

HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY SCHOOL OF BIOTECHNOLOGY AND FOOD TECHNOLOGY

FRUITS IN NORTH VIETNAM: CURRENT STATUS AND FUTURE PROSPECTS

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Training Workshop on "Characterisation of fresh and processed fruit quality", July 23-25, 2012



- Central Highland: avocado, persimmon
- Central South: mango, grap dragon fruit ...
- South East: Durian, rambutan, mangosteen, mang citrus
- Mekong River Delta: citrus, durian, pineapple, banana, mango, dragon fruit, star app mangosteen

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Outline

- Overview on fruit production in North Vietnam
- Potentials for fruit production and export
- Factors influencing fruit quality and post-harvesting losses
- · Challenges for fruit supply chains in Vietnam
- Strategy to develop some key fruits in North Vietnam until 2020
- An example on litchi production, storage and processing
- Conclusion

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School of Biotechnology and Food Technology - Hanoi University of Science and Technology Area and production of major fruits in North Vietnam in 2011

	Areas (1000 ha)			Production (1000 tons)		
Fruit types	North	Country	North/Country (%)	North	Country	North/Country (%)
Oranges	29.2	86.7	33.7	174.3	700.0	24.9
Pomelo	11.8	39.7	29.7	119.4	417.6	28.6
Litchi	88.9	88.9	100.0	200.9	200.9	100.0
Longan	44.0	97.9	44.9	176.8	614.0	28.8
Banana	44.8	106.2	42.2	799.9	1670.0	47.9
Pineapple	17.0	38.6	44.0	174.3	533.0	32.7
Mango	12.1	76.7	15.8	52.4	596.0	8.8
Others	66.8	240.8	27.7	-	-	
Total	314.6	775.5	40.6	-	-	

8 FRUIT PRODUCTION ZONES IN VIETNAM

North East

North West

Red River Delta

Tentral North

Central South

South East

Mekong River
Delta

North East: citrus, longan, litchi, pear, custard apple

- North West: citrus, mango, banana, persimmon, plum
- Red River Delta: longan, litchi, banana, citrus, papaya
- Central North: citrus, pineapple, banana, mango



School of Biotechnology and Food Technology - Hanoi University of Science and Technology Some large and concentrated zones for fruit production in North Vietnam

Litchi: mainly planted in Bac Giang province: Luc Ngan (80,000 tons), Luc Nam (41,000 tons) and Yen The (16,000 tons)

- Longan: smaller sizes of longan plantation in Hung Yen, Ha Tay, Son La
- Citrus: biggest area for orange plantation in North Vietnam: Ham Yen (Tuyen Quang), Bac Quang (Ha Giang)

Large and concentrated sizes for the production of special varieties of pamelos (Dien, Doan Hung, Phuc Trach, Thanh Tra) established in Hanoi, Phu Tho, Ha Tinh, Hue, respectively

- Pineapple: large and concentrated sizes for pineapple production in Lao Cai, Ninh Binh, Thanh Hoa and Nghe An.
- Banana: mainly planted in Phu Tho, Khoai Chau and Quang Tri

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Potentials for fruit production and export

- Large number of varieties with good to premium quality fruits in both tropical and subtropical fruits (deciduous fruits)
- Increased export volume of Vietnam fruits and its values in a number of markets in the world.
- Government policy and efforts to encourage fruit production, processing and export



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Factors influencing fruit quality and postharvesting losses

Postharvest

- Maturity
- Transport and storage conditions (temperature, humidity, atmosphere)
- Handling and packaging
- Postharvest processing
- Fresh cut products

Other factors

- Infrastructures
- Weather conditions
- Human resources



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Potentials for fruit production and export

- 11 fruit crops with competitive advantages identified and approved by MARD including: dragon fruit, milk apple, mangosten, citrus, mango, durian, pineapple, litchi, longan, coconut, papaya.
- Recent establishment of some concentrated fruit growing areas in large scale such as Thanh Ha litchi, Luc Ngan litchi, Hung Yen longan, Ha Tay late longan, Ban Nguyen banana, Thanh Tra pamelo, Ha Giang king orange
- Recent establishment of agricultural cooperatives to organize the production and distribution of products

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Challenges for fruit supply chains in Vietnam

1. Cultivation

Scattered fruit production area and small fruit farm causing difficulty to transfer technologies and to collect fruit products

Low yield, quantity and quality of fruit

50% of orchard farmers did not apply appropriate and/or advanced agricultural practices to the production

2. Post harvest issues

Simple techniques for storage and transportation

Low ratio of fruit being processed

Fruit losses are too high (about 25-30%)

