



SESSION 1
Crop and Market
NUTMEG

World Spice Congress 2012
PUNE

Objectives of this presentation

Answer to your questions

What is the Nutmeg global market?

Why has the price gone up so much and how is the future price?

How can the Aflatoxin risk be controlled?

Sources of information and Disclaimer

Sources of information

FAO "FAOSTAT"

GTIS "World Trade Atlas"

IMF "Primary Commodity Prices"

Indonesia National Basis Data of Nutmeg Production

ITC (International Trade Centre) "GRENADA NUTMEG SECTOR STRATEGY"

Spices Board India

Suppliers (PT.VOX TRADING INDONESIA, MPB)

UN "comtrade"

UN, World Population Prospects

Disclaimer

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3. Aflatoxin

3-1. How Aflatoxin contaminates into Nutmeg.

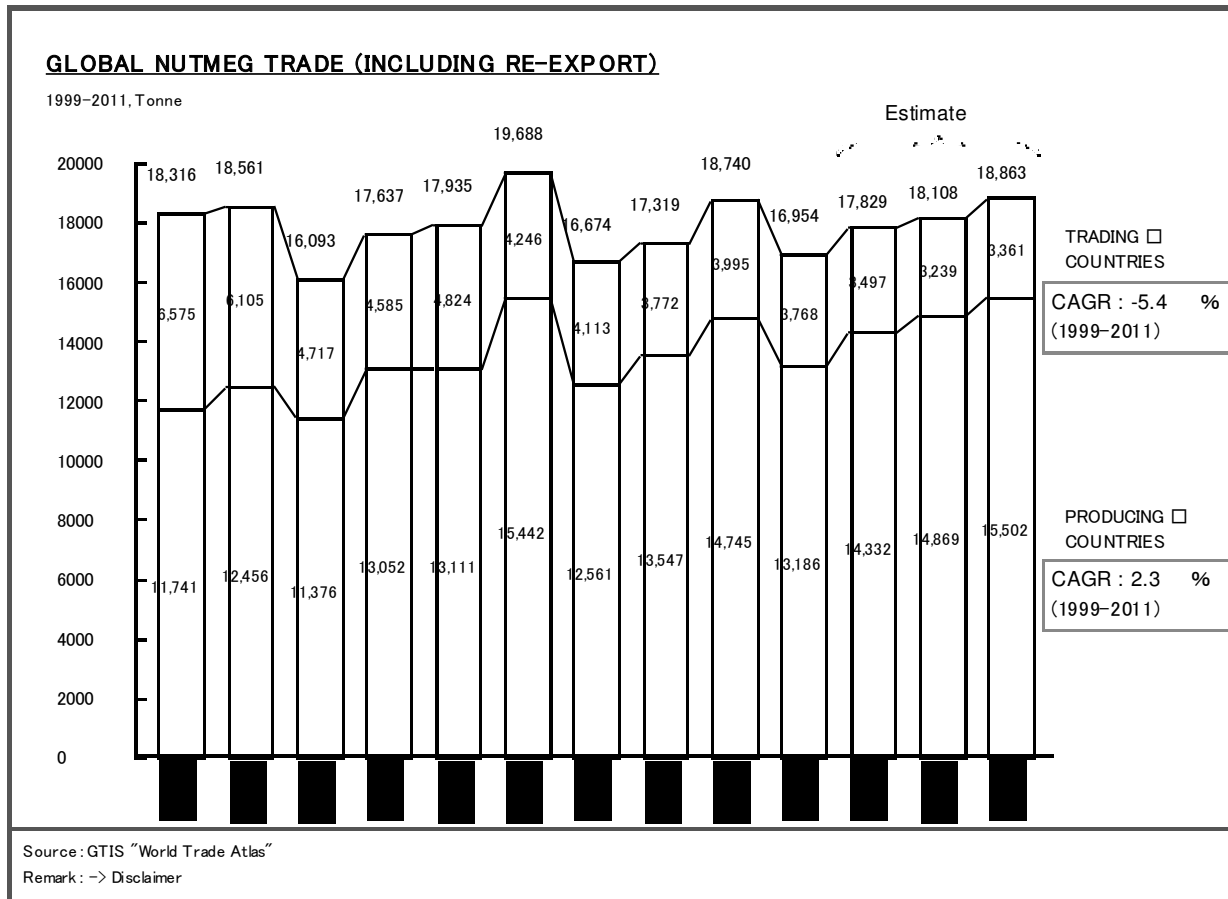
3-2. Approaches to control Aflatoxin risk.

1.Overview of Global Nutmeg Market

1-1.Suppy and demand

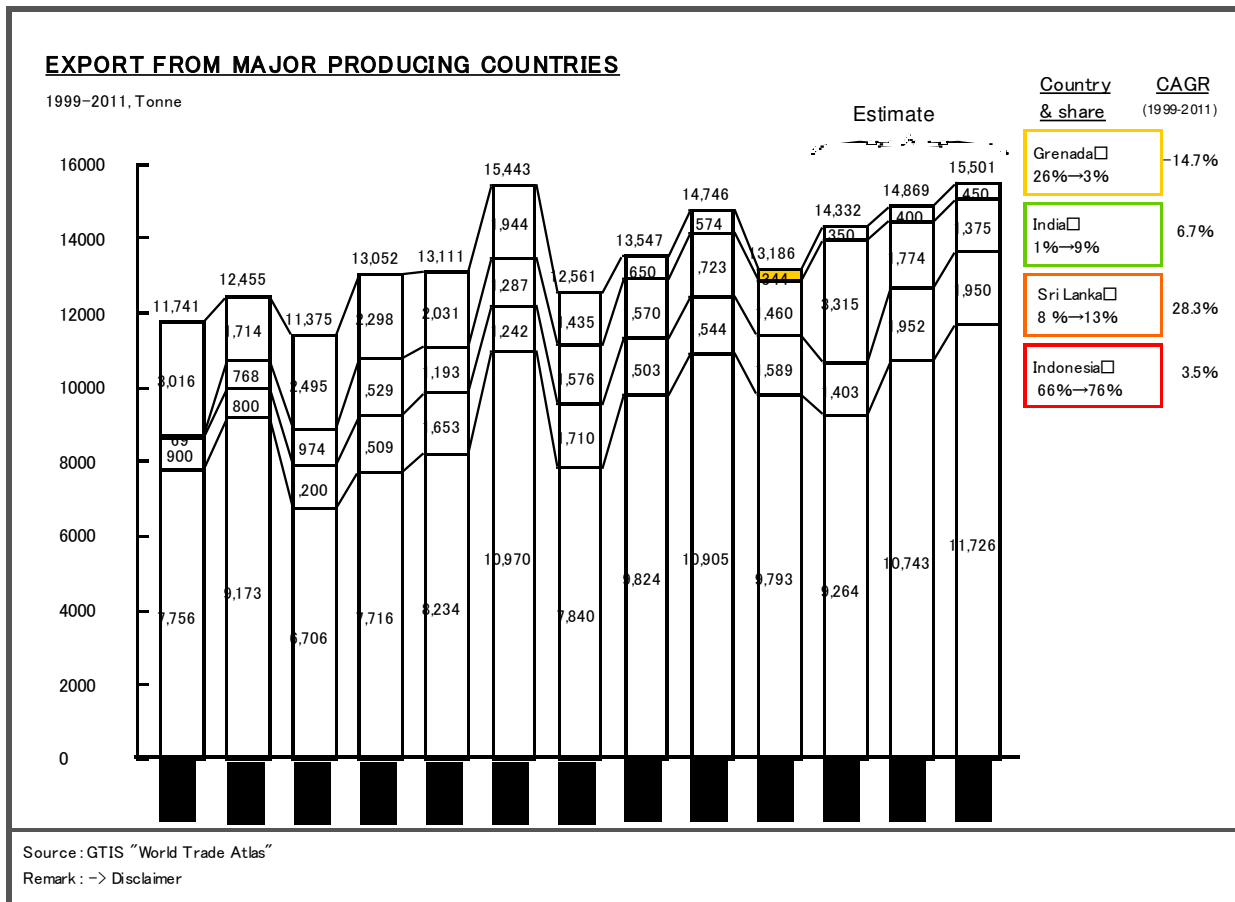
1-1. Supply and demand

Global Nutmeg trading volume including Re-export from Trading countries is about 18,000 tonne. Direct export from producing countries has been increased and trading countries lost their share.



