

The Chinese Citrus Industry

ICBC 2025

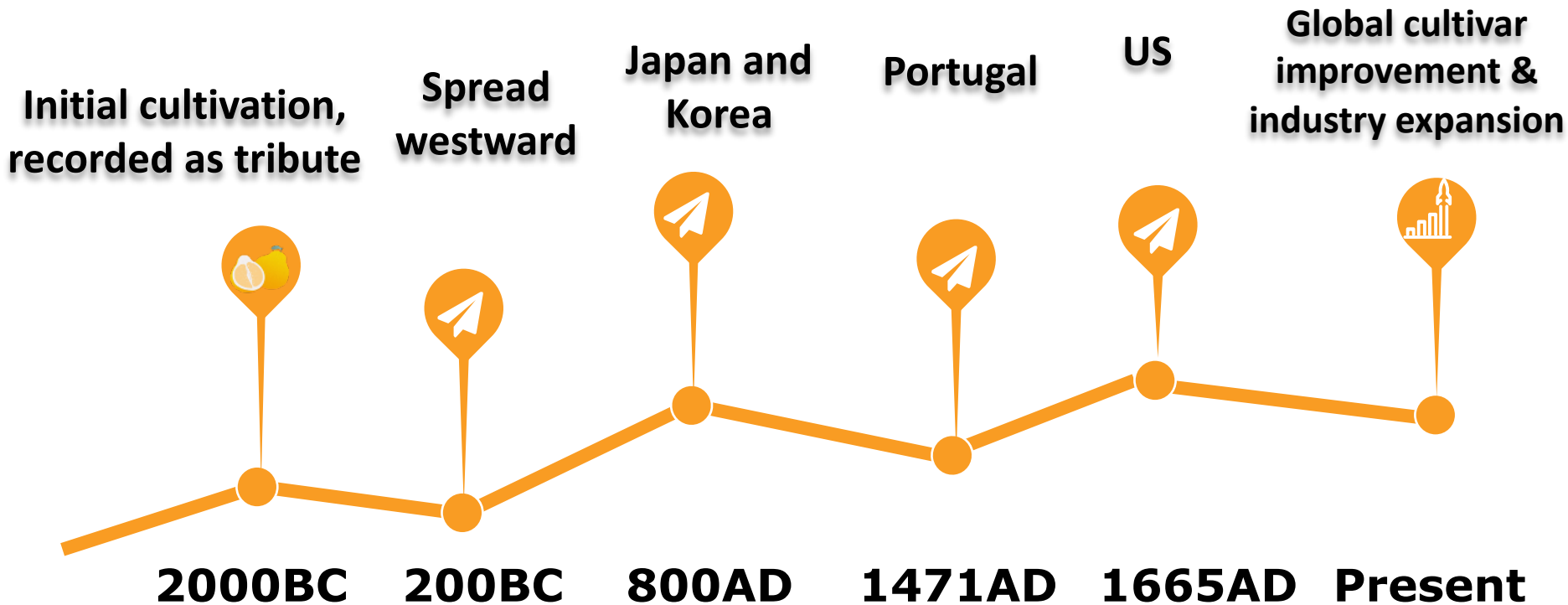
Beijing Yiqing Holding Co., Ltd.



