



Food and Agriculture
Organization of the
United Nations



**One Country
One Priority Product**

The Green Development of Special Agricultural Product Mango in China

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Main Content

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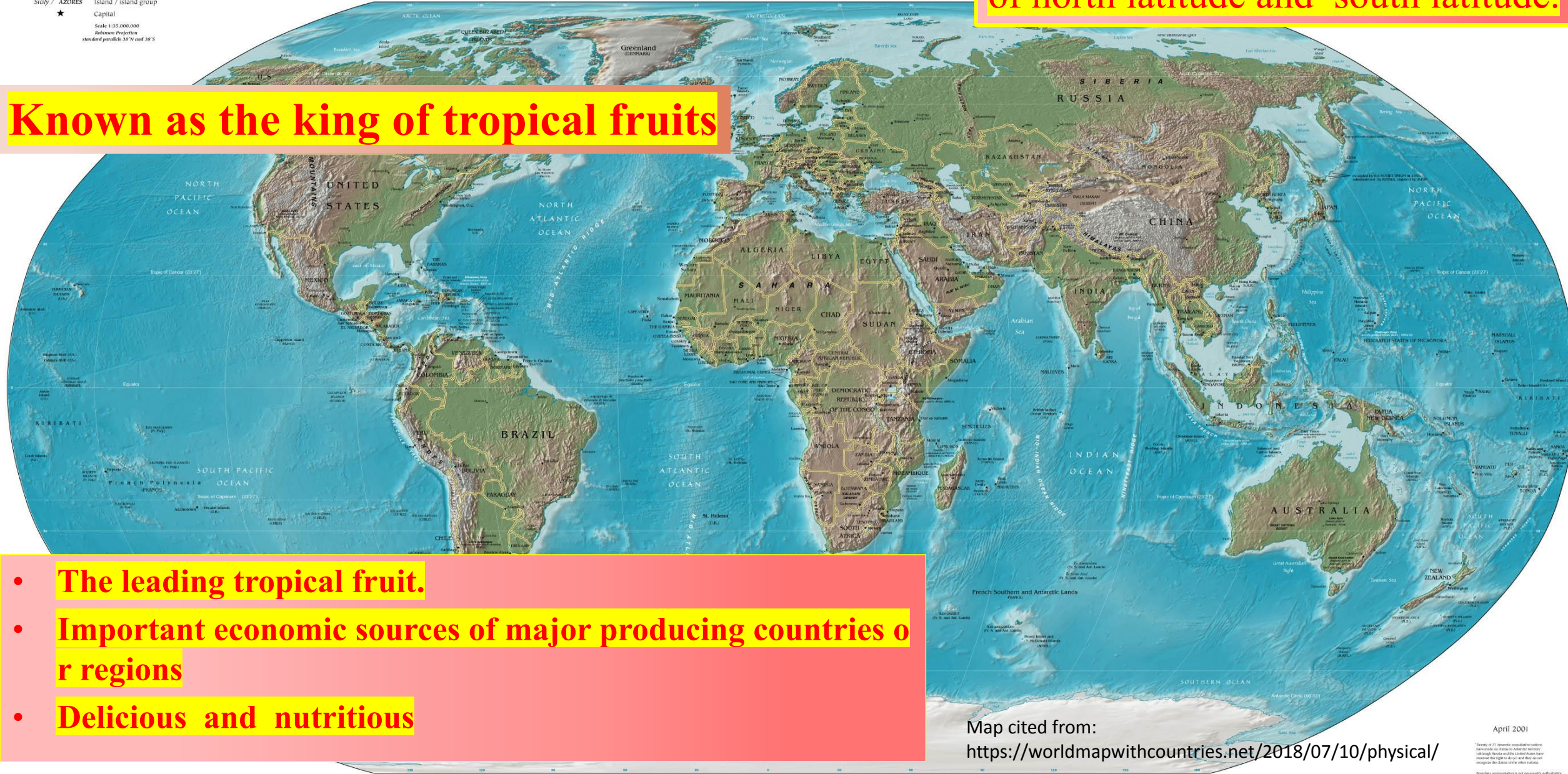
Importance

In the region between 30 degrees of north latitude and south latitude.

