

# BATTLE OF THE OILS

*Does oil really matter?*

A PROJECT BETWEEN BUNGE AND THAILAND CHEFS ASSOCIATION



# BATTLE OF THE OILS

8 types of cooking oil put to the test on  
15 popular dishes in Thailand.

## Oil selection is subjective....

Cooking oils shape the culinary experience. Each has distinct functional, flavour and sensory characteristics that affect how food is prepared, served and enjoyed.

However, choice of cooking oils made by both consumers and professional chefs is done on a subjective basis rather than an informative decision based on the cooking performance of the oils.

Cooks from professional kitchens tend to choose the oils that they are familiar with growing up. European chefs use mainly olive and sunflower oils, North American chefs, canola and soybean, South East Asian chefs, palm and coconut oils, Australian chefs, canola etc...

Bunge and the Thailand Chefs Association for the first time ever are providing answers based on empirical evidence.

## Which oil is best for your dish?

Does the choice of oil really make a difference to the taste, smell, texture and appearance of a dish? Does oil really matter?

To answer this question, Thailand's top chefs used eight of Thailand's top cooking oils to prepare the most popular Thai dishes. A panel consisting of professional chefs, consumers, foodies and cooking enthusiasts judged the oils based on cooking performance, taste and sensory appeal.

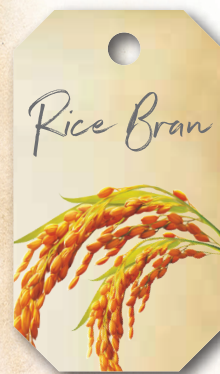
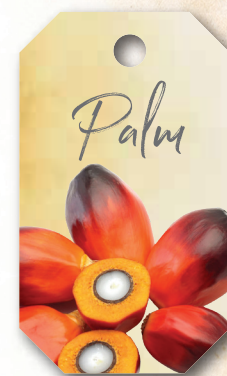
The results published here provide guidance on which oils work best for each particular dish based on the experience of consumers and chefs.

*Are you ready?*

## The Test

### The Contenders

These eight oils were tested across 20 dishes, which will come up tops in this test?







# The Test

## The Dishes



### Appetizer

ปอเปี๊ยะทอด / Spring Roll  
 หนมปังหน้าหมู / Minced Pork Toast  
 ปีกไก่ทอด / Fried Chicken Wing  
 ทอดมันกุ้ง / Shrimp Cake  
 ข้าวตังหน้าตั้ง / Rice Cracker

### Main Course

ไข่เจียว / Thai Omelette  
 ผัดไท / Pad Thai  
 ส้มตำทอดกรอบ / Deep-fried Papaya Salad  
 ข้าวผัด / Fried Rice  
 ผัดซีอิ๊ว / Stir-fried Noodle With Black Soy Sauce  
 หมีกรอบ / Sweet And Sour Crispy Rice Vermicelli  
 ผัดผักรวม / Stir-fried Vegetable  
 ผัดกระเทียม / Stir-fried Chicken With Thai Sweet Basil

### Dessert

กล้วยแขกทอด / Deep-fried Banana  
 กระทงทอง / Fried Sweet Batter With Sesame

# The Test

## The Chefs







# The Test

## The Judges

A panel comprised of professional chefs, consumers, foodies and cooking enthusiasts judged the best oil for each dish based on the following parameters:



### Battle of The Oils Thailand Sensorial Testing

Panelist: ( ) Food Instructors ( ) Foodie ( ) Food Students ( ) Housewife ( ) Non Foodie

Date: Dish:

Name: Oil:

Legend: 5 for the highest grading and 1 for the lowest grading.  
For each question, please grade by circling the number that represents your answer.  
Please also write your comment for the grading given.

Testers are required to rate the Colour and Appearance of all 8 dishes before the taste tests.