2025.09.24



4000 Years Cultivation History



CONTENT

1. Overview of Chinese citrus industry
2. BAOF - a mandarin producer model
3. Citrus applications in BJYQ



Overview of Chinese citrus industry

1
PART 01



Overview of Chinese citrus industry

- **Production**
 - **Consumption**
 - **Challenges**
 - **Trends**
- 



Overview of Chinese citrus industry

- **Production**
 - **Consumption**
 - **Challenges**
 - **Trends**
- 

»» 1.1 Production - Varieties



北京一轻
BEIJING YIQING

2000+ Local Varieties

**Natural selection &
Artificial breeding**

»» 1.1 Production - Varieties

3 major varieties

✓ **Mandarin**

Sugar, Orah, Satsuma

✓ **Orange**

Navel, Bingtang, Valencia

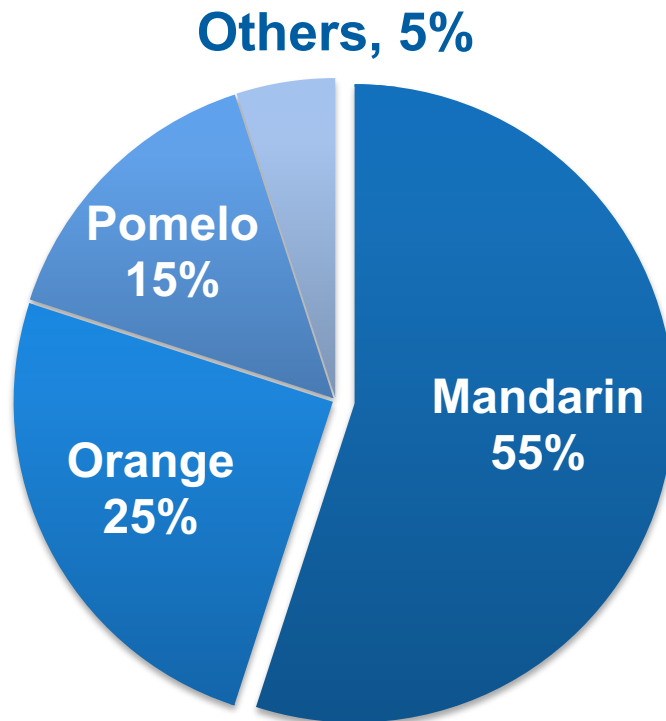
✓ **Pomelo**

Guanxi Honey, Shatian



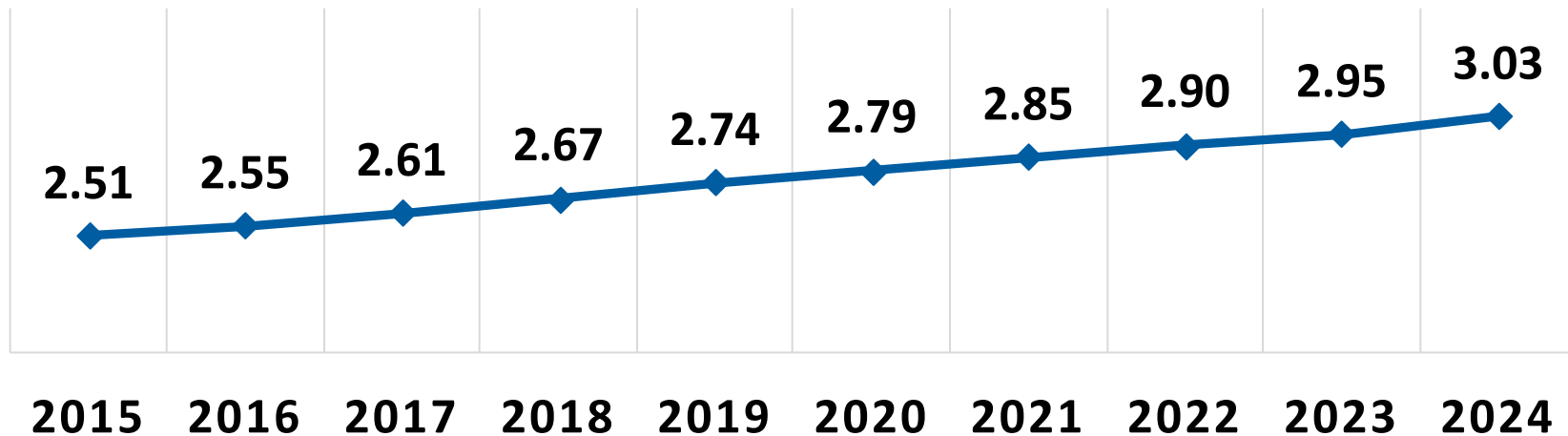
>>> 1.1 Production - Varieties

Variety structure



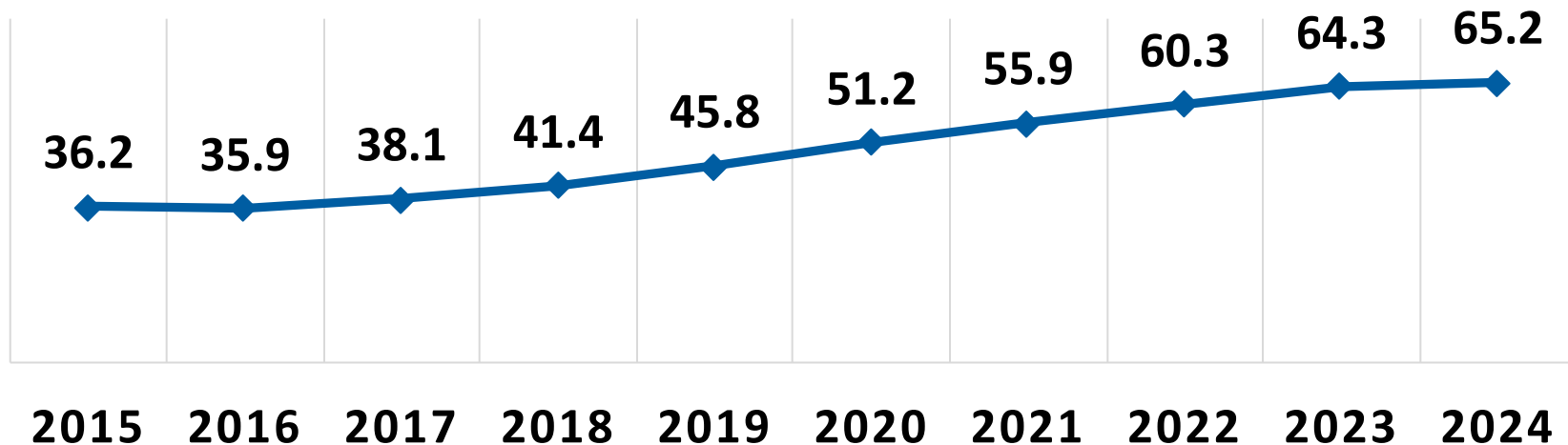
>>> 1.1 Production - Planting area

- ✓ **3 Mha (45mMu) , 30% global area**
- ✓ **Average growth rate 2.1%**



>>> 1.1 Production - Output

- ✓ **65 Mt** in 2024/25, **33%** global yield
- ✓ Average growth rate **2.5%**



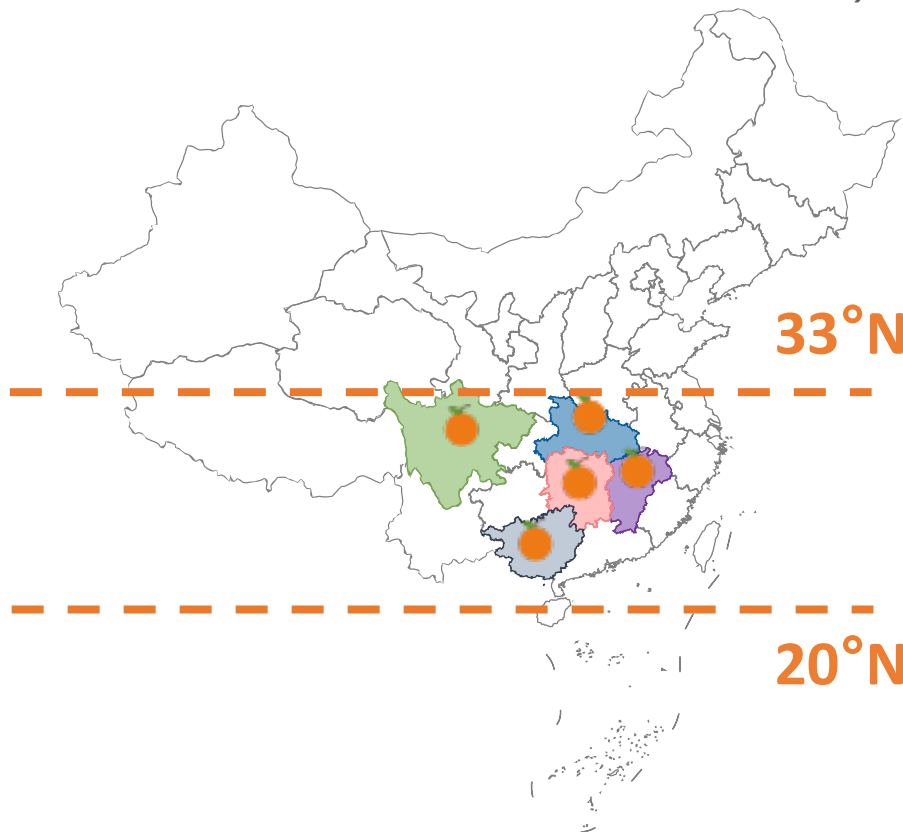
»» 1.1 Production - Layout



北京一轻
BEIJING YIQING

Top5: 77% Output

- Guangxi
- Hunan
- Hubei
- Sichuan
- Jiangxi



Golden Citrus Growing Belt

>>> 1.1 Production - Layout



北京一轻
BEIJING YIQING

Guangxi

31% national output \approx 20 Mt

Features tangerines and mandarins

