

A photograph of a tea plantation on a hillside. The tea bushes are arranged in neat rows, and the leaves are a vibrant green. The background shows more of the plantation extending up the slope under a bright sky.

Supply Chain Challenge For Producers

From Indonesian Perspective

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Map of Indonesia



Largest archipelago country, Total area: 2.00 million sq km;
Over 17,00 islands (6,000 inhabited);

Major spices produced in Indonesia

Crops	Major Producing Provinces
Black Pepper	Lampung, West Kalimantan
White Pepper	Bangka Belitung, East Kalimantan
Cassia vera	West Sumatera and Jambi of the Sumatera Island
Cloves	North Sulawesi, South Sulawesi, Center Sulawesi
Nutmeg	Maluku and Papua
Vanilla	North Sulawesi, Center Sulawesi, Bali, East Java





A view of the pepper garden in Bangka

Challenges

1. Low Productivity;
2. Pests & Diseases
3. High Cost of Labor and inputs
4. Climate change
5. Shifting to other crops and activities
6. Stringent trade & quality regulations of major consuming countries
7. Currency fluctuation / lack of financial supports to farmers



Low Productivity



Pepper producing countries	Average Productivity of pepper (2005-2010)
Vietnam	2,180 kg per Ha
Brazil	1,760 kg per Ha
Malaysia	1,580 kg per Ha
Sri Lanka	480 kg per Ha
Indonesia	370 kg per Ha

Pests & Diseases

Old & Senile plants in Pepper, about 70%

Major Diseases	Major Pests
a. Foot rot	a. Stem borer
b. Yellows (slow decline)	b. Tingid bug
c. Cucumber Mosaic Virus	c. Leaf gall trips



Yellowing (*R. similis*, *M. incognita*, *Eusarium oxysporum*, infertile soil)

The main constraint in pepper cultivations:

1. Foot rot disease (*P. capsici*)
2. Stunted disease (*Virus*)



No cultivated peppers resistant to viral diseases (CMV & PYMV)

Wild type seems to be resistant to viruses



Severe symptoms on *P. nigrum*



Mild symptoms on *P. hirsutum*

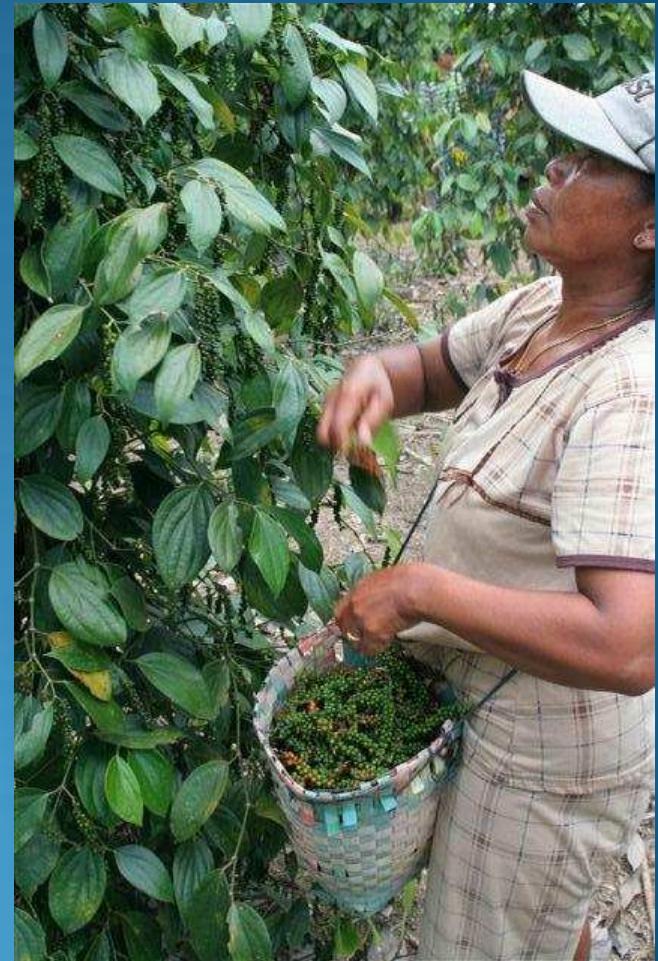
High cost of Labor and Inputs

Labor cost:

- For cultivation & related activities
US\$ 6.00 per day
- For harvesting / cleaning/ drying:
US\$ 7.00 per day

Input costs –

- Chemical fertilizers become more and more expensive.
- Farmers in Lampung use only organic fertilizers which increases the cost



Climate changes

1. Unfavorable weather pattern due to climate change has affected the pepper production from major growing areas in Indonesia.
2. Harvesting time was also changed. In East Lampung, Sukadana district, harvesting normally starts during July/ August. In 2011, it started in April/May.



Three stages of fruit setting seen in the pepper garden in Lampung, due to uncertain rainfall pattern

Shifting to other Crops



1. Palm oil gives better and regular income unlike pepper, which is seasonal
2. Rubber cultivation is promoted due to financial support and regular income
3. Cassava cultivation provides comparatively higher return in view of current high demand
4. Cocoa provides daily / weekly income
5. Tin mining in Bangka provides four times higher earning than the wages available for agriculture activities.

Quality & Trade related Issues

Stringent quality and trade regulations are imposed by major importing countries

Aflatoxin	: < 3 ppb
Ochratoxin A	: 30 ppb for Capsicum
(July 2012)	: 15 ppb for other spices
MRLs for Spices	



Currency Fluctuation



1. High Currency fluctuation is not a healthy sign as it affects the pepper and other spice trade;
2. Exporters and buyers are finding it difficult in making commitment at the time of high fluctuation
3. Currency fluctuation is experienced during the last six months

Observations

- In terms of volume & value, pepper ranks as the main spice in International trade.
- The farm gate price is influenced by availability & access to the up dated market information.



Observations

- In the absence of realistic demand estimation and growth rate, speculative activities are very high. As a result of this situation in some years the pepper price are far below the cost of cultivation. This leads to abandoning the cultivation.
- Islands of Indonesia hold a comparative advantage in spices cultivation, which can be exploited as the demand for spices rises.



Suggestions:

- Government departments, regulatory agencies and producers' organizations, concerned agencies in consuming countries are required to work together towards ensuring sustainable production and stability and remunerative returns for farmers
- A long term view of pepper production and marketing should be disseminated among the farmers, traders and buyers



Suggestions:

- Regular interface with the concerned governments in the producing and consuming countries, industry & regulatory agencies for sharing details on market demand, trade regulations , quality & food safety standards and price.
- More supports to pepper farmers to enable farmers to produce quality pepper products



Suggestions:

- Active participation of the consuming countries in improving the quality by providing financial/ technical supports such as holding more GAP Trainings at the growing areas are required.
- Remunerative prices to avoid pepper farmers/ producers to switch to other commodity/crops
- An intensive market study for a realistic estimation on consumption, new users & application and supply capabilities is required





Thank you