โปรดให้คะแนนและพิจารณา โดยตรวจสอบด้วยตา 5- นาทีก่อน 1- นาทีก่อน และให้คะแนน รสชาติและ  
คำอธิบายเพิ่มเติมในช่อง หมายเหตุ

1. Color & Appearance of the Dish สีและรูปลักษณ์ของอาหาร 1 2 3 4 5

Remark หมายเหตุ:

2. Taste of the Dish รสชาติของอาหาร 1 2 3 4 5

Remark หมายเหตุ:

3. Texture of the Dish เนื้อสัมผัสของอาหาร 1 2 3 4 5

Remark หมายเหตุ:

4. Smell of the Dish กลิ่นของอาหาร 1 2 3 4 5

Remark หมายเหตุ:

(Please re-look at the dish after 10 minutes กรุณาพิจารณาอาหาร หลังจากผ่านไป 10 นาที อีกครั้ง)

5. Color & Appearance of the Dish สีและรูปลักษณ์ของอาหาร 1 2 3 4 5

Remark หมายเหตุ:

### Battle of The Oils Thailand Cooking Testing Parameters (Professional Chefs)

Date: Dish:

Name: Oil:

1. Stability of the Oil during Cooking (Smoking point, how the oil holds over time whether it

needs to be changed before it smokes or turn dark/ burnt, any oil splattering, etc.)

คุณภาพและความคงทนของน้ำมัน ในระหว่างการทำอาหาร (จุดเกิดควัน ความคงทนเมื่อเวลาผ่านไป

ว่าต้องเปลี่ยนน้ำมันก่อนที่จะเกิดควันหรือเปลี่ยนเป็นสีเข้ม /ไหม้ น้ำมันกระเด็น) .....

2. Fat Absorption

การซับน้ำมัน .....

3. Smell of the Oil during Cooking

กลิ่นของน้ำมันในระหว่างทำอาหาร.....

4. Colour of the Oil during Cooking

สีของน้ำมันในระหว่างทำอาหาร.....

5. Preparation & Cooking Time Difference

เวลาที่ใช้ในการทำอาหารและเวลาที่ใช้ในการปรุง.....

6. Taste of the Dish (Ready to Serve/ After Shelf Life)

รสชาติของอาหาร ตอนเสิร์ฟ และหลังจากตั้งทิ้งไว้.....

7. Effect on Reheating Process (Taste, Texture, Colour & Smell)

ผลกระทบในระหว่างการอุ่นซ้ำอาหาร รสชาติ เนื้อสัมผัส สี และกลิ่น.....

And the results are...



# ปอเปี๊ยะทอด (Spring Roll)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



RUNNERS-UP



# ขนมปังหน้าหมู (Minced Pork Toast)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



RUNNERS-UP



## What do consumers say?

- Sunflower oil ranks highest with nice golden-brown color, great aroma, crispiness outside and juiciness inside.

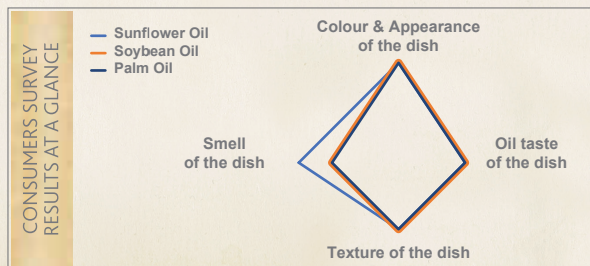
### Runners-up:

- Soybean oil gives nice golden color and crispy texture, despite a bit oily taste and color change after some time.
- Palm oil provides nice aroma and color, but texture is slightly harder.



## What do chefs say?

- Palm, corn and coconut oils give good crispiness and nice color, with good heat stability and no rancid smell.



## What do consumers say?

- Coconut oil gives nice long-lasting golden color, crispy texture, delicious coconut aroma and taste.

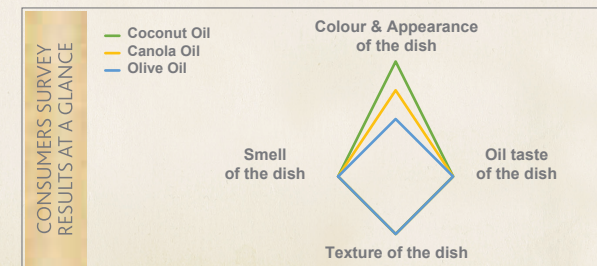
### Runners-up:

- Canola oil delivers nice long-lasting yellow golden color and good oil smell but a bit oily.
- Olive oil gives good color, very nice smell but loss of some crispiness after 10 min.



## What do chefs say?

- Palm, canola and rice bran oils are the best due to clear color when cooking and less oil absorption, while palm is the most heat stable.