Sugar Mandarin

Mid-ripening

Orah

Late-ripening



>>> 1.1 Production - Layout



北京一轻
BEIJING YIQING

Hunan

14% national output \approx 9 Mt

Features mandarins and oranges

Satsuma

Mid-ripening

***Bingtang* orange**

Mid-ripening



>>> 1.1 Production - Layout



北京一轻
BEIJING YIQING

Hubei

13% national output \approx 8 Mt

Features mandarins and oranges

Wudang Mandarin

Early-ripening

Navel Orange

Mid-ripening



>>> 1.1 Production - Layout



北京一轻
BEIJING YIQING

Sichuan

10% national output \approx 7 Mt

Features citrus hybrids

Dekopon

Late-ripening

Beni Madonna

Late-ripening



>>> 1.1 Production - Layout



北京一轻
BEIJING YIQING

Jiangxi

9% national output \approx 6 Mt

Features oranges

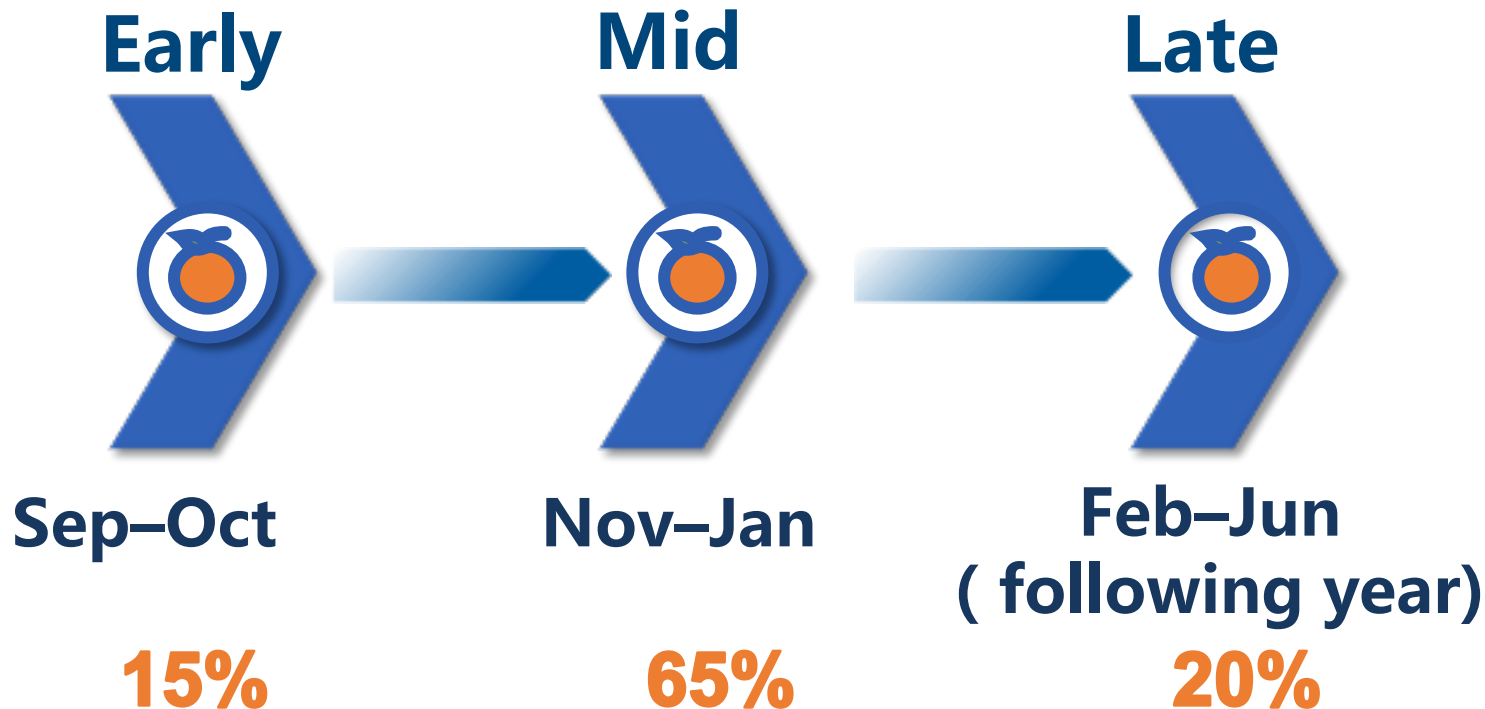
Navel Orange

Mid-ripening



>>> 1.1 Production - Layout

Ripening season difference





Overview of Chinese citrus industry

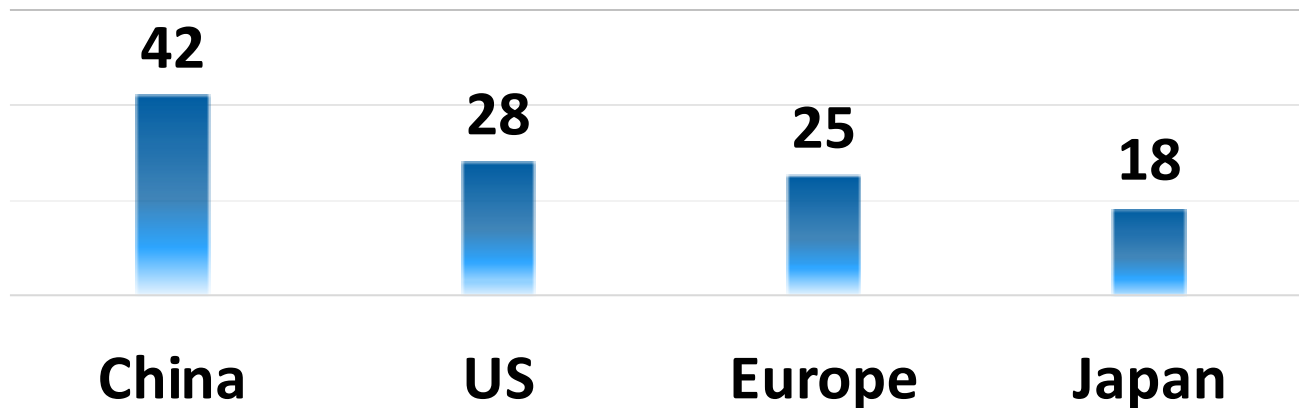
- **Production**
 - **Consumption**
 - **Challenges**
 - **Trends**
- 

»»1.2 Consumption - Size

Market size

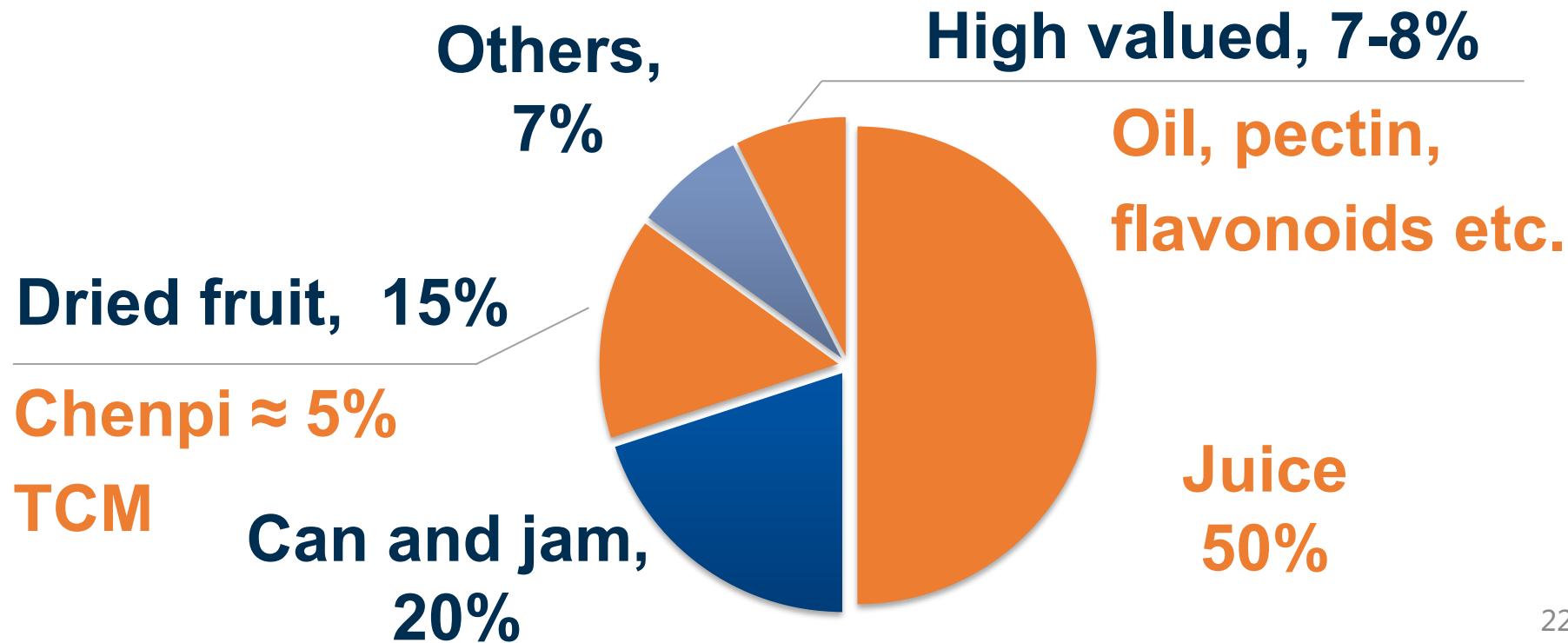
✓ 35.2 Bn\$ (≈253 billion RMB)

✓ ≈ 42kg Per capita



»» 1.2 Consumption - Structure

80% fruit & 20% processed



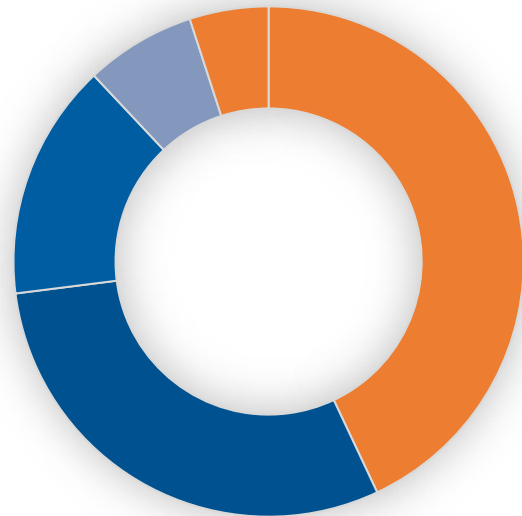
»» 1.2 Consumption - Mandarin



北京一轻
BEIJING YIQING

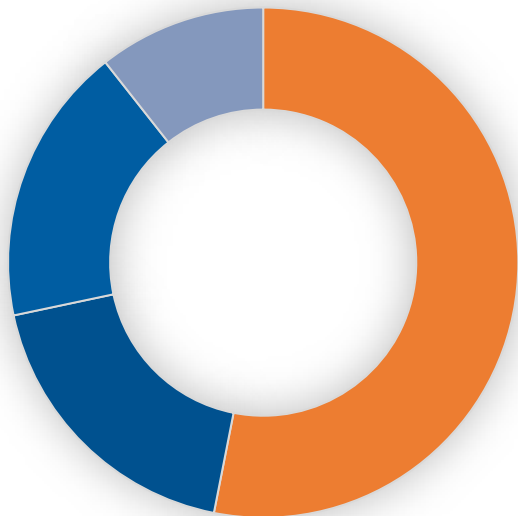
75% fruit & 25% processed

- 43% Juice
- 30% Can and jam
- 15% Dried fruit
- 7% Peel extraction
- 5% Vinegar, fruit wine etc.



