

## VIETNAMESE POMELO PRODUCTS



1. **The slogan:** Vietnamese pomelo - Fresh taste from Vietnamese land

2. **Introduction:** Vietnamese Pomelo *Citrus maxima* (Burman) Merr

Pomelo is a fruit of the citrus genus, usually with light green to yellow color when ripe, thick skin, spongy peels, sweet and sour or sweet depending on the different varieties.

Image of Pomelo (Pomelo with the skin intact, Pomelo on the tree, Pomelo segments ...)

### - *Origin*

Vietnamese pomelo is a specialty fruit of Viet Nam, with natural sweetness and characteristic aroma. Viet Nam has a variety of outstanding different types of pomelo such as Da Xanh pomelo, Nam Roi pomelo, Dien pomelo, Doan Hung pomelo, Phuc Trach pomelo ... With a thin skin, the fruits are large and firm with beautiful colors. Vietnamese pomelo is not only a treat to eat but also brings nutritional value to health.

Each Pomelo variety has its own origin. Ben Tre land is one of the localities with a large green pomelo growing area with a long history. This place has long formed areas specializing in pomelo cultivation, bringing good source of income to farmers. Based on annual statistics, Ben Tre's Da xanh pomelo planting area is

gradually increasing.

Phu Dien region has a unique tree variety that is Phu Dien pomelo. At the beginning of the 20th century, the whole Phu Dien region was severely affected by the historic flood (1915) that destroyed the country for several years. However, that flood also brought a lot of silt to the land and enriched the fields. At that time, Mr. Ly Khang went to visit Doan Hung, found that the pomelo variety here was so juicy that he asked to bring the seedlings back home to plant. The root from that Pomelo tree in his house gave branches to hundreds of other houses, spreading to the whole commune.

Nam roi pomelo is one of the famous specialties in Vinh Long, originating from My Hoa commune, Binh Minh district. This is considered a land abundantly accreted by alluvium from Hau River, Tra Von River plus extremely favorable weather conditions for the growth and development of this pomelo variety.

According to some old documents, the Nam roi pomelo variety was found by Mr. Tran Van Bui (1918 - 1990), a native of Mai Dam village, now in Phu Huu A commune, Chau Thanh district, Hau Giang. At the time of his birth, Mr. Pomelo worked as a river trader, when he stopped his boat in Xinzhou, he picked up a strange fruit in the river. This fruit has green skin, red and yellow intestines, eaten with a sweet and juicy taste, so he took the seeds to grow in Phu Huu.

After this pomelo variety was popularized throughout Mr. Tran Van Bui's countryside, many people from other places also came to ask for the plant variety to plant. Today, Nam Roi pomelo is most grown in Phu Huu, Chau Thanh, Hau Giang and Binh Minh, Vinh Long.



Pomelo in Tan Trieu, Dong Nai formed very early in the years after 1869, when this land was still wild, sparsely populated about 10km from Bien Hoa City. At that time, the Tan Trieu church was built, the parish priest brought two Pomelo trees from Brazil to plant in front of the yard. Every year, the Pomelo tree bears many fruits. Seeing this, people asked to extract branches to plant and replicate throughout the region. After the Nham Thin flood (1952), the land of Tan Trieu no longer grows betel nut, people switched to pomelo cultivation. Gradually, a century passed, pomelo trees were present throughout the region and became a specialty of Dong Nai province with many different types such as Duong La Cam Pomelo, Guava Pomelo, Duong Da Lang Pomelo, Thanh Tra Pomelo, Duong Hong Pomelo, Pomegranate Pomelo ...