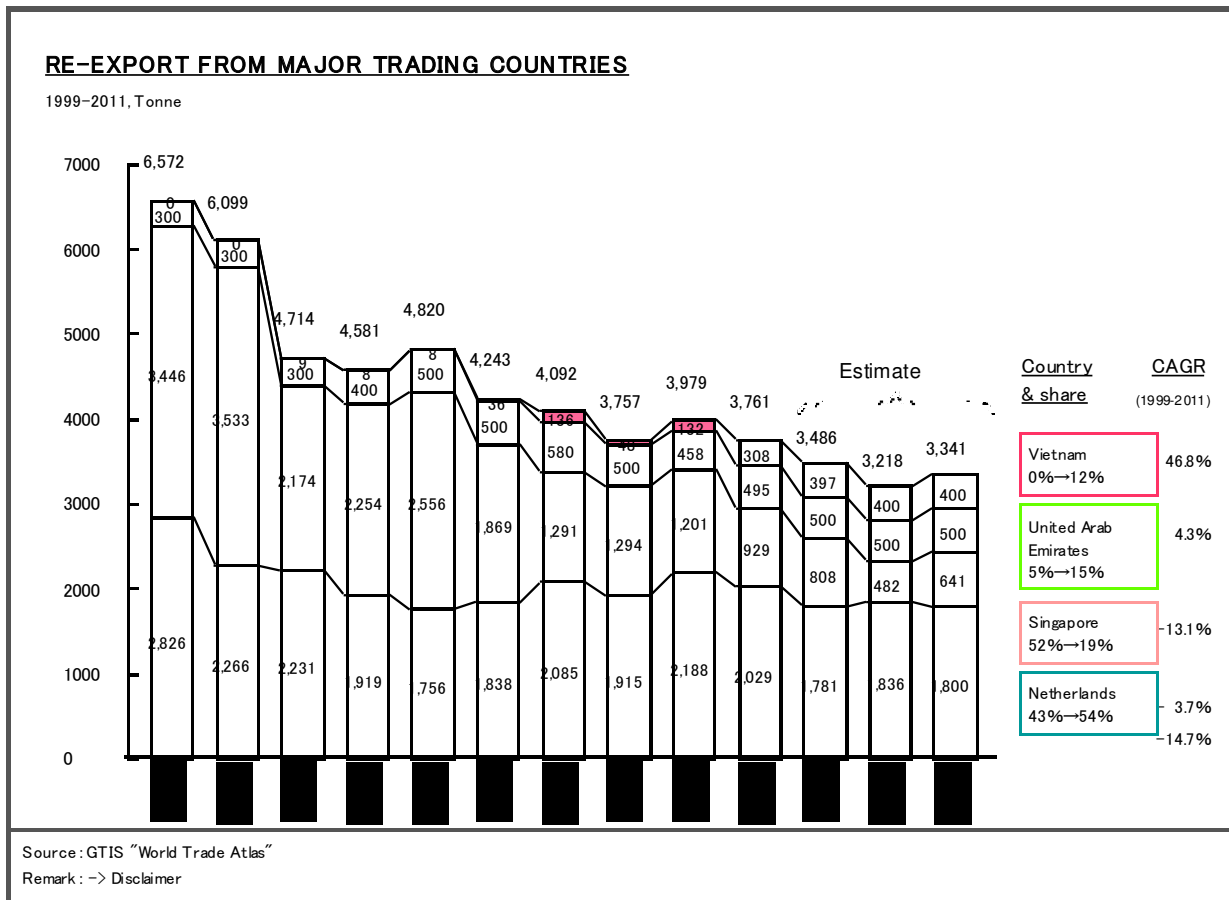
1-1. Supply and demand

Indonesia, India and Sri Lanka increased.
Grenada dropped after the Hurricane damage in 2004 and 2005.



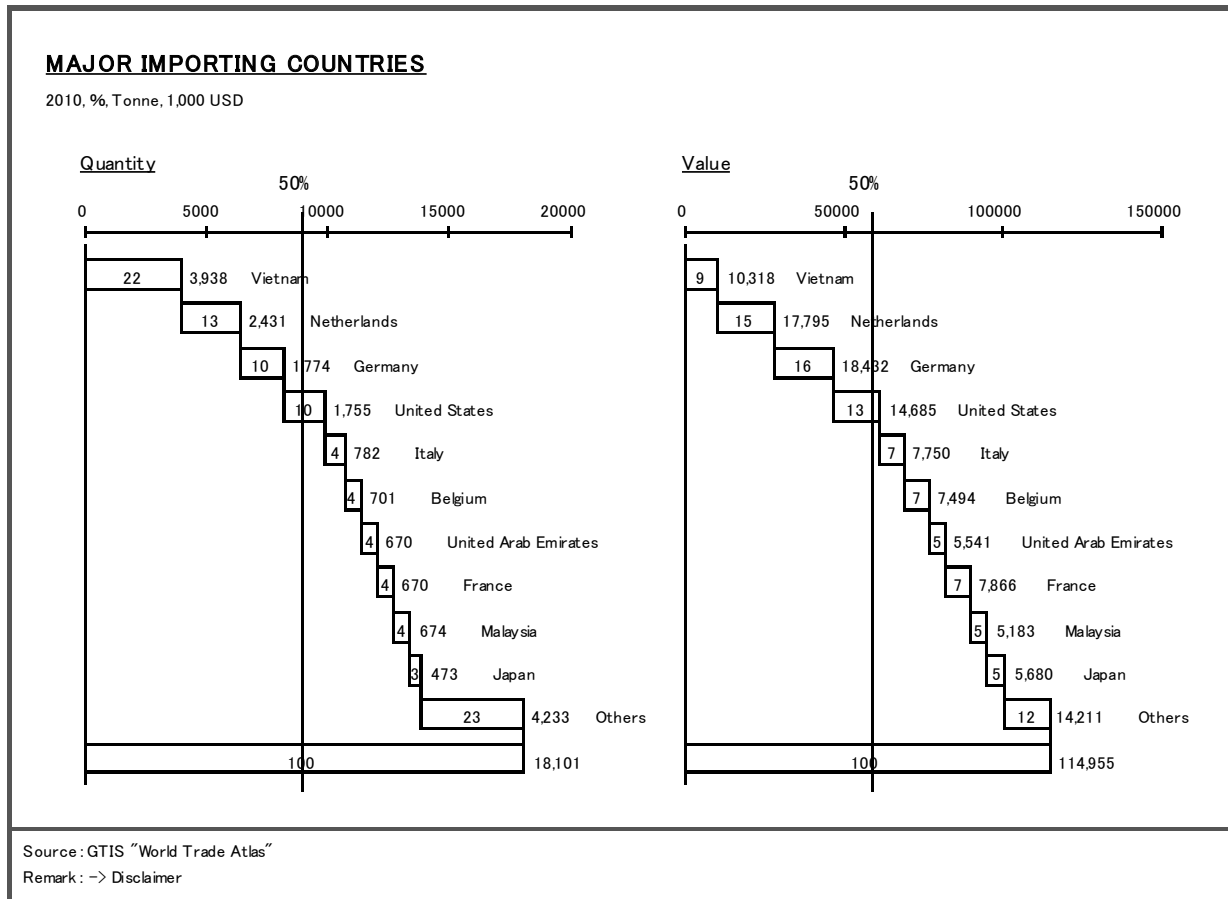
1-1. Supply and demand

Singapore lost its position as a trading center.
 Vietnam increased its volume because some companies started processing.
 BUT Vietnam has more important function as described later.