»» 1.2 Consumption - Orange

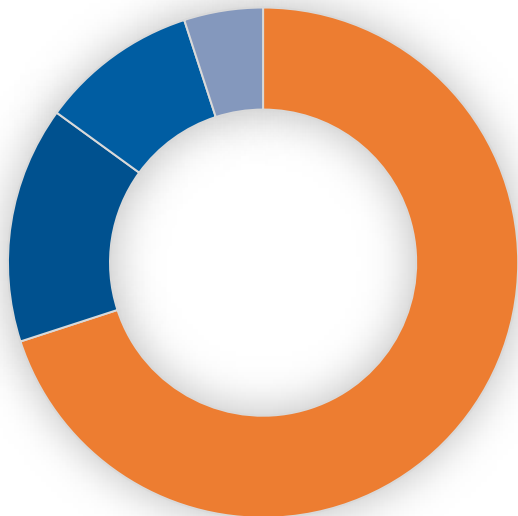
94% fruit & 6% processed



- **60% Juice**
- **21% Snacks**
- **7% Pectin etc.**
- **12% Others**

>>> 1.2 Consumption - Pomelo

85% fruit & 15% processed

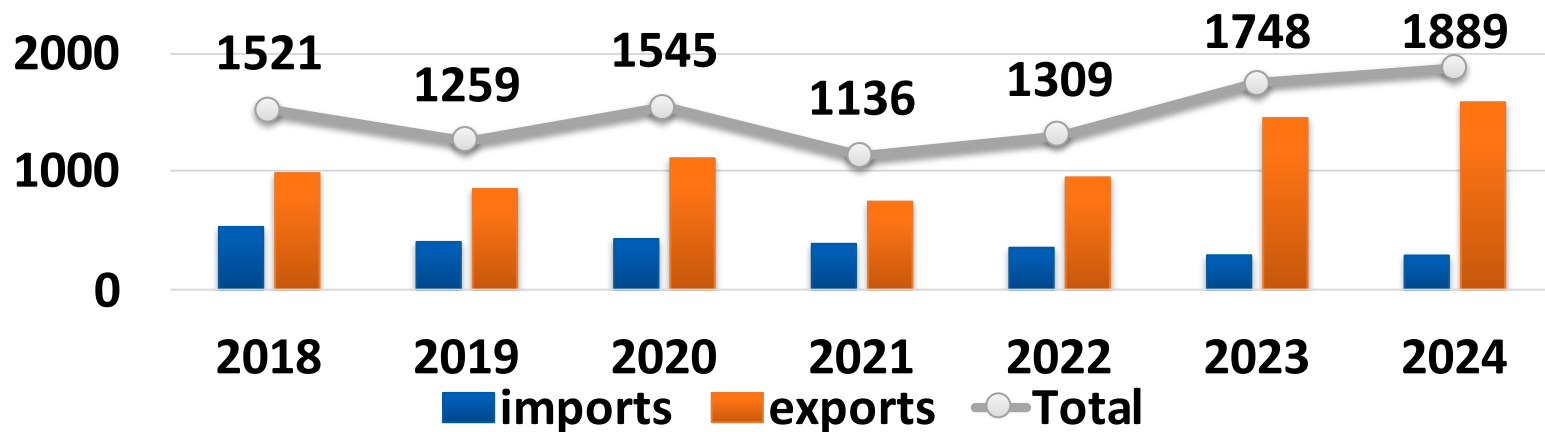


- **70% Juice**
- **15% Snacks**
- **10% Extractions**
- **5% Others**

>>> 1.2 Consumption - International Trade

Trade Volume

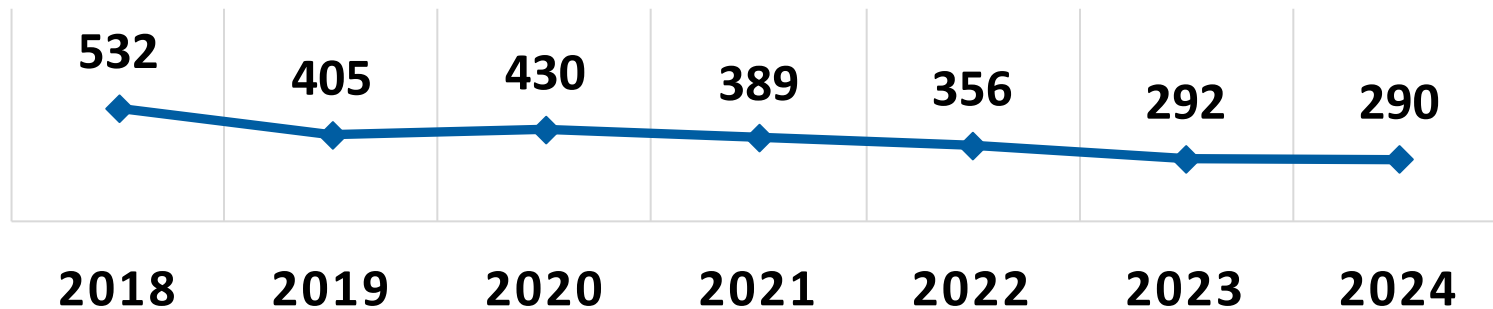
- 1.89 Mt fruit & 117kt juice



»» 1.2 Consumption - International Trade

Imports

- ✓ **290kt** fruit, valued **446 M\$**, S. Africa, Aus.
- ✓ **111kt** juice, valued **420 M\$**, Brazil, US