***- Main varieties in Viet Nam***

Name	Shape, color	Weight (g)	Sweetness (%)	Distinctive features	Distribution location
Da xanh	The fruit is round, green skin when ripe	1800-2000	11-12	The skin is pale pink. The juice is medium, sweet and excellent, rich taste.	Mo Cay district, Chau Thanh district, (Ben Tre province); Chau Thanh District (Tien Giang Province)
Nam Roi	Pear-shaped, yellow-green peel when ripe	1400-1800	6-8	The pulp of pomelo is white, the citrus of pomelo is yellowish-green, the Pomelo clove is yellow, even, smooth, juicy but dry, easy to separate from the pulp of Pomelo. The	Binh Minh District, Vinh Long Province

				fruit shaft is dense, with few seeds or no seeds. A lot of juice, good taste and sweet, strong taste.	
Dien	Round, yellow pods	800-1000	12-14	The fruit is yellow. Rich sweet taste	Bac Tu Liem District (Hanoi)
Doan Hung	Round	700-800	9-11	Juicy, easy to peel with only a few seeds; The flesh is sweet and slightly bitter.	Doan Hung District (Phu Tho Province)
Phuc Trach	Round, Yellowish-green shell	1000-1200	10-12.8	The flesh is light pink or white. Sweet, slightly sour taste	Phuc Trach district, Ha Tinh province
Tan Trieu	Pear-shaped, yellowish-green peel when ripe	800-1200	10.6	The shell is thin, sweet, without a slightly bitter taste and after-sweet. The flesh is easily separated from the citrus, light yellow in color.	Tan Trieu, Dong Nai Province, Vinh Cuu District, Binh Duong Province

*(Pictures of Pomelo varieties)*

***- Harvest season of main Pomelo varieties***

Growing area	Harvest	Maincultivated Pomelo varieties/types
Northern Mountainous Midlands	Flowering months 2 - 3, fruits ripen in October - 11.	Doan Hung, red Pomelo in Tan Lac Hoa Binh, Da xanh
Red River Delta	Flowering February - 3, fruits ripen in December - January of the following year	Perform
North Central Coast	Flowering months 2 - 3, fruits ripen in months 9 - 10	Phuc Trach Pomelo, Thanh Tra
South Central Coast		
Central Highlands	Year-round, concentrated from 6-8 months	Da xanh Pomelo, rubi pink Pomelo
Southeast Region	harvested year-round but most concentrated from 8-11 months every year	Da xanh
Mekong Delta	harvested year-round but mostly concentrated from 8-11 months every year	Da xanh

**- *Benefits of Pomelo***

+ *Value of use*: Pomelo can be consumed as fresh products or processed for many different purposes:

\*Fruit peels, leaves and pulps are also used. People collect ripe fruits in autumn and winter, dry them in the shade and then hang them on the stove; the skin would be peeled off to be used for washing. The leaves are harvested all year round, used fresh or dried in the shade.

\*Cosmetic products: Pomelo flowers can be used to produce shower gels, lotions, perfumes ...

\* Food and beverages: Pomelo juice, Pomelo wine, Pomelo tea, Pomelo jam, Pomelo tea, other dishes from Pomelo ...

\* Other uses: Pomelo flavor, Pomelo bonsai for decoration ...

+ *Nutritional value in pomelo*

The outer shell is rich in narin-gosid. The peel is bitter and has essential oils, about 0.80-0.84%. Fruits contain 0.5% essential oils. The leaves also have essential oils. Pomelo peel essential oil contains d-limonene, a- pinene, linalol, geraniol, citral; and also alcols, pectins, citric acid. Ripe fruit juice has many nutrients: water 89%, glucid 9%, protid 0.6%, lipids 0.1% and minerals Ca 20mg%, P 20mg%, K 190mg%, Mg 12mg%, S 7mg% and Na, Cl, Fe, Cu, Mn... Fruits have vitamins such as (in mg%) C 40, B 0.07, B2 0.05 PP 0.3 and vitamin A 0.1. 100 mg of fruit can produce 43 calories.

+ *Benefits of Pomelo for consumers' health*

Boosts the immune system: Contains natural antioxidants, which help protect the body from the effects of free radicals and the aging process.

Antioxidant: Contains natural antioxidants, which help protect the body from the effects of free radicals and the aging process.