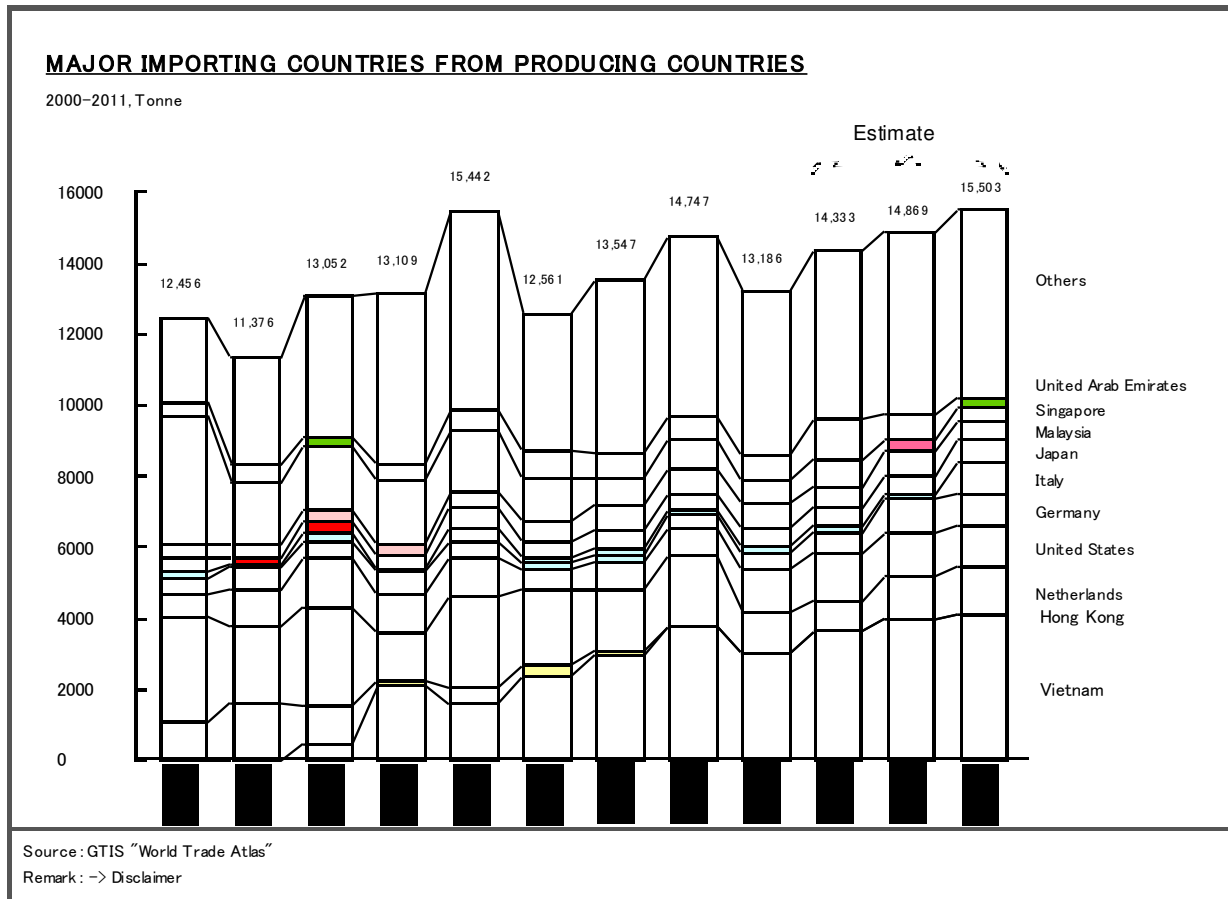
1-1. Supply and demand

Total market size of trading sector was about 115 million dollars in 2010.
 Europe is the largest market for Nutmeg.
 Vietnam has NO.1 share in volume as a single country. But less in value.



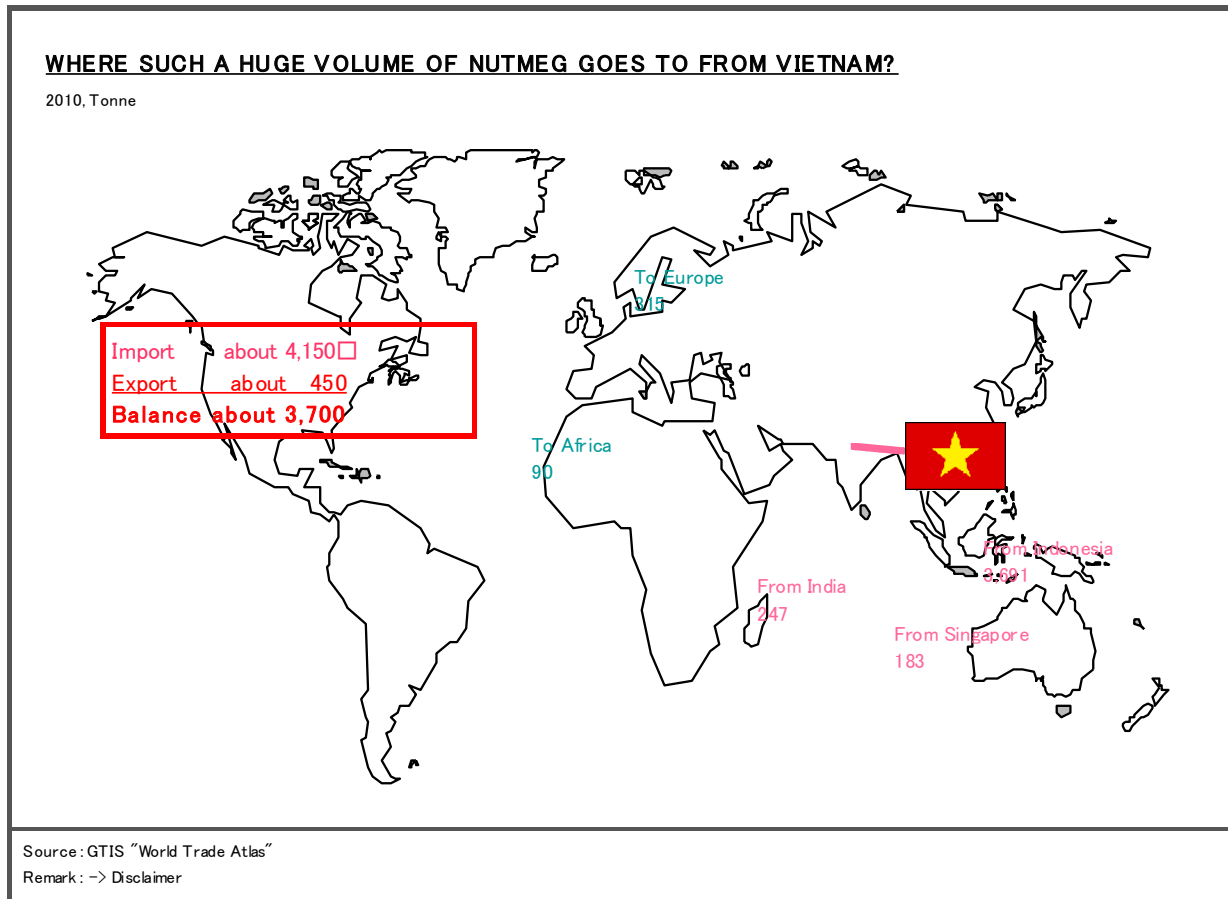
1-1. Supply and demand

Hong Kong seems to be absorbed by Vietnam.
 Singapore lost its share.
 More direct import into European countries, where imported through Netherlands before.