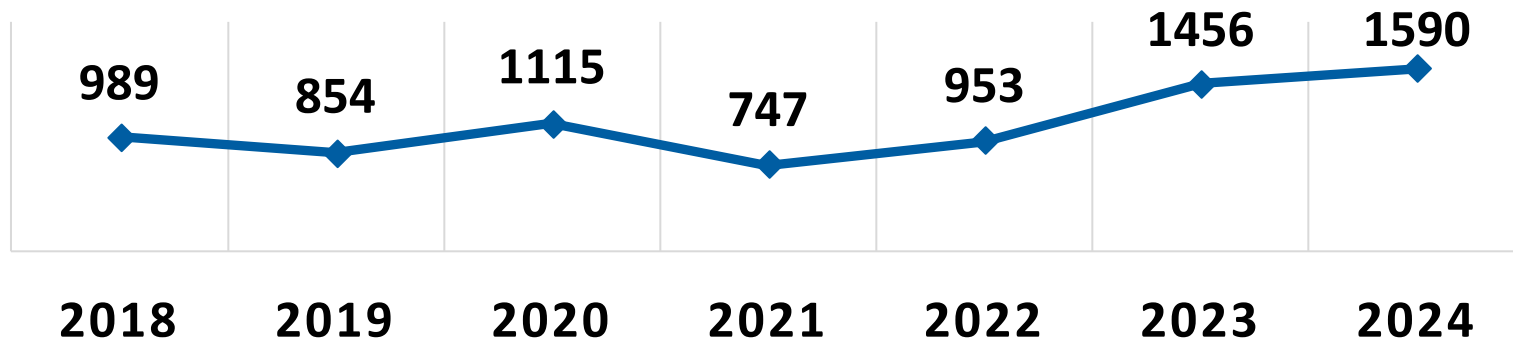


>>> 1.2 Consumption - International Trade

Exports

✓ **1.6 Mt** fruit, valued 1.25 Bn\$, SouthEast

✓ **6.4kt** juice



Source: Trade Data Monitor, LLC

Unit, 1000 tons



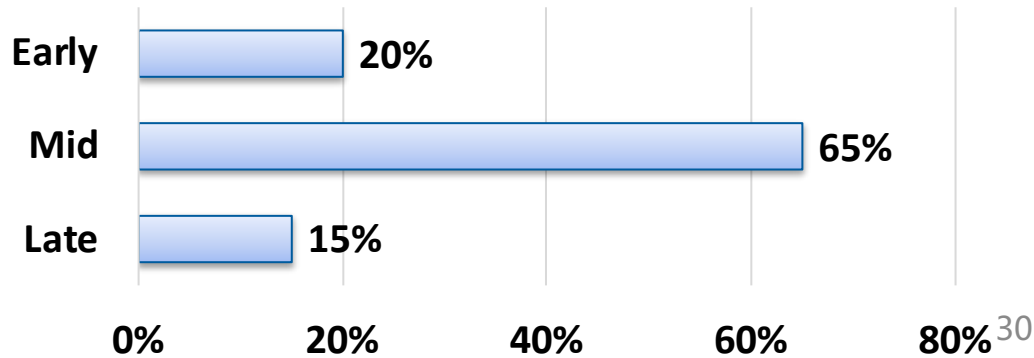
Overview of Chinese citrus industry

- **Production**
 - **Consumption**
 - **Challenges**
 - **Trends**
- 

>>> 1.3 Challenges

Imbalance variety structure

- ✓ Lack of dedicated processing citrus
- ✓ 65% mid-ripening varieties
- ✓ Seasonal supply-demand imbalance



»» 1.3 Challenges

Low industrialized level

- ✓ 20% processed
- ✓ Shortage of high-valued products
- ✓ Intense market competition





Overview of Chinese citrus industry

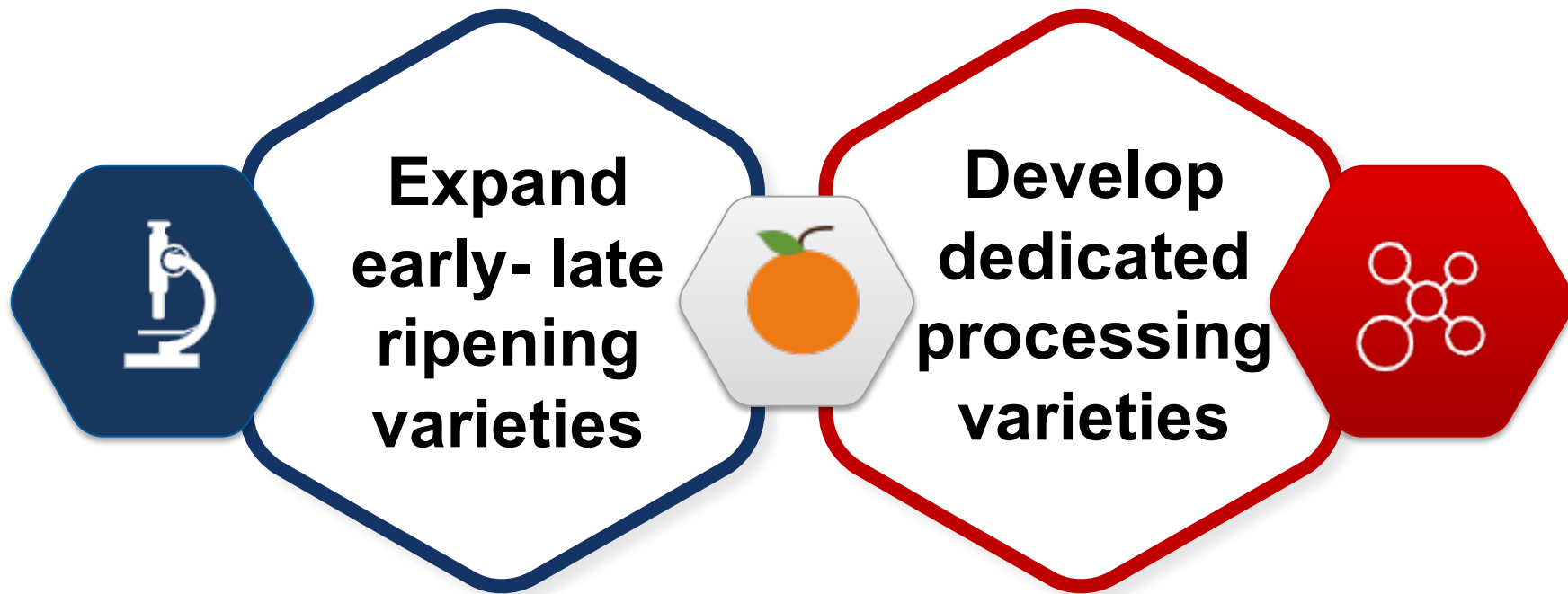
- **Production**
 - **Consumption**
 - **Challenges**
 - **Trends**
- 

»» 1.4 Trends



北京一轻
BEIJING YIQING

Optimize variety structure



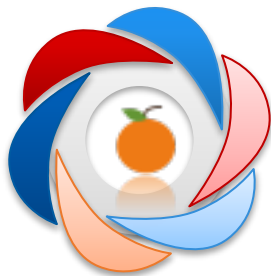
»» 1.4 Trends

Deepen green industry chain

- ✓ Develop high-valued products
- ✓ Comprehensive usage of peel, oil, pomace

Food

Pharma



Packaging

Cosmetics



BAOF - a mandarin producer model

PART 02



北京一轻
BEIJING YIQING

Beijing Arctic Ocean Food Co. - BAOF

A leading mandarin processor in China





北京一轻
BEIJING YIQING

1936

Beijing Ice Factory

1985

BAOF

2018

Maanshan factory

2024

Chongqing factory

1951

The Arctic Ocean trademark

2013

Canned packaging


2020

Two Beijing factories






BAOF - a mandarin producer model

- **Specific raw material**
 - **Juice & Soda processing**
 - **Comprehensive utilization**
 - **Innovative scenarios**
- 



BAOF - a mandarin producer model

- **Specific raw material**
 - **Juice & Soda processing**
 - **Comprehensive utilization**
 - **Innovative scenarios**
- 

>>> 2.1 Specific raw material



北京一轻
BEIJING YIQING

Wudang Mandarin

*Dahongpao Ancient
Tangerine*

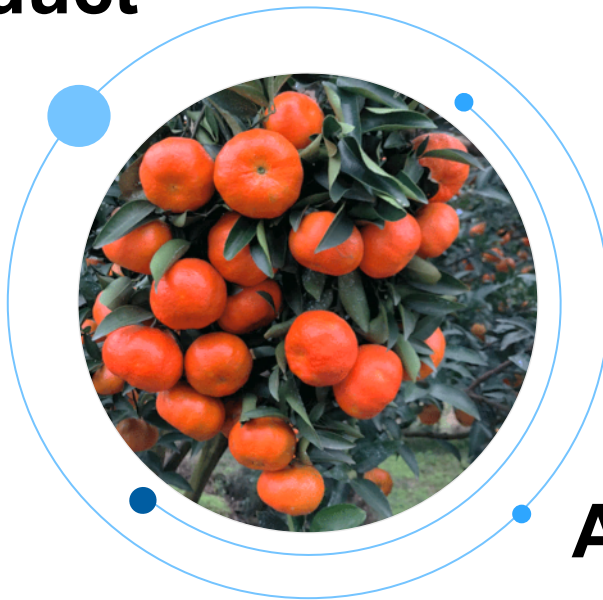


»» 2.1 Raw material – *Dahongpao Tangerine*



北京一轻
BEIJING YIQING

National Geographical Indication Protected Product



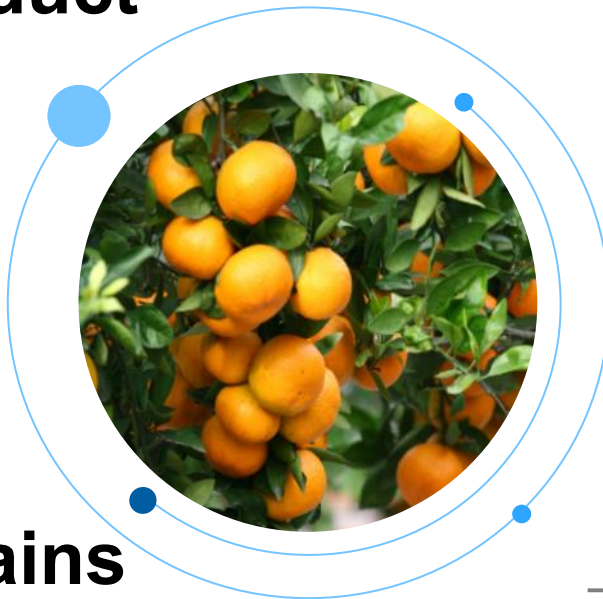
**Agricultural Cultural
Heritage of China**

