Challenges and Emerging Opportunities to Develop Horticultural Value Chains in Indonesia

ACIAR – Adelaide University - Capacity building for research: promoting inclusive development of agricultural value-chains

Bogor, 1-3 September 2014
OUTLINE

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II • CHALLENGES

III • EMERGING OPPORTUNITIES

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I. CURRENT STATUS
Horticulture plays pivotal roles, the GDP of horticulture rises year to year significantly.
Consumption of horticultural products

Average Expenditure per Capita Every Month Based on Good Categories

- Vegetables
- Fruits
- Cereals
- Prepared Foods
CURRENT STATUS OF INDONESIAN HORTICULTURE

**Strengths**
- High economic value
- Potential for hort. germplasm resources
- Widespread in most of AEZ
- Wide distribution of harvested areas
- Source of agricultural employees
- Availability of horticultural technologies

**Weaknesses**
- Inconsistency quality
- Low competitiveness of hort. products
- Low adoption of high yield varieties
- Incompetence of farmers in process and marketing
- Undeveloped horticulture industries
- Horticulture technologies have not been optimally disseminated yet
- Land competition
- Market structures and price volatility

**Opportunities**
- Potential domestic and global markets
- High demand of horticulture products as nutrition
- Availability of land/areas for hort. extension

**Threats**
- Global market competitiveness
- Climate changes
- Land competition
- Infrastructures for marketing
It is necessary to:

• Increase productivities by GAP and GHP
• Build national seed industries
• Study supply and demand fluctuation in order to manage supply continuity and availability for consumers
• Pressure the government to build adequate facilities and infrastructure not only in the cities but also in the villages as production center
• Improve market integration, supply chain, value chain
• Improve competitive advantages for horticultural products
Common Horticultural Chains

- Farmers
  - Collectors/Agents
    - Local traders
    - Wholesalers
    - Retailers
  - Processors
  - Hotels, Restaurants
  - Consumers
Improve quality and continuity of horticultural products (inventions)

- Research on high yielding varieties
- Seed Management
- Improvement of the horticultural technologies
- Improvement of the post harvest technologies
- Improvement of the efficiency of supply chain management

Increase of adoptions of horticultural innovations domestic and internationally

- Increase efficiency and effectivity through use research resources optimally
- Increase use and accelerate disseminations of horticulture technologies through ltkajibangdiklatluhrap

Strategy to foster the development of horticultural products in domestic and global market
R&D Priorities of IAARD on Fruits and Vegetables

- R&D in breeding, biotechnology and genetic resources for shallots, chilies, potatoes, onions, citrus, mangoes, mangosteen, bananas
- Research on socio-economics and policy for horticulture for priorities commodities related to the farming system, market integration (exports and imports), price volatility, supply and demand
- Development of horticulture agribusiness model based on technology innovation – PKAH, particularly for mangoes - Cirebon, chillies - Ciamis, citrus - Tuban
- Development of seed systems for priorities commodities
Invention to Innovation: ICHORD - IAARD
Commodities Priorities

• Vegetables (Indonesian Vegetables Research Institute): potato, shallot, chili, indigenous vegetables
• Tropical Fruit (Indonesian Tropical Fruits Research Institute): durian, mangosteen, mango, banana, papaya
• Citrus and Sub tropical fruits (Indonesian Citrus and Sub Tropical Fruits Research Institute): citrus, grapes, longan
# Invention - Innovation (Kencana Chili)

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<tr>
<th>Research</th>
<th>Developments</th>
<th>Adoption</th>
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| High Yield Variety of Kencana. Minister of Agriculture Decree No. 4704/kpts/SR.120/11/2011 | • Production of SS and FS through UPBS (20 kgs)  
• Disseminations through KRPL and KAH  
• Licences: PT. Fajar Seed, PT. Agrindo Hartha Mekar | 10 Ha in West Java |
## Invention - Innovation (True Shallot Seed)

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<th>Developments</th>
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| High Yield Variety of TSS (2 varieties) with productivity 11-20 tons/ha TSS-1-S4 and TS-KL80-S3 (2012) | • Production of SS TSS (8 kg) for *demfarm* – (2012)  

Seedless varieties
Invention - Innovation (Mangoes)

Arumanis

Gedong gincu

Podang

Garifta Kuning

Garifta Gading

Garifta Orange

Garifta Merah
THE DIVERSE OF CITRUS (KEPROK), INDONESIA

Keprok Batu 55

Keprok SoE

Keprok Borneo Prima

Keprok Brastepu

Keprok Tejakula

Keprok Gayo

Keprok Selayar

Keprok Madura

Keprok Terigas
THE DISTRIBUTION OF CITRUS SEEDS IN 22 PROVINCES
II. CHALLENGES OF HORTICULTURAL VALUE CHAINS
REDUCING GAP BETWEEN FOOD SUPPLY AND DEMAND

1. Reduce production loss
   - Food supply when harvested failure can be avoided

2. Increase productivity
   - Food supply if food productivity might be increased

3. Reduce demand on Staple Food
   - Food demand

4. High technologies
   - Food productivity could be increased through the use of LSO optimization and high technology application (biotechnology, irradiation, biodiversity, and precision farming)
Challenges of Horticultural Value Chains

- Inefficiency supply chains (high transportation and transaction costs, inefficient distribution channels)
- Unfair market share
- Changes of consumer preferences and purchasing habits
- Consumers’ ability and willingness to pay
- Simple Processing
- Single market, competition from imports
- Limited knowledge on crop management, post-harvest pest and disease management
- Phytosanitary regulations in some regional markets
- Limited access to the input market (High Yielding Varieties) and output market
Challenges of Horticultural Value Chain (cont.)

• Seasonal production patterns, short harvesting season
• Product perishability ⇔ natural protection
• Domestic regulation on import
• Competition in export markets
• Price volatility
III. OPPORTUNITIES OF HORTICULTURAL VALUE CHAINS
Emerging Opportunities Horticultural of Value Chains

- Farmers: Better quality, More continues
- Collectors: Better handling
- Wholesaler: Wider market, Varietal market segmentation
- Retailer: Varietal market segmentation
- Consumers: Better preferences, Changing healthy awareness
IV. CONCLUSION

• Horticultural supply chains and value chains in Indonesia need to be improved in order to meet the requirements of the consumers as well as increase the farmers’ welfare.

• Thus, it could increase bargaining power of horticulture farmers for having access to modern markets (in domestic market) and single market (in regional market) as agreed in AEC 2015.

• Some problems such as price volatility, product continuity, and finding the niche markets could be addressed.