# ปีกไก่ทอด

(Fried Chicken Wing)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**

RUNNERS-UP



Soybean



# ทอดมันกุ้ง

(Shrimp Cake)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**

RUNNERS-UP



Rice Bran



## What do consumers say?

- Soybean oil ranks the highest with long lasting appealing color, delicious taste and aromatic fragrance. Food is crispy outside and soft inside.

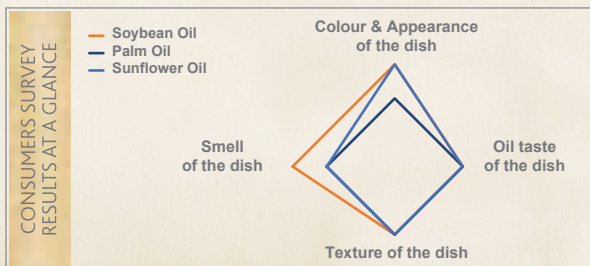
### Runners-up:

- Palm oil delivers nice yellow color and clean taste, leaving the dish crispy outside while soft inside.
- Sunflower oil delivers nice dark yellow color and good texture, despite texture being dried and uneven color after 10 min.



## What do chefs say?

- Palm, rice bran and soybean oils give nice aroma and brings up taste of food and non-oily mouthfeel.



## What do consumers say?

- Rice Bran oil ranks the highest with good non-oily taste, attractive aroma, crispy outer layer, soft inside texture and long-lasting nice golden color.

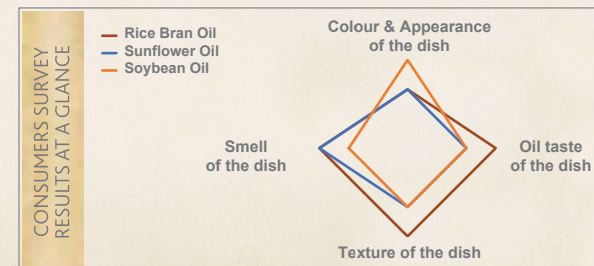
### Runners-up:

- Sunflower oil balances well on color, taste, aroma and crispy texture, but color turns a bit darker and a bit of oil leaks out after some time.
- Soybean oil gives darker color on the food and crispy texture.



## What do chefs say?

- Sunflower, soybean and coconut oils give good texture, taste and lowest oiliness.





# ข้าวตังหน้าตั้ง

(Rice Cracker)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



## RUNNERS-UP



# ไข่เจียว

(Thai Omelette)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



## RUNNERS-UP



## What do consumers say?

- Corn oil ranks the highest with consistent beautiful color, good volume, light crispy texture and clean taste both when freshly served and after a while.

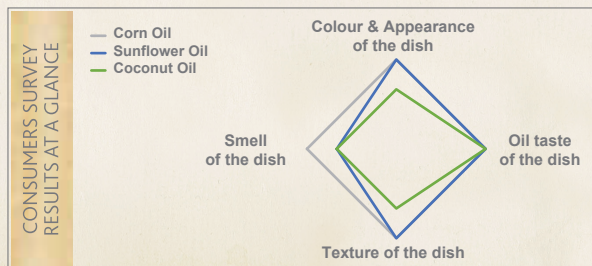
### Runners-up:

- Sunflower oil delivers long-lasting nice color and crispy texture.
- Coconut oil gives nice yellow color and light aroma, but texture is harder with some oil leaking after served.



## What do chefs say?

- Sunflower, corn and soybean oils support prolonged crispiness and good taste, being stable and clear during cooking



## What do consumers say?

- Corn oil ranks the highest with even light yellow color, fluffy texture, good shape and delicious taste that last.

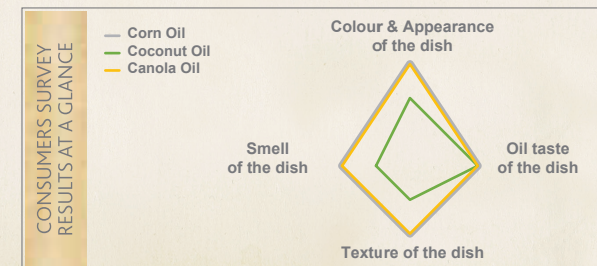
### Runners-up:

- Coconut oil delivers nice golden color and good shape to the dish, despite being a bit hard in texture. The coconut aroma matches well with the egg.
- Canola oil gives nice yellow color and soft fluffy texture when freshly served.