»» 2.1 Raw material - *Wudang Mandarin*



北京一轻
BEIJING YIQING

National Geographical Indication Protected Product



Located in
Danjiangkou

—the core water source for the South-to-North Water Diversion Project

Wudang Mountains

—the Taoist Holy Land and national
tourist attraction

»» 2.1 Specific raw material


Quality control & Social responsibility

- ✓ Exclusive orchards – Contract Farming
- ✓ Strict harvest standards – brix & total acid
- ✓ Farmers' income increase – \$300 seasononly





BAOF - a mandarin producer model

- **Specific raw material**
 - **Juice & Soda processing**
 - **Comprehensive utilization**
 - **Innovative scenarios**
- 

»» 2.2 Juice & Soda processing

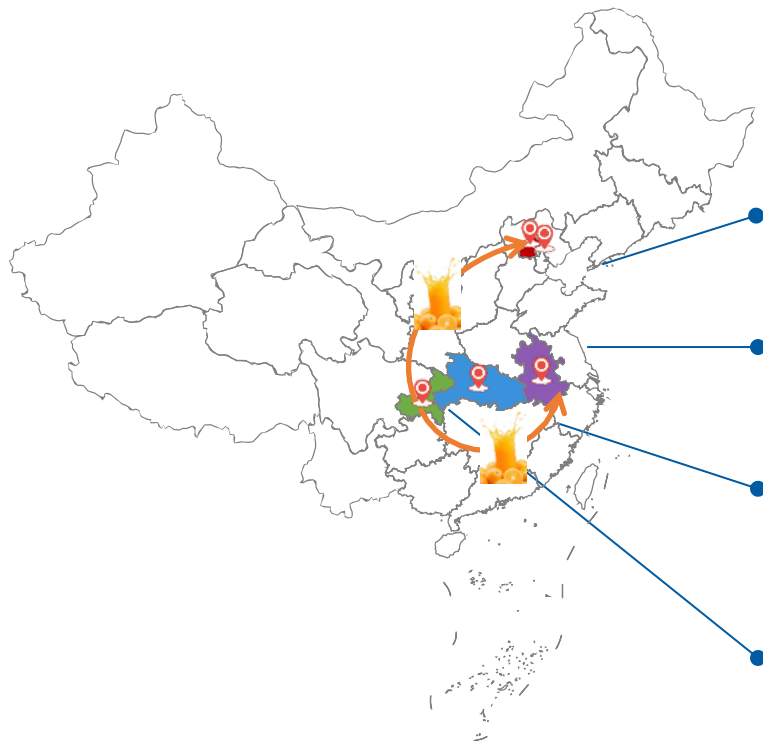


北京一轻
BEIJING YIQING

5 Bases

2 Juice lines

17 Beverage lines



Beijing

Daxing, Changping

Anhui

Maanshan

Hubei

Danjiangkou

Chongqing

Jiangjin

»» 2.2 Processing – Juice Base



北京一轻
BEIJING YIQING

Jiangjin base, Chongqing

- ✓ **200 tons** citrus per day, concentrated juice
- ✓ Provide juice for BJ and Maanshan Soda
- ✓ **30%** local *Dahongpao Tangerine*



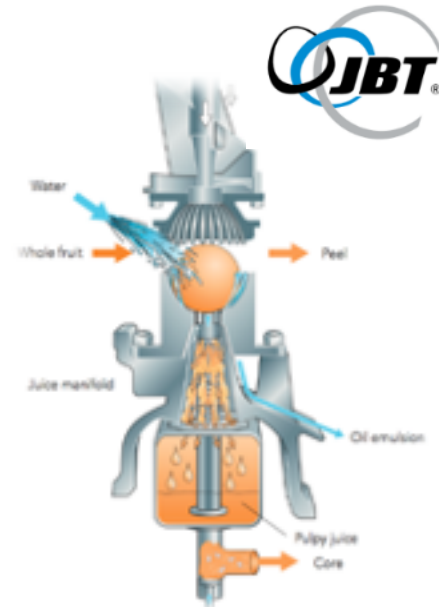
»» 2.2 Processing – Juice Base



北京一轻
BEIJING YIQING

Jiangjin base, Chongqing

- ✓ **Whole fruit** extraction within 1s
- ✓ **Oil recovery ($\approx 0.16\%$)**
- ✓ **Peel aging to Chenpi**
- ✓ **Pasteurization and concentration**



Source: Ulla Ringblom. The Orange Book. Lund: Tetra Pak, 2004.

»» 2.2 Processing – Juice Base

Danjiangkou base, Hubei

- ✓ **280 tons** citrus per day
- ✓ **HPP NFC juice**
- ✓ **30%** local *Wudang Mandarin*



»» 2.2 Processing – Juice Base



北京一轻
BEIJING YIQING

Danjiangkou base, Hubei

✓ HPP Strengths



600MPa non-thermal

90% Vitamin C retained

Flavor & aroma retention



>>> 2.2 Juice & Soda processing - Products



北京一轻
BEIJING YIQING

1st mature curve
Soda & HPP juice



2nd growth curve
Fermented juice



3rd breeding curve
Chenpi healthy water

»» 2.2 Juice & Soda processing - Products

1st mature curve - Soda & HPP juice

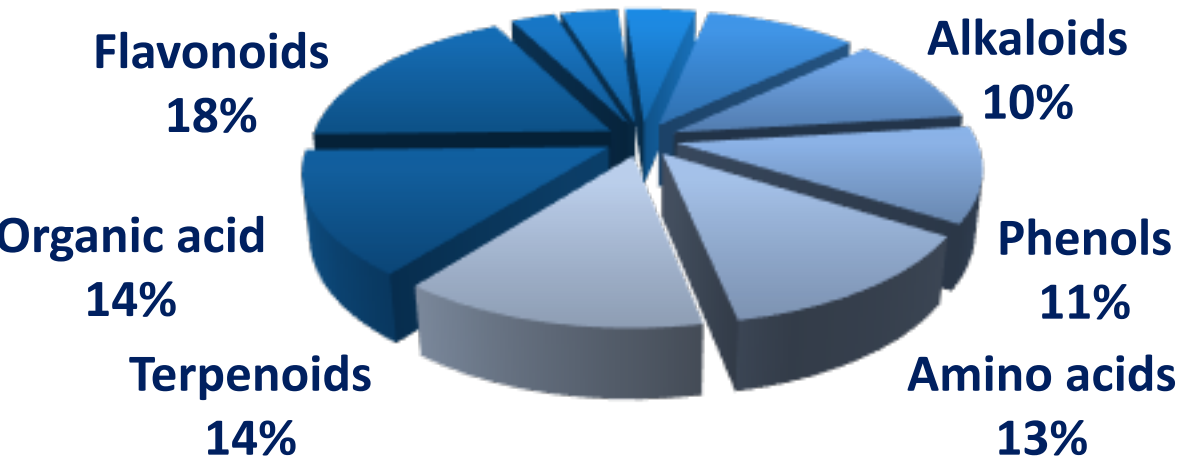
- ✓ Cloudy juice
- ✓ Adding citrus oil
- ✓ Rich, refreshing, sharp



»» 2.2 Juice & Soda processing - Products

2nd growth curve – Fermented juice

- ✓ Increased functional factors
- ✓ Tea and juice co-fermentation
- ✓ Adding hops, alcohol-free