AUSTRALIA Independent state
Bermuda Dependency or area of special sovereignty
Sicily / AZORES Island / island group
★ Capital
Scale 1:35,000,000
Robinson Projection
standard parallels 38°N and 38°S

Known as the king of tropical fruits

- **The leading tropical fruit.**
- **Important economic sources of major producing countries or regions**
- **Delicious and nutritious**



Map cited from:
<https://worldmapwithcountries.net/2018/07/10/physical/>

April 2001
Boundary representation is not necessarily authoritative.

Importance



continent	Harvest Area(10 ⁴ ha)	Proportion(%)	Yield(10 ⁴ t)	Proportion(%)
world	552.29	100.00	5483.11	100.00
Asia	402.71	72.91	3974.25	72.48
Africa	96.71	17.51	862.10	15.72
America	51.19	9.27	639.90	11.67
Oceania	1.67	0.30	6.86	0.13
Europe	0.03%		Rarely	

Five continents, more than 100 countries or regions.

Asia -NO.1, with an area of 40.27 million ha and an output of 42.1398 million tons, accounting for 72.91% and 72.48% of the world respectively. (2020, FAO)

Ranked according to harvest area: India,Indonesia,China (The data of China comes from the Ministry of Agriculture and Rural Affairs of P.R.China, the same below.)

Comparative Advantages

A large number of mango genetic resources have been collected and preserved, a number of new varieties have been cultivated

农业农村部儋州芒果种质资源圃收集保存的部分种质资源



香蕉芒



圣心



贵妃



秋芒



爱文



串芒



小鸡芒



达拉英达



红象牙



红光6号



小鹰嘴芒



虎豹牙



桂热芒10号



海豹



大白玉



瓦城芒



太太芒



台牙



热品4号



苹果芒



肯辛顿



凯特



金兴芒



红晕



红玉芒



广西土芒



R2E2



三年芒



龙井大芒



Comparative Advantages

- **Continuous increase in domestic consumption (2020)**
 - 35.96×10,000 ha, 6.4 %↑
 - 348.35×10,000 t, 19%↑
 - China has a population of 1.44 billion. Even if mangoes are not exported, they are all fresh fruits, and the consumption is only 2.4 kg per person, the potential market is large
- **Steady rise in international trade (2020)**
 - *In 2020, 84139.63 tons of fresh mangoes were imported, with a year-on-year growth of 481.03%.*
 - *44407.38 tons of mangoes were exported, a year-on-year increase of 49.87%*



Demands

- ***Sustainable development technology of mango industry***
- ***Key techniques for improving the quality and safety of mango products***
- ***Technology and equipment for improving the modern level of mango processing***
- ***Efficient utilization technology of mango resources***



Challenges

- *1. Output VS Quality(Safety and quality of mango)*
- *2.Increase in the labor cost*
- *3. How should we protect ecology and soil ?*
(Pests and diseases,Decrease in soil quality)
- *4.Climate Change*



**Mango snow
disaster(2022,Sichuan)**



Strategy

- ***No Increase Action of fertilizers and pesticides***
- ***Science and technology promote mango industry***

Standardization of the whole industrial chain----

- ***Strengthen mango industry by machinery***
- ***Carry out breeding work***
- ***Support leading mango enterprises and large growers***



Rail conveyer



Net cross pollination



Key Action

- *Adhere to green development:*

- 1) Implement no increase action of fertilizer and pesticide
- 2) Improve the construction of the mango plantation
- 3) Improve the coverage of green pest control.

- *Promoting S&T innovation:*

- 1) Increase the planting proportion of varieties with independent property rights;
- 2) Improve the mechanization level of orchards;
- 3) Increase the proportion of processed products



Key Action

- **Innovate business forms**

- (1) Extension of the industry's functions,
- (2) Online mango trade

- **Promote cooperation and exchanges**

- (1) Hold international or domestic mango festivals
- (2) Intergration with the Belt & Road Initiative

- **Integrate the culture, the industry**

- (1) Extend the industry chain for greater value
- (2) Synergy with the Rural Revitalization Strategy

- **Build a suitable industrial development model**

such as "government+agricultural technology departments+scientific research institutions+leading enterprises+fruit farmers"