## What do chefs say?

- Soybean and coconut oils give rich good taste on food and not oily.





# ผัดไท

(Pad Thai)



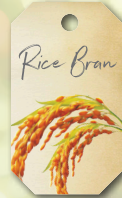
## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**

Olive

## RUNNERS-UP



# ส้มตำทอดกรอบ

(Deep-fried Papaya Salad)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**

Coconut

## RUNNERS-UP



## What do consumers say?

- Olive oil ranks the highest due to great fragrance, taste, texture and long-lasting beautiful color.

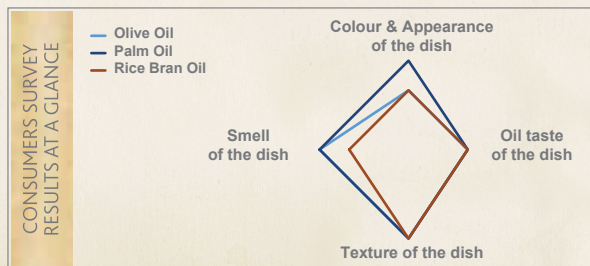
### Runners-up:

- Palm oil has a good balance on color, taste, aroma and texture, but the food dries up after a while.
- Rice Bran oil gives light color and taste, but color fades and food dries up after a while.



## What do chefs say?

- Most oils are suitable for this dish due to good taste and texture. But olive oil has faster heat reaction and nice color during cooking.



## What do consumers say?

- Coconut oil ranks the highest with aromatic sweet fragrance, crispy texture outside, soft texture inside and great taste, which compensates for the softened texture after food is served for a while.

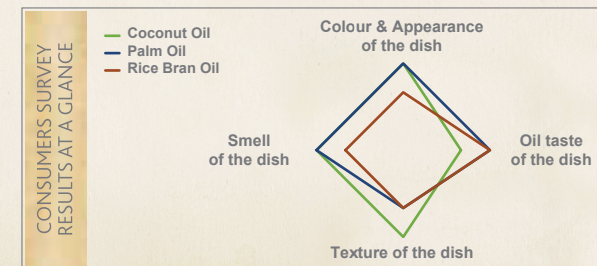
### Runners-up:

- Palm oil brings nice even golden color, good taste and crunchiness.
- Rice Bran oil delivers light yellow color and crispiness, despite a little oiliness.



## What do chefs say?

- Palm and soybean oils are best with aroma and low oil absorption. The dish is tasty and remains crispy over time.





# ข้าวผัด

(Fried Rice)



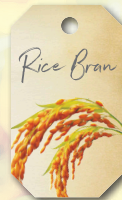
## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



## RUNNERS-UP



# ผัดซีอิ๊ว

(Stir-fried Noodle With Black Soy Sauce)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



## RUNNERS-UP



## What do consumers say?

- Sunflower oil ranks the highest due to nice bright yellow color, soft but not wet rice texture, appealing aroma and good taste.

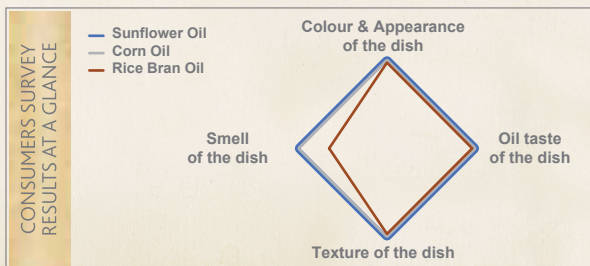
### Runners-up:

- Corn oil has a good balance of aroma, texture and taste despite color changing and a bit of oiliness after dish is served for a while.
- Rice Bran oil delivers soft rice texture and good taste, but color is a bit too light.



## What do chefs say?

- Palm, corn and sunflower oils are best with nice aroma and consistent texture over time.



## What do consumers say?

- Coconut oil ranks the highest with good taste and strong aroma that match well with the food.

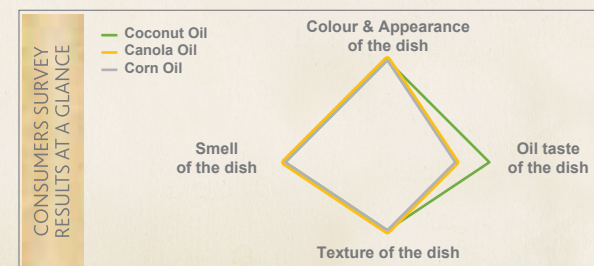
### Runners-up:

- Canola oil gives nice dark shine and good taste, despite texture being a bit harder.
- Corn oil delivers lighter color, good taste and soft texture, but smells a bit burnt.