Fermented
juice soda



Kombucha

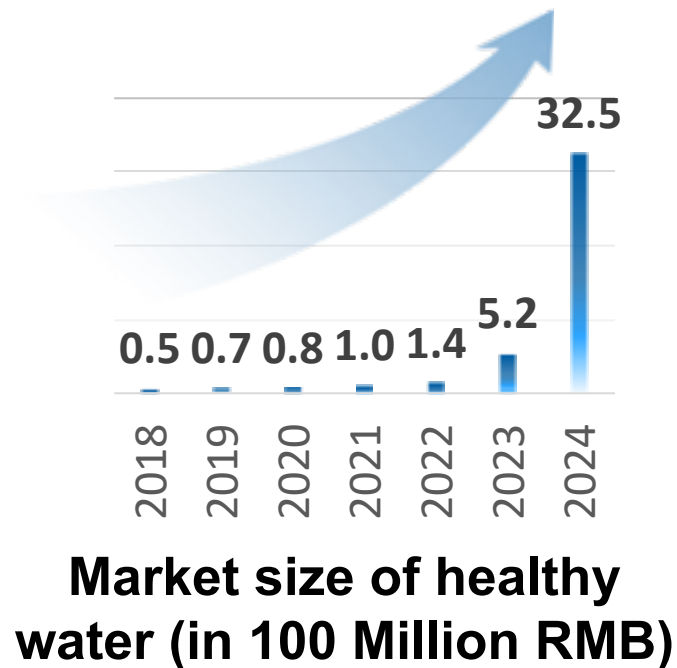
»» 2.2 Juice & Soda processing - Products



北京一轻
BEIJING YIQING


3rd breeding curve - Chenpi healthy water

- ✓ TCM ingredients
- ✓ Improve digestive function





BAOF - a mandarin producer model

- **Specific raw material**
 - **Juice & Soda processing**
 - **Comprehensive utilization**
 - **Innovative scenarios**
- 

»» 2.3 Comprehensive utilization

BAOF Story

01 Juice ↗

Juice, Soda, Fermentation

02 Oil ↗

Beverage, Yogurt,
Daily chemicals

03 Pulp ↗

Beverage, Bread, Yogurt



↗ 04 Pomace

Mycelium, Packaging

↗ 05 Peel

Chenpi, NHDC

↗ 06 Seed

Herb, Spice

»» 2.3 Comprehensive utilization

Citrus oil

- ✓ **1.6kg** from per ton mandarin
- ✓ Oil recovery with **cold pressing at 15°C**
- ✓ Adding to beverages and yogurt



»» 2.3 Comprehensive utilization



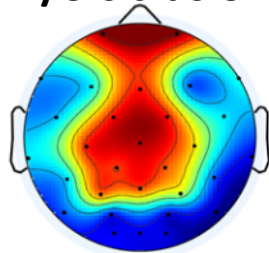
北京一轻
BEIJING YIQING

Citrus oil function

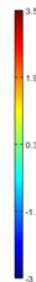
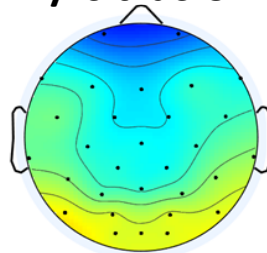
- ✓ Ease spiciness – Lower brain stimulation
- ✓ Relieve stress and emotions – Brain relax signal increased, **43.64/48.66**



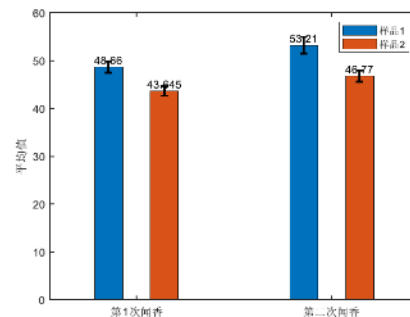
w/o citrus oil



w/ citrus oil



Relax Level



»» 2.3 Comprehensive utilization



北京一轻
BEIJING YIQING

Biosynthesis NHDC from peel

High sweetness with low calories

relative sweetness of 1500-1800 times of sucrose

Safe and non-toxic

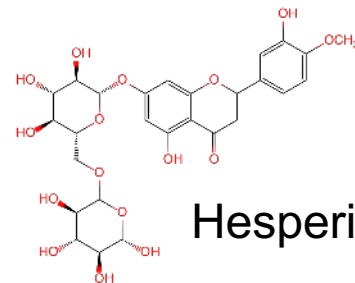
exists in nature, natural sweetener

Flavor synergy

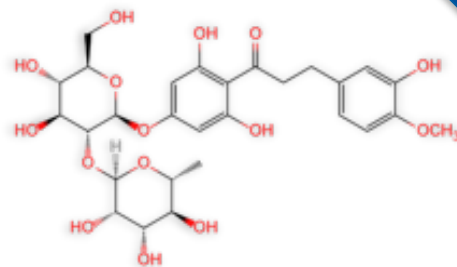
enhances flavor profile

Bitterness masking

masks undesirable flavors



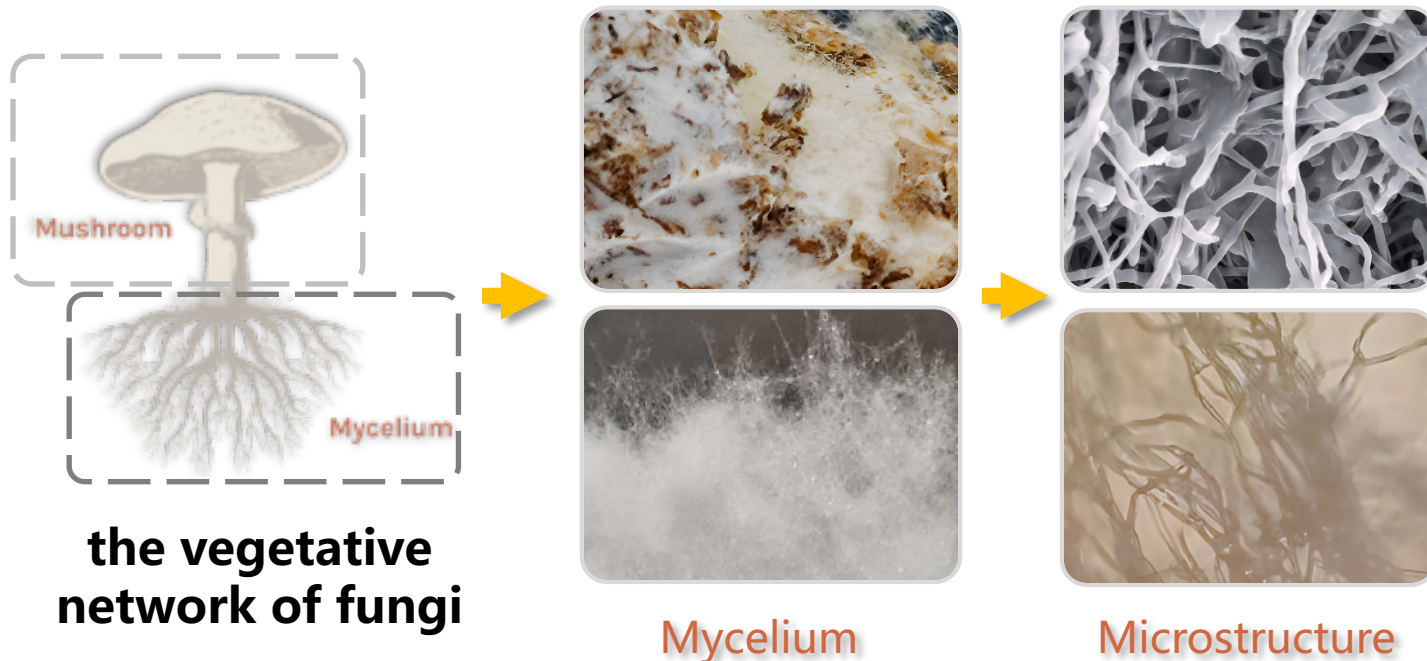
Hesperidin



Neohesperidin Dihydrochalcone (NHDC)