Mango Festival



Buddhism and Mango



Key Technologies

1 Propagation

Standardized
cultivation of
seedlings



Top
Working



2. Plant spacing

- **Recommended: 4.0 ~ 5.0 m in-row and 5.0 ~ 6.0 m between rows.**



3 Interplanting (leguminous crops)



4 Bagging



The white bag



the yellow bag



non-bagging

Bagging





5 Balanced fertilization

Nutrient content and demand of 9 main cultivars

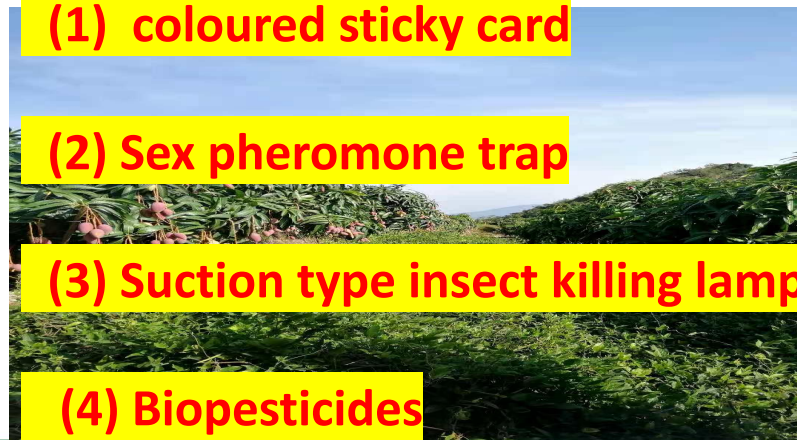
品种	N:P ₂ O ₅ :K ₂ O:CaO:MgO
红象牙	1:0.18:0.62:0.53:0.20
台农	1:0.27:1.08:0.76:0.28
桂热	1:0.27:0.84:0.91:0.21
四季芒	1:0.23:0.64:0.29:0.20
三年芒	1:0.23:0.55:0.45:0.17
吉禄	1:0.39:0.83:0.28:0.35
凯特	1:0.92:1.45:0.67:0.41
金煌	1:0.25:1.13:0.60:0.13
红金龙	1:0.27:1.00:0.77:0.13

Circular furrow
fertilization



From Pro.Lindian

6 Green prevention and control technology of diseases and pests



(1) coloured sticky card

(2) Sex pheromone trap

(3) Suction type insect killing lamp

(4) Biopesticides



7. Postharvest handling



表 2 芒果主要品种适宜热处理条件。

品种	最佳处理温度 (°C)	最佳处理时间 (min)
贵妃(正常果)	51	10-15
贵妃(败育果)	51	10-15
金煌(正常果)	55	5-10
金煌(败育果)	51	10-15
台农 1 号(正常果)	51	10-15
台农 1 号(败育果)	47	20
桂热 82 号	55	5-10
凯特	51	10-15
吉禄	55	5
红玉	51	10-15

After harvesting, the healthy fruit is soaked in hot water at 50-55 °C for 5-15 min.

After the fruit is taken out, packaged in 0.01-0.02 mm PE bag, packaged, stored and transported.

Fruit picking and packaging should be completed within 24-48 hours



8 Green Processing



Fruit vinegar

Fruit Juice



Dried Mango



品名: 梅乃宿果肉芒果酒
品牌: 梅乃宿
规格: 720ml
酒精度: 5%vol
原产国: 日本
原料与辅料: 芒果、食用酒精、蔗糖、水、大米、米曲等
产品类型: 配制酒
保质期: 三年
生产商: 梅乃宿酒造株式会社
贮存条件: 存放在阴凉处, 避免阳光灯光直射。

fruit wine



Effectiveness



- ***Stable increasement of mango production in China***
- ***Future expectation: China's mango -- high-quality mango---World's mango***
 - Can mango producers, middlemen, retailers and processors make profits in the fields of planting and processing?....***



Experience and Lesson

- *Experience:*
 - 1) *Fruit quality is getting better and better;*
 - 2) *Diversification of product types;*
 - 3) *Significant increase in economic benefits*
- *Lesson:*
 - 1) *A few producers still apply too much fertilizer and chemicals;*
 - 2) *The benefit sharing mechanism of producers, middlemen and sellers need improving*



Suggestions

*Stabilize planting area, Solve key technologies,
improve mango quality, increase the proportion of
processed products, support leading
enterprises, build influential mango brands*

→→→ Achieve Green High-quality Development





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Thanks for Your Attention !