## What do chefs say?

- Sunflower and corn oils are top on food taste and least oiliness over time.





# หมี่กรอบ

(Sweet And Sour Crispy Rice Vermicelli)



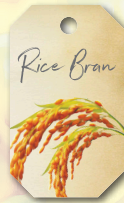
## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



## RUNNERS-UP



# ผัดผักรว

(Stir-fried Vegetables)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**



## RUNNERS-UP



## What do consumers say?

- Sunflower oil ranks the highest with beautiful light color, good volume, clean taste, crispy texture that maintains well over time.

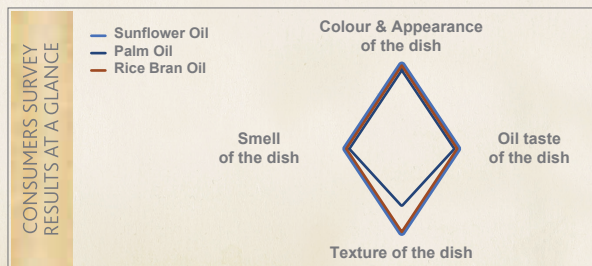
### Runners-up:

- Palm oil performs well on color and taste, with less volume and harder texture.
- Rice Bran oil provides good dark yellow color, good volume, clean taste but less crispy texture.



## What do chefs say?

- Sunflower, corn and soybean oils deliver great clean taste and prolonged crispiness.



## What do consumers say?

- Olive oil ranks the highest with consistent beautiful color, fragrant aroma, great taste and crispy vegetable texture.

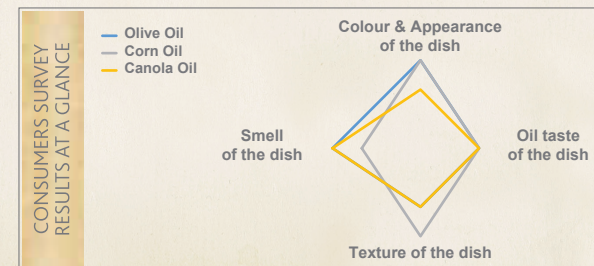
### Runners-up:

- Corn oil works well in terms of nice color, aroma and crunchiness.
- Canola oil delivers nice shiny appearance, crispy texture but slightly more oily taste.



## What do chefs say?

- Coconut oil brings up better food taste and corn oil produces nice aroma. Both oils support consistent taste and color.





# ผัดกะเพรา

(Stir-fried Chicken With Thai Sweet Basil)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**

Rice Bran

## RUNNERS-UP



# กล้วยแขกทอด

(Deep-fried Banana)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

**BEST**

Canola

## RUNNERS-UP



## What do consumers say?

- Rice Bran oil ranks the highest with enhanced aroma, clean non-oily taste and tender texture. Food remains good appearance after served.

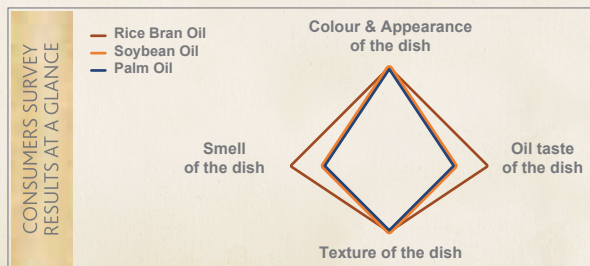
### Runners-up:

- Soybean oil gives darker color, but achieves good balance on aroma, taste and texture.
- Palm oil delivers light color and soft texture, however taste is a bit oily. Food dries after served.



## What do chefs say?

- Rice bran, corn and canola oils are top choices with great taste and aroma and less oiliness.



## What do consumers say?

- Canola oil ranks the highest with superior crispiness, delicious taste and long-lasting even golden color.