Protects heart health: Pomelo contains natural anti-bacterial qualities, which can help reduce the risk of cardiovascular problems.

Supports the digestive system: Pomelo contains natural fiber, which enhances digestive function, prevents constipation and maintains a healthy digestive system.

### **3. Export Markets**

Vietnamese fresh pomelo is not only consumed in Viet Nam but also exported to many countries, including EU, Russia, Chile, USA, Canada.... The main export varieties include Nam Roi, Da Xanh, Dien pomelo, Doan Hung pomelo, ... and mainly produced in Long An, Ben Tre, Soc Trang, Hau Giang and Vinh Phuc.

It is expected to be able to export about 110,000 tons per year.

Pomelo is harvested and exported year-round, but the peak harvest period is from May to August.

Da xanh Pomelo has been exported the most. Currently, Da xanh pomelo is available in 50 different markets around the world. Under normal conditions, Da xanh Pomelo can last longer than 15 days.

### **4. Pomelo growing area and production capacity**

Pomelo is produced in every region and locality in the country. Pomelo production areas have been formed on a large scale and concentrated in regions such as: Northern mountainous midlands: Phu Tho pomelo (Doan Hung district,



Phu Ninh), Bac Giang (Luc Ngan district), Hoa Binh (Cao Phong district, Luong Son, Tan Lac, Kim Boi district), Tuyen Quang (Yen Son district, Ham Yen); *North Central region*: Pomelo Ha Tinh (Huong Khe district, Huong Son), Thanh Hoa (Tho Xuan, Nhu Xuan, Thach Thanh districts) ... ; *Red River Delta*: Pomelo in Hanoi (Hoai Duc, Quoc Oai, Chuong My, Phuc Tho districts).



The country has about 105,400ha of pomelo cultivation, the output is nearly 905,000 tons; with diverse varieties of pomelo, specific to each region. Specifically, the Red River Delta has more than 13,000ha with an output of over 175,000 tons, the northern mountainous Midlands has more than 30,000ha with an output of 253,000 tons. The largest pomelo growing area is concentrated in the Mekong Delta with about 32,000 hectares, the output is about 369,000 tons. The yield is from 68-158 quintals / ha. High pomelo yield is concentrated in the Hip River Delta and Mekong Delta