3. Market

Difficulties for farmers to access to national and foreign markets Limited quality of fresh fruits can meet the requirement of USA and European markets

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Factors influencing fruit quality and postharvesting losses

Variety Production factors

- Irrigation
- Nutrition
- Growing system
- Pest and disease management



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Efforts to improve the fruit quality

- VietGAP (Vietnam Good Agricultural Practices) for
- fresh fruit, vegetable and tea) adopted in 2008

Australia, New Zealand

- Implementation of GlobalGAP and VietGAP standards for key fruits: dragon fruit, mango, longan, pumelo, litchi
- Law on food hygiene and safety adopted in 2010
 Overcome plant quarantine barriers with US, Japan,
- Efforts in producing organic fruits started (dragon fruit)
- International co-operation projects with Australia, France, India, Japan, New Zealand, UK, US....

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Strategy to develop some key fruits in North Vietnam until 2020

Determination of priority of fruit varieties

- Key fruit groups: fresh and processed fruit for national consumption and export
 - + Citrus (pamelo, oranges, madarines)
 - + Longan, litchi
 - + Banana and pineapple
- Auxiliary fruit groups: fresh and processed fruit for national consumption
 - + Mango, papaya
 - + Sub-tropical fruits (plum, peach and pear)

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Strategy to develop some key fruit in North Vietnam until 2020

Storage and processing

Development and improvement for techniques for harvesting, storage and processing of fruit to increase added value and decrease losses

Planning for concentrated plantation zones of key

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Strategy to develop some key fruits in North Vietnam until 2020

Selection and creation of new fruit varieties

- + Pamelos: Increased yield, quality, forms for special varieties of pamelos Dien, Phuc Trach, Doan Hung and
- + Oranges: selection of non-seed varieties.

Selection for longan varieties with high yield, good quality and increased duration of harvesting until 3 months: early and late longan ripening.

Selection for varieties with early ripening and small seed

School of Biotechnology and Food Technology - Hanoi University of Science and Technology An example on litchi production, storage and processing







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Strategy to develop some key fruits in North Vietnam until 2020

Selection for Cavendish varieties for fresh fruit export

Selection for varieties for fresh consumption and for export of processed pineapple

Improved plantation techniques

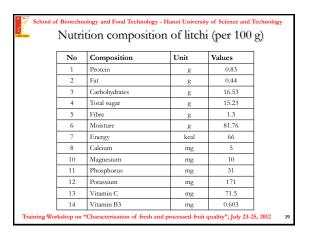
- Application of VietGAP and global GAP for key fruits
- Improved intensive plantation techniques (density, fertilizers, irrigation and chemical treatment...)

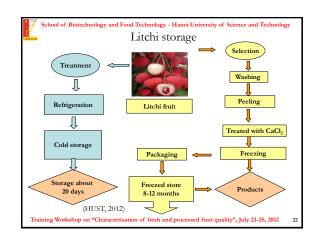
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School of Biotechnology and Food Technology - Hanoi University of Science and Technology Area and production for litchi

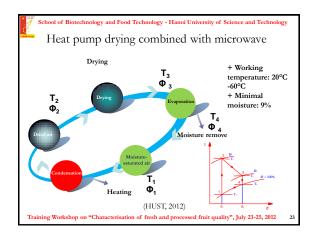
Year	Area (ha)	Production (tons)
1998	16,369	10.000
2000	24,200	29.000
2002	32,474	59.800
2004	34,923	158.800
2006	40,000	170.300
2008	35,000	213.900
2009	35,000	123.000
2011	35,000	200.000
2012	35,000	80,000

(Bac Giang department of Science and Technology)

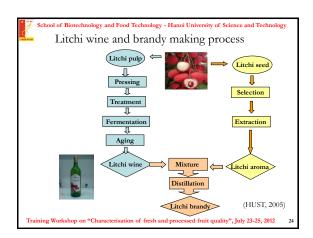












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Conclusion

- The current development of fresh and processed fruits in North Vietnam still remains limited
- The variety and the quality of the fruits in Vietnam are of great potential to be explored and developed.
- Effort are undertaken to improve quality, quantity, storage and processing of fruits

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Thank you for your time!

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Future Prospects

- Exchange fruit germplasm to select suitable varieties or to use as breeding materials
- Set up co-operation programs of fruit development between neighbouring countries
- Development of appropriate postharvest technology, especially in term of storage and processing
- Share information in region and international fruit market
- Exchange national and overseas experts and researchers to share experience in fruit R&D

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