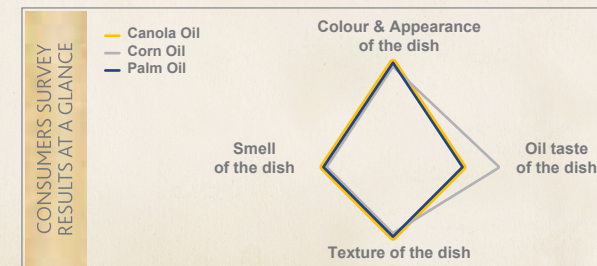
### Runners-up:

- Corn oil delivers nice golden yellow color and brings up good taste and aroma of the food.
- Palm oil gives the good harder texture and darker color, but still crispy.



## What do chefs say?

- Palm and soybean oils deliver good taste, while being heat stable for frying.





# กระเบื้องทอด

(Fried Sweet Batter With Sesame)



## Test Results

BEST  
OVERALL OIL  
FOR THIS  
DISH

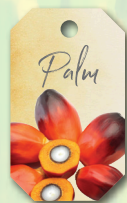
**BEST**

Rice Bran

## RUNNERS-UP



Coconut



Palm



## What do consumers say?

- Rice Bran oil ranks the highest rank due to even golden color, good shape, crispy texture, light aroma and clean non oily mouthfeel.

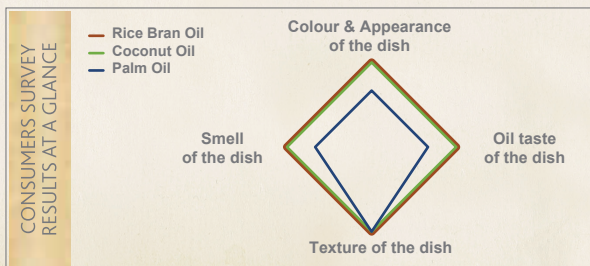
### Runners-up:

- Coconut oil provides a distinctive smell and golden color, despite a little oiliness.
- Palm oil is darker in color but delivers good crispiness, despite oiliness.



## What do chefs say?

- Palm, sunflower and corn oils suit this dish the best, with clean taste and crispy texture.



# Top Choice in Aggregate

We hope that you have enjoyed this culinary journey as much as we did. Through this, we hope to have increased your awareness of how different oils can impact your dishes and help you to become a better cook, whether it be in a restaurant or at home.

If your restaurant covers a wide variety of dishes, it would be too challenging to have to store eight different types of oil in your kitchen, as that would be too complex to handle. We have therefore taken a realistic approach and summarised the survey results of this culinary journey below.

## Consumers' Choice



## Chefs' Choice



We also very much welcome your comments and would like to hear from you on your experiences and findings. Please email us with your comments at [CS-Oils@bunge.com](mailto:CS-Oils@bunge.com)

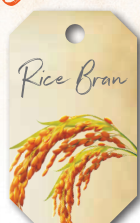


# Do you know your oils?



## Sunflower oil

Sunflower oil originates mostly from Ukraine and Russia. It is low in saturated fats and rich in Omega 9 and 6 and antioxidants (Vitamin E, sterols and squalene)



## Rice Bran oil

Rice bran oil commonly uses as a cooking oil in many Asian countries. Rice bran oil extracted from the hard-outer brown layer of rice. It is relatively low in saturated fats and rich in antioxidants (Vitamin E and Oryzanol)



## Canola oil

Canola oil originates mostly from Canada and China. It is low in saturated fats and rich in Omega 9, 6 and 3 and antioxidants (Vitamin E)



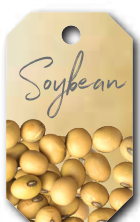
## Corn oil

Corn oil originates mostly from the USA. It is relatively low in saturated fats and rich in Omega 6 and 9



## Olive oil

Olive oil originates mostly from Spain. Pomace oil is extracted from olive pulp after the first press. It is relatively low in saturated fats.



## Soybean oil

Soybean oil originates mostly from North and South America. It is relatively low in saturated fats and rich in Omega 6 and 9.