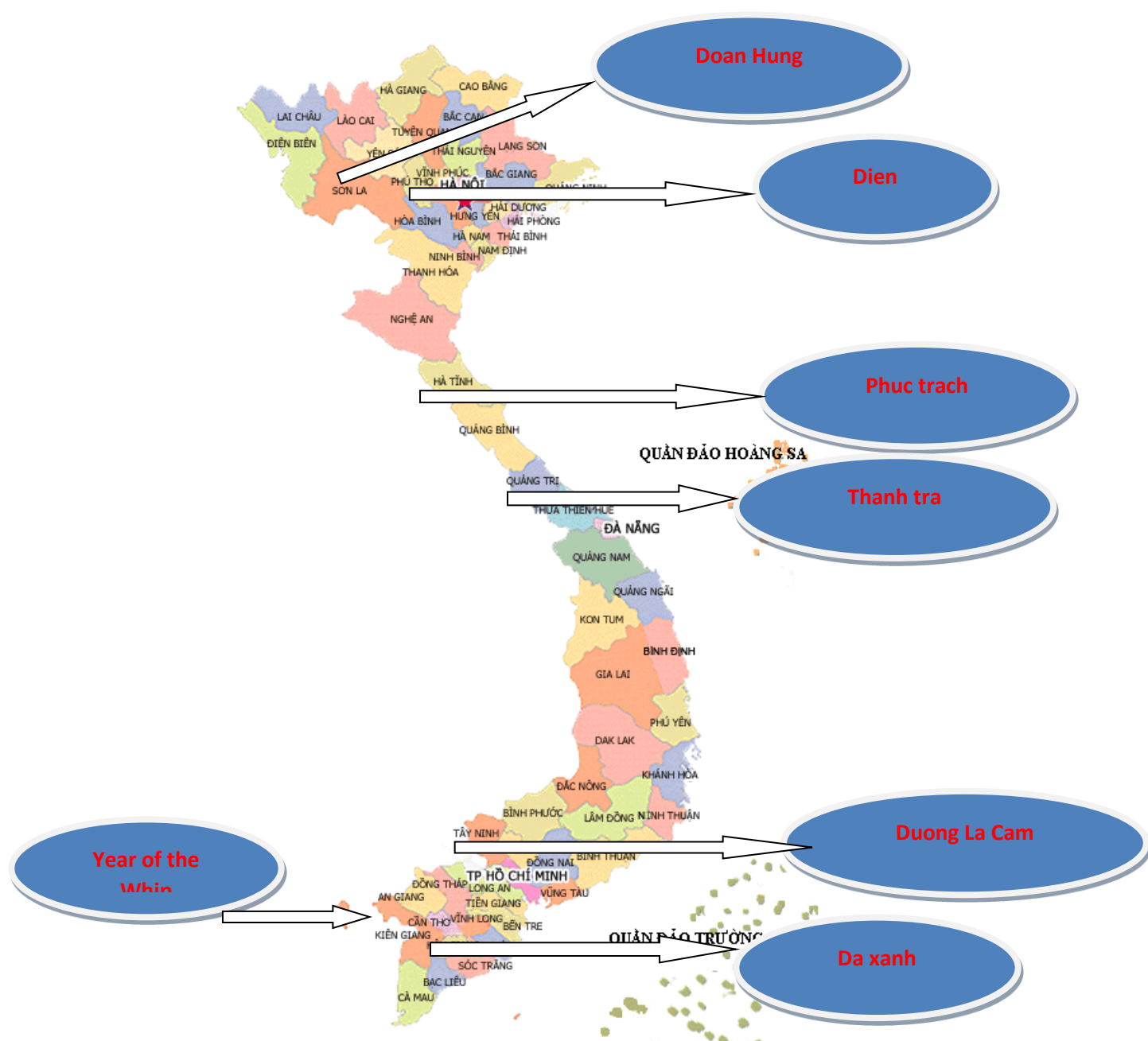
**Table 1. Pomelo growing area in Viet Nam**

Region	Pomelo growing area (ha)		
	2015	2020	2021
Northern Mountainous Midlands	996,8	1.777,4	30.558,25
Red River Delta	5.854,0	5.928,1	12.664,14
North Central Coast	4.546,5	4.859,3	9.323,71

Region	Pomelo growing area (ha)		
	2015	2020	2021
South Central Coast	644,0	651,4	3641,1
Central Highlands	255,8	259,1	1.393,11
Southeast Region	3.925,0	4.027,1	16.297,03
Mekong Delta	2.4793,0	25.173,6	31.925,49
<b>All</b>	<b>46.538,0</b>	<b>48.917,6</b>	<b>105.802,81</b>

(Source: Ministry of Agriculture and Rural Development)

Picture 1. Main varieties of pomelo and growing regions





**Table 2. Fresh pomelo production in Viet Nam**

Growing areas	Production (tons/year)		
	2015	2020	2021
Northern Mountainous Mid-range	6,240,8	6.493. 8	204.456. 7
Red River Delta	75.921. 0	76,464,9	165,314,4
North Central Coast	34.589. 1	38.457. 2	91.218. 3
South Central Coast	2.176. 7	2.279. 7	9.166. 6
Central Highlands	1.539. 6	1.535. 7	3.994. 0
Southeast	31.820. 5	31.179. 9	99.854. 9
Mekong Delta	32.381. 5	36.234. 1	329.193. 0
<b>All</b>	<b>258.087. 1</b>	<b>265.266. 2</b>	<b>903.197. 9</b>

(Source: Ministry of Agriculture and Rural Development)

### **5. Production process and preservation of fresh Pomelo**

- Production process (diagram)
- Harvesting and preservation (diagram)
- Preliminary processing and treatment before export