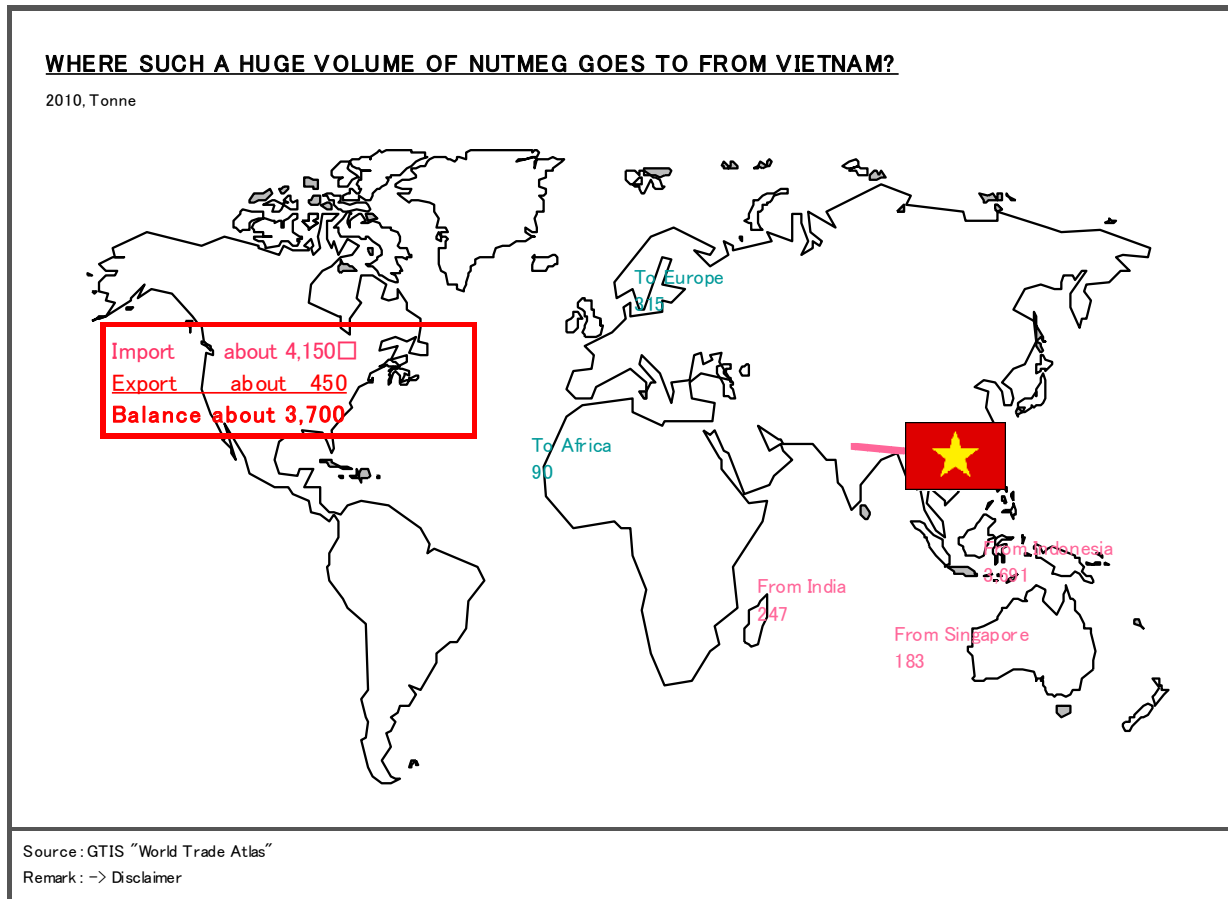
1-1. Supply and demand

Vietnam imports about 4,150 tonne and export about 450 tonne.
Does Vietnam consume such a huge amount of Nutmeg?



1-1. Supply and demand

Some spice companies in China said, “We are using Vietnamese Nutmeg”. Major part of Vietnam's import-export balance may go into China through the boarder. Hong Kong lost its position as a entrance to China and was taken over by Vietnam.



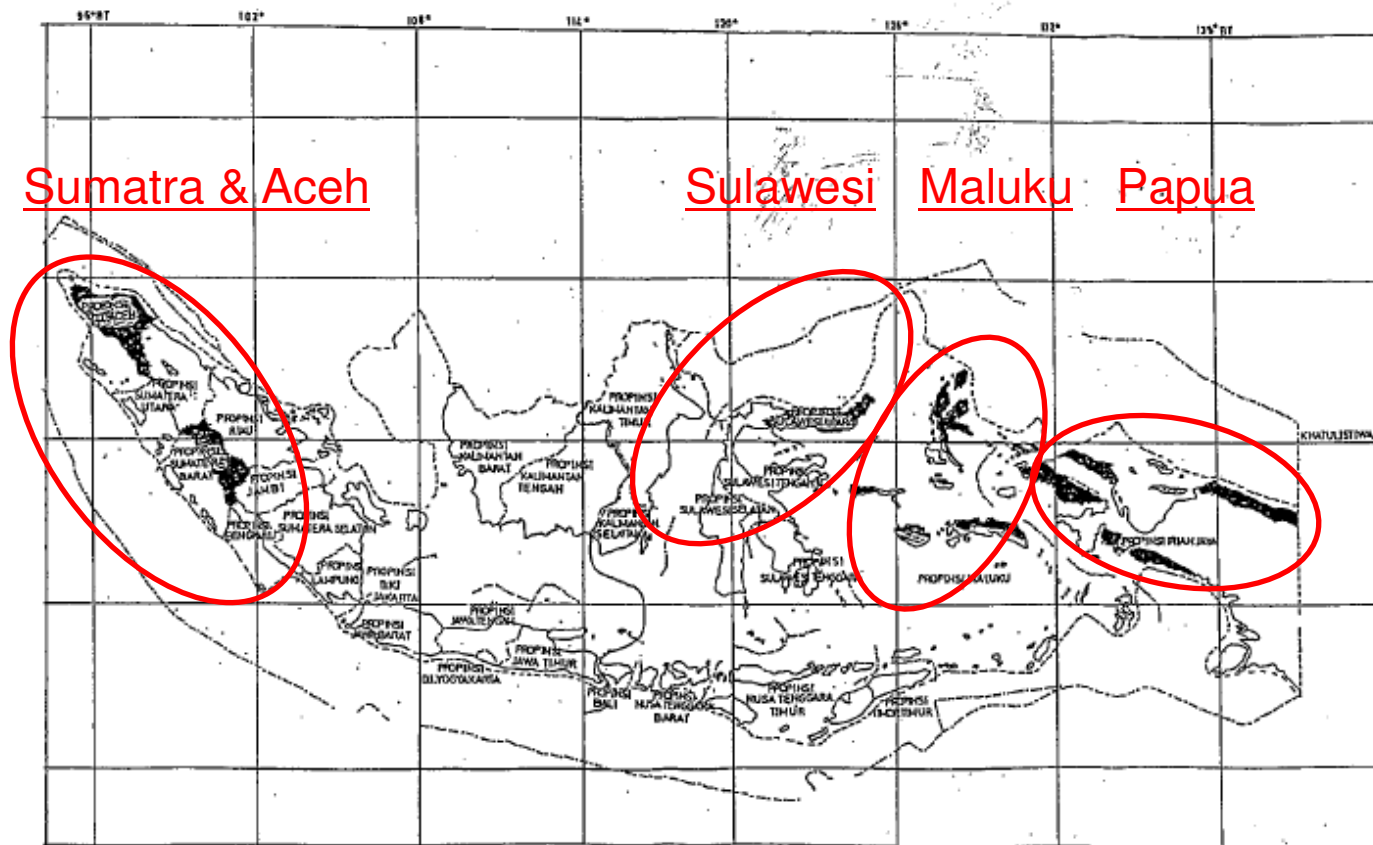
1. Overview of Global Nutmeg Market

1-2. About producing countries

1-2.About Producing Countries

<Indonesia>

Major producing areas of Nutmeg in Indonesia are “North Sulawesi”, “Maluku and North Maluku”, “Sumatra including Aceh” and “Papua”.