## Coconut oil

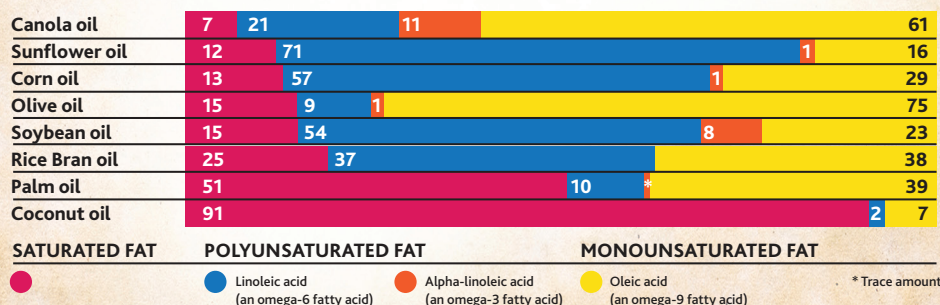
Coconut oil originates mostly from Indonesia, Philippines, and India. It is high in saturated fats but rich in medium chain triglycerides.



## Palm oil

Palm olein oil originates mostly from Indonesia and Malaysia. It is high in saturated fats but rich in beta-caroten.

### COMPARISON OF DIETARY FATS



**BUNGE**  
Loders Croklaan

### What we do

We bring food from where it is grown to where it is needed. For the last 200 years, Bunge has served the world, connecting harvests to homes, restaurants, hotels, bakeries and food manufacturers.

### Our living heritage

We see our work as a huge opportunity and an important responsibility. We maximise the value of the agrifoodchain in for communities, shareholders and ourselves by producing safe and high-quality products, and acting as a trusted partner to farmers, customers and consumers.

### From farm to table

We ensure quality and food safety from the farms to your table. As world populations grow, we rely increasingly on farmers in the Americas and Europe. As a partner of choice, we help them deliver better harvests and select to deliver you with the highest quality food all year round.



The Thailand Chefs Association was registered as "Thai Chefs Association" in 2525. In 1992, the name was changed to "Thailand Chefs Association" and in the same year joined the World Association of Cooks Societies (WACS) as a member of the World Chef Association.

Currently, the association consists of more than 500 members, most are Thai professional working in the hotel, culinary schools, universities, colleges, restaurants and various food-related industries in various regions such as Koh Samui, Phuket, Hua-Hin, Pattaya, Chiangmai and Korat are affiliated with the Thailand Chefs Association.

Over the past 10 years, the association has contributed to the development of people and the food service industry, support activities to help society, as well as building a reputation for Thailand by sending a team to compete in international culinary events and receiving numerous awards. In 2018, Thailand was honored as the president of the 10<sup>th</sup> ASIAN WACS Forum held in Thailand with professional collaboration and support from the World Chef Association that is a great honor to the Thailand Chef Association.





## Testimonials

" Bunge organized this event to evaluate the performance of 8 popular vegetable oils on 15 favorite dishes. We invited Chefs, consumers, foodies and cooking enthusiasts as judges "

Ms. Wipawee Wongmark, Food Service Marketing Manager

" From the Association's point of view, the various oils we tested today will be useful for members. Each oil performs differently in terms of aroma, color, the taste especially and also the texture. We can learn, experience, use and develop further. "

Mr. Somsak Rarongkam, President Thailand Chefs Association

" I have never tried these 7, 8 oils so today I get to try them. It's a knowledge. It's like a classroom, a science lab. And it seems that the results are different. I think today's event will be beneficial to everyone working in this industry. "

Mr. Teerapat Teeyasoontranon (Chef R), Celebrity Chef and Iron Chef Thailand

" This exercise shows us properties of some oils that we can use differently in our cooking. This is good for us to know, that some oils can be used in our kitchen. "

Mr. Komsan Choyadiros, Chef de Cuisine

" In the food industry, we clearly see that oil is a factor of good cooking results. Each oil plays an important role on each type of food differently. Some oils give nice volume but do not contribute to crispiness of the food. This knowledge will be beneficial to consumers. We can now choose the right oil that will give health benefits to consumers with better tasting dishes. "

Mr. Teeravee Ditsayachaipong, Food Instructor

" This event made me realize that when we choose ingredients, we have to choose according to the food that we plan to cook. This will ensure that the food come out good, appetizing and delicious. Also, consumers will be happy. "

Food blogger IG @mee\_bakingtime

" I have learnt that if we use the same oil for different types of food or cook the same food with different oils, it will have completely different effect on hardness and softness of the food. "

Food blogger IG @ARPAPHAN #aumfooddiary

" In the past, I've never paid attention to the types of oil used on different food to make it more delicious. Now I know that if we choose the right oil, our dishes will be more impressive. "

Food blogger FB @BOVY



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