»» 2.3 Comprehensive utilization

Mycelium materials from pomace



»» 2.3 Comprehensive utilization

Mycelium materials from pomace

Materials



Mycelium
Packaging
Material



Soap holders



Construction material



Mycelium
Protein



Meat slices



Burger patties

»» 2.3 Comprehensive utilization



北京一轻
BEIJING YIQING

Chenpi from peel

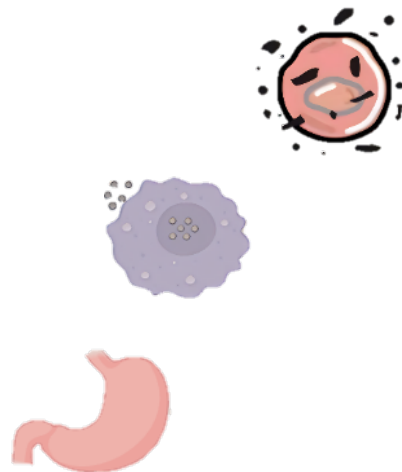
- ✓ TCM
- ✓ At least **3 years** of drying and aging



»» 2.3 Comprehensive utilization

Function of Chenpi

- ✓ TCM & Food
 - Ease cough
 - Improve digestive function
 - Antioxidant



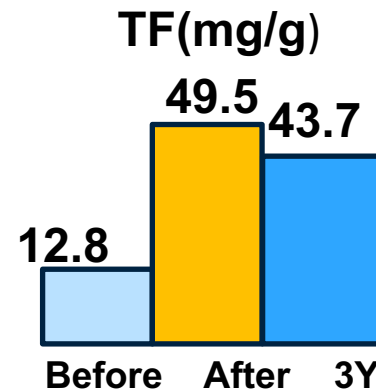
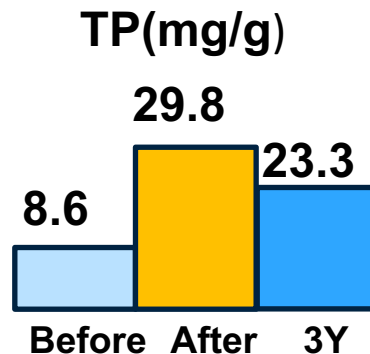
»» 2.3 Comprehensive utilization



北京一轻
BEIJING YIQING


Chenpi from peel

- ✓ **Microbial accelerated** peels aging
- ✓ **Total phenolics (TP), 8.6 to 29.8**
- ✓ **Total flavonoids (TF), 12.8 to 49.5**





BAOF - a mandarin producer model

- **Specific raw material**
 - **Juice & Soda processing**
 - **Comprehensive utilization**
 - **Innovative scenarios**
- 

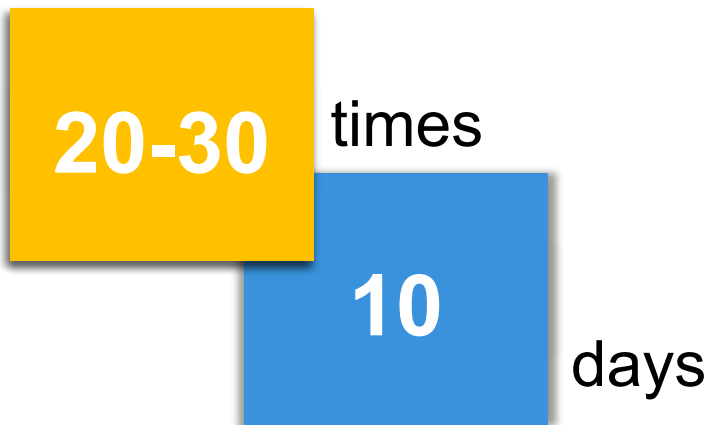
»» 2.4 Innovative scenarios



北京一轻
BEIJING YIQING

Recycled glass bottle

- ✓ **Save 73.3% energy consumption**
comparing new bottles



»» 2.4 Innovative scenarios

Recycled plastic crates

- ✓ Build iconic landmarks, telling cultural stories
- ✓ Spread Brand Spirit
- ✓ Attract youths flocking to must-see-site



»» 2.4 Innovative scenarios



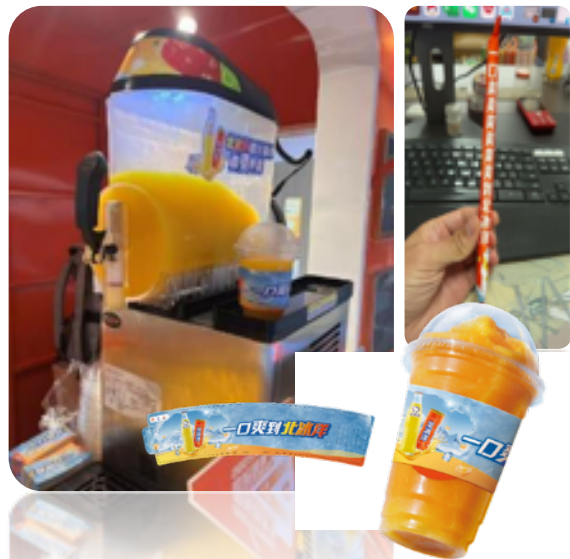
北京一轻
BEIJING YIQING

Interactive & Experiential

Smoothie

Shaking ice

Rolling ice



»» 2.4 Innovative scenarios



北京一轻
BEIJING YIQING

Industrial-Cultural Theme Garden



»» 2.4 Innovative scenarios



北京一轻
BEIJING YIQING

Industrial-Cultural Theme Garden

✓ 220,000 kids & parents





Citrus applications in BJYQ



PART 03



Citrus applications in BJYQ

- **About us**
 - **More citrus applications**
 - **Research institution - BITRI**
- 



Citrus applications in BJYQ

- **About us**
 - **More citrus applications**
 - **Research institution - BITRI**
- 



About Us

- ◆ Key enterprise of Beijing
- ◆ Engaged in light industry

»» 3.1 About us - 7 industrial sectors



北京一轻
BEIJING YIQING

Drinks & Foods



Daily Chemicals



Musical Instrument



Glass



Paper & Printing



北京印刷集团有限责任公司
Beijing Printing Group Co., Ltd.

Electro-control



Advanced new Materials



»» 3.1 About us - Time-Honored Brands



北京一轻
BEIJING YIQING

National Intangible
Cultural Heritage



Traditional Brewing
Techniques of
Erguotou Liquor





Citrus applications in BJYQ

- **About us**
 - **More citrus applications**
 - **Research institution - BITRI**
- 

»» 3.2 More citrus applications



北京一轻
BEIJING YIQING

CrossBorder - Citrus flavor liquor

- ✓ Citrus Juice + Baijiu
- ✓ Co-fermentation and distilled



Cocktail

»» 3.2 More citrus applications



北京一轻
BEIJING YIQING

CrossBorder - Citrus flavor drinks

- ✓ Citrus Juice + Wine
- ✓ Co-fermentation & distilled



DRAGON SEAL[®]
龙徽葡萄酒



Fruit Wine

»» 3.2 More citrus applications



北京一轻
BEIJING YIQING

CrossBorder - Citrus flavor craft beer

- ✓ Citrus Juice + Beer
- ✓ Co-fermentation



Craft Beer

»» 3.2 More citrus applications



北京一轻
BEIJING YIQING

CrossBorder - Citrus flavor foods

Bread & Bakery



Ice cream & Yogurt



»» 3.2 More citrus applications



北京一轻
BEIJING YIQING

CrossBorder - Citrus dailycare chemicals



**Household
Cleaners**



**Skin Care
Products**



Cosmetics





Citrus applications in BJYQ

- **About us**
 - **More citrus applications**
 - **Research institution - BITRI**
- 

»» 3.3 Research institution - BITRI



北京一轻
BEIJING YIQING

Beijing Industrial Technology Research Institute

- Founded in 1973
- 50 years on light industry research



»» 3.3 Research institution - BITRI

Beijing Industrial Technology Research Institute

Food & Drinks

Daily Chemicals

Flexible
Manufacturing

Fermentation



>>> Contact Information



北京一轻
BEIJING YIQING

Zengming

@beibingyangfood.com

**Beijing Arctic Ocean
Food Co., Ltd.**

kjfzb@bitri.cn

**Beijing Industrial
Technology
Research Institute**