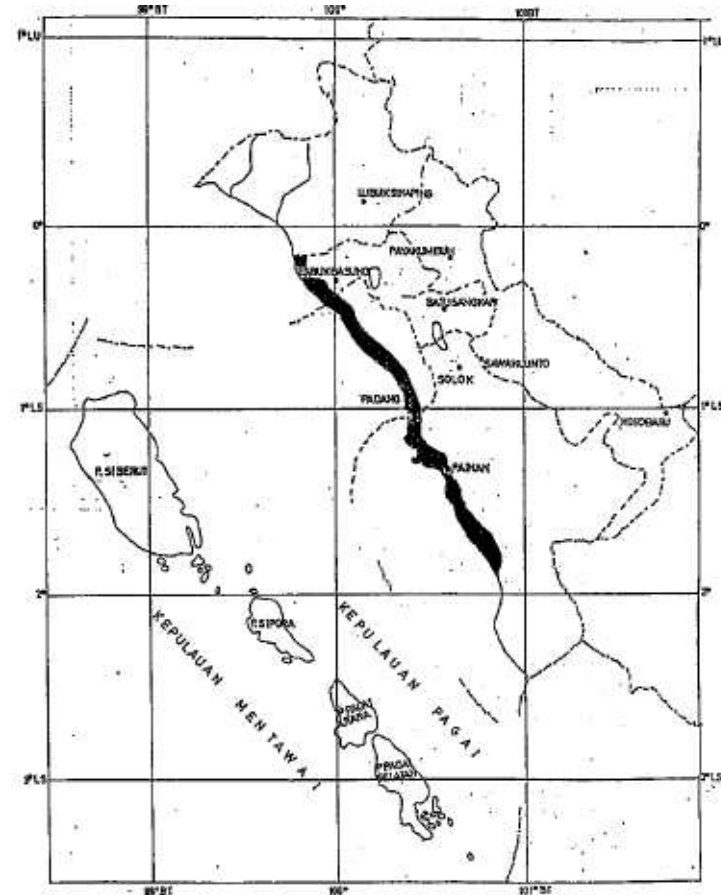
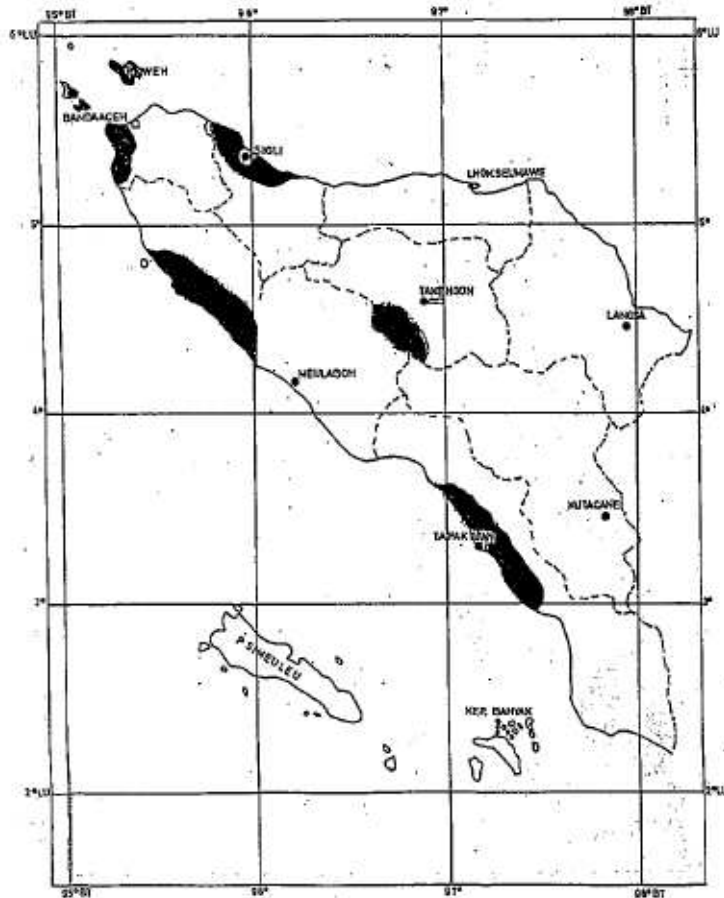


61-62

1-2.About Producing Countries

<Indonesia>

Nutmeg produced in “Sumatra including Aceh” and other places like Java is used for extraction.
Young fresh nutmeg is used for extraction.



1-2.About Producing Countries

<Indonesia>

Siau Island, producing about 2,400 tonne of “Nutmeg with shell” annually, has one of the most active Volcano in Indonesia. This volcano is the mother of high quality nutmeg.



1-2.About Producing Countries

<Indonesia>

Fresh nutmeg and mace is dried under the sun. If there is a sun, you may see sundry everyday in Siau. Matured fruits have been getting less and less because of “Early Pick”.



1-2.About Producing Countries

<Indonesia>

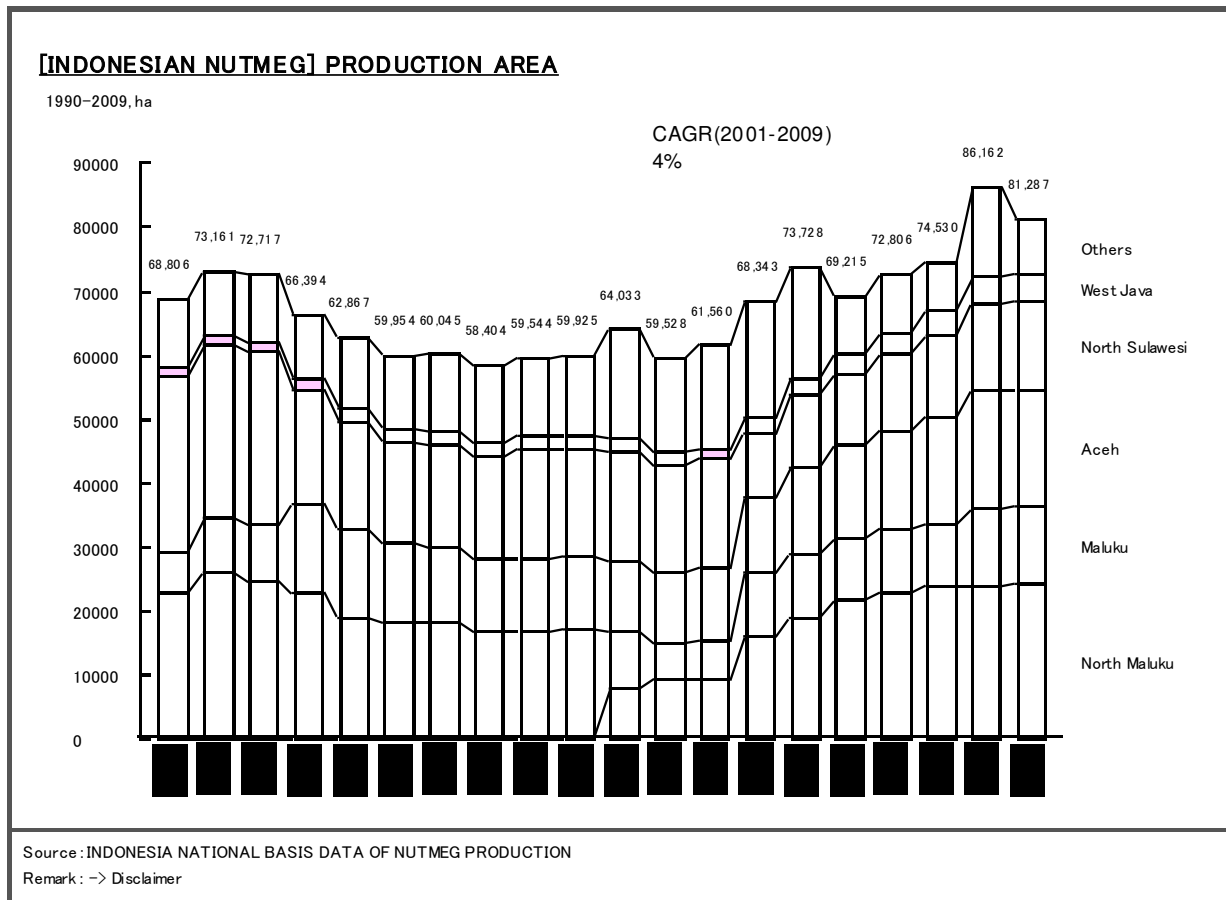
Farmer sells dried “nutmeg with shell” to Local Trader. Exporter removes shell.
And separate into three grades, “ABCD”, “SS” and “BWP”.



