tonnes in 2017.

Our World
in Data





Plantation



Realising possibilities, together

THANK YOU