1-2.About Producing Countries

<Indonesia>

Nutmeg production area in Indonesia has been increasing. Especially in North Maluku. Production area has been increasing at the average rate of 4% since 2001.

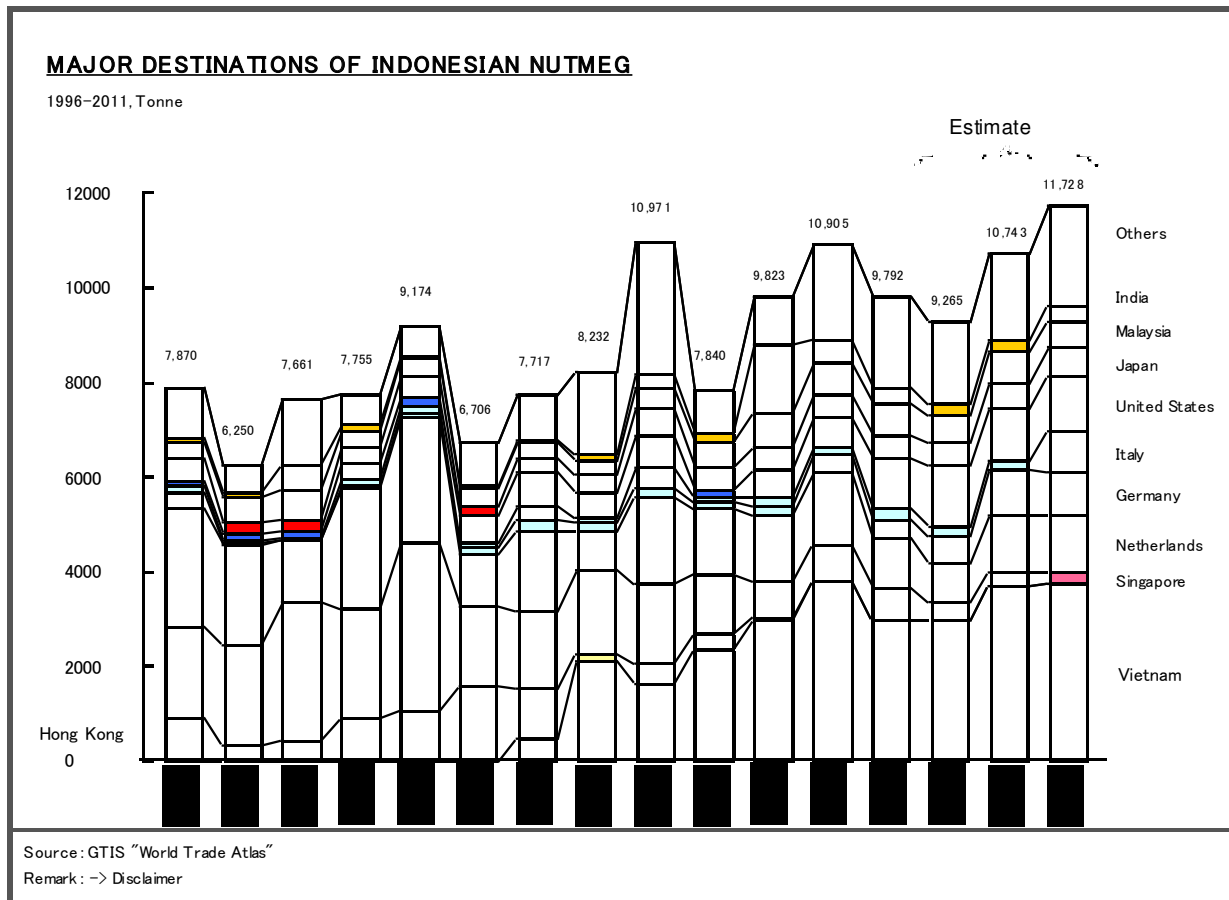


1-2.About Producing Countries

<Indonesia>

Vietnam gained large share in a short period.

US increased import from Indonesia as Grenada could not supply after the Hurricane damage.



1-2.About Producing Countries

<Grenada>

Nutmeg is a traditional agricultural crop in Grenada. It was introduced to the British Colonies in 1843.



Grenada

1-2.About Producing Countries

<Grenada>

Prior to Hurricane Ivan, the Nutmeg sector provides income to about 30% of Grenada's population of 100,000 inhabitants. And earned 22.5% of total merchandise export in 2002.



FAO "Nutmeg and derivatives"

1-2.About Producing Countries

<Grenada>

Fresh Nutmeg is dried in shade. Not under the sun like in Indonesia.



FAO "Nutmeg and derivatives"

1-2.About Producing Countries

<Grenada>

The Grenadian Nutmeg Industry was devastated by Hurricanes Ivan in Sep.2004 and Emily in Jul.2005.



1-2.About Producing Countries

<Grenada>

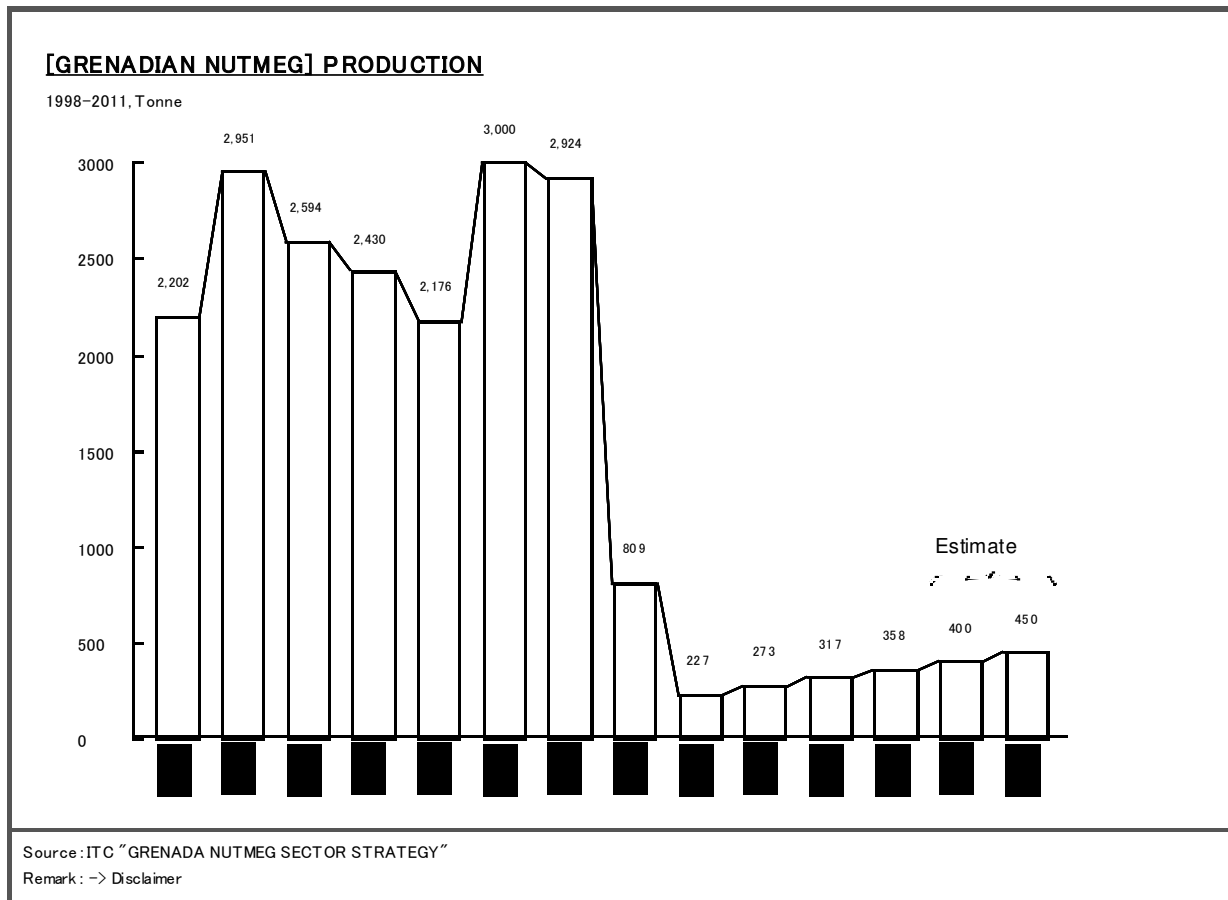
About 90% Nutmeg trees were damaged by the Hurricanes. 40% of the damaged trees were toppled, 25% were injured, 30% were inaccessible and 5% died according to ITC report.



1-2.About Producing Countries

<Grenada>

The production in 2006 was only 227 tonne, which was 92.43% less than that in 2003. And the recovery speed has been slow.

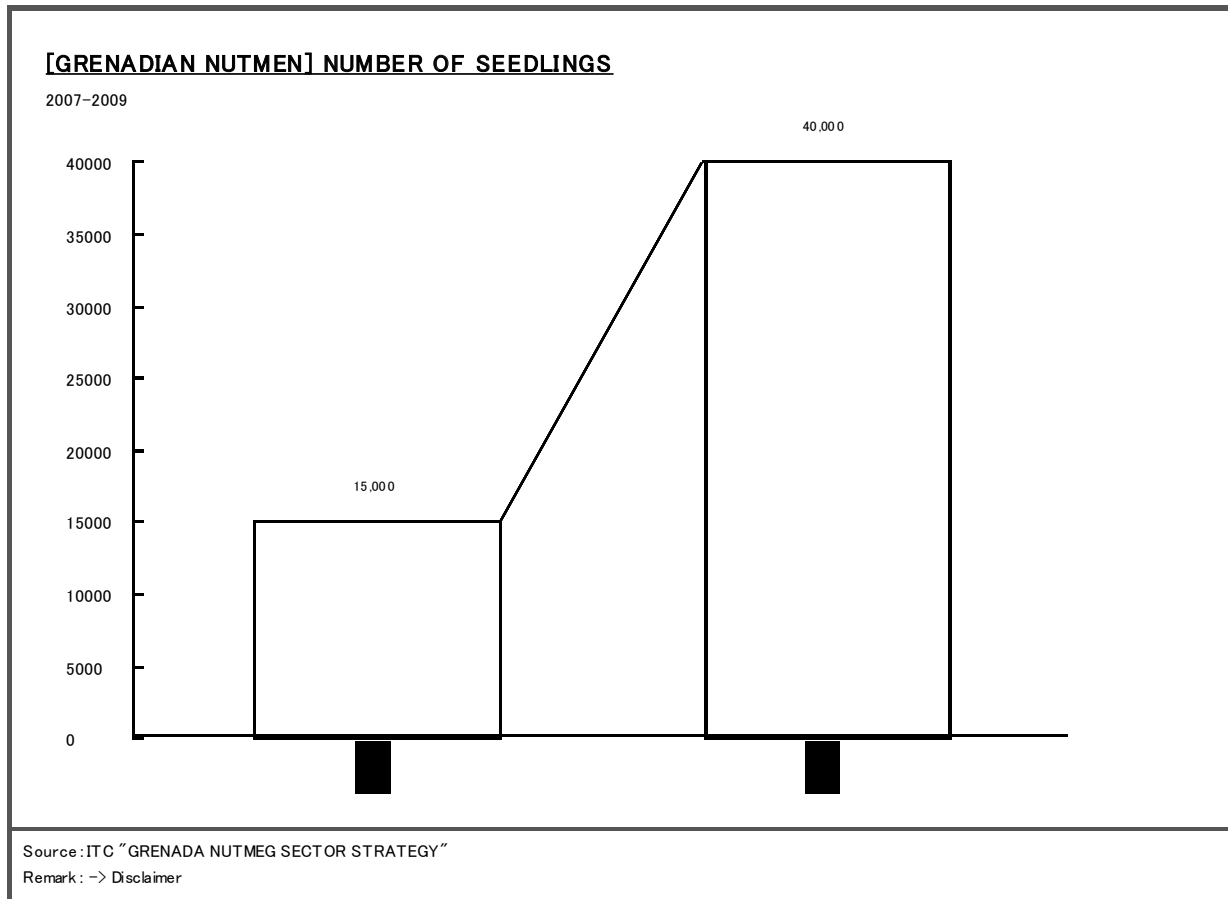


1-2.About Producing Countries

<Grenada>

The number of seedlings in 2007 was about 15,000 and about 40,000 in 2009.

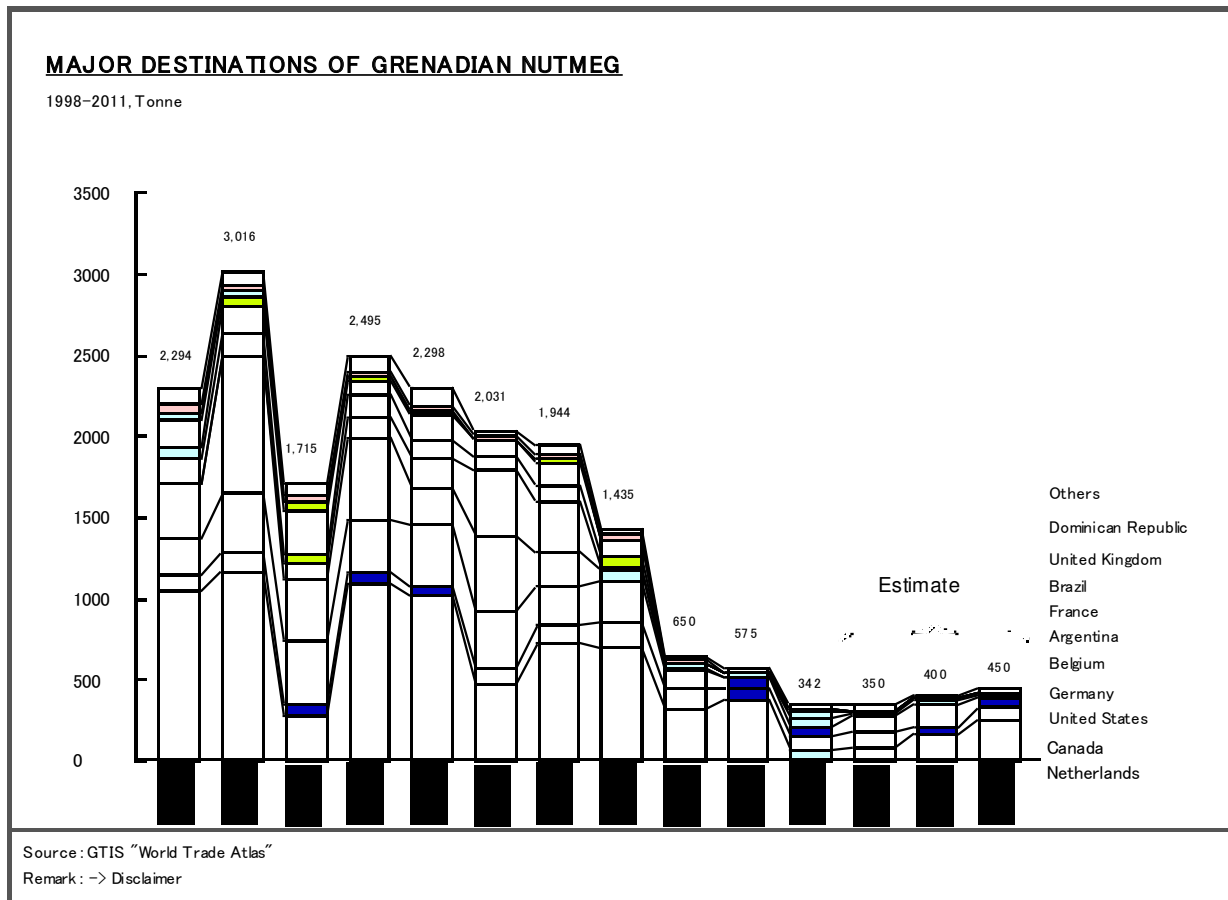
Nutmeg tree bears fruit about 5-7 after planting. One tree produces up to 100kg of nutmeg per year.



1-2.About Producing Countries

<Grenada>

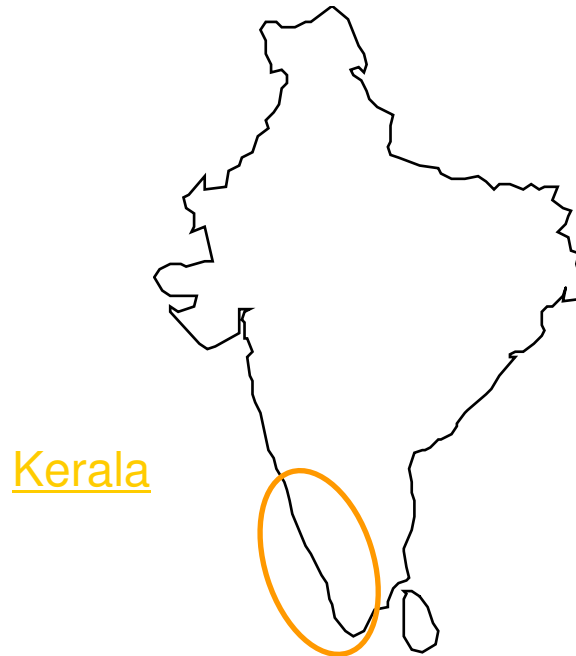
After 2004, the Grenada stocks were gradually released. In 2008 all stocks were finally depleted. Netherlands remains the NO.1 destination.



1-2.About Producing Countries

<India>

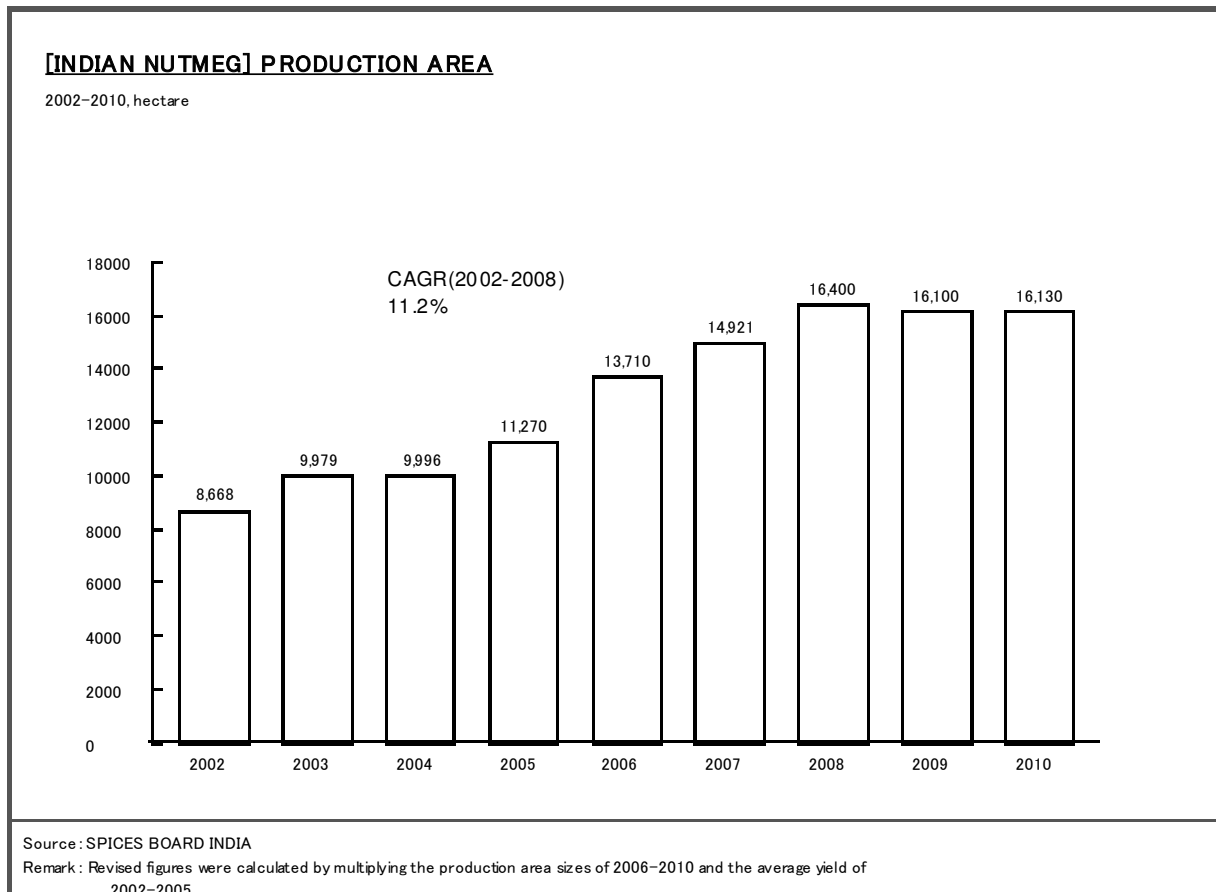
Major producing areas of Nutmeg in India is "Kerala."



1-2.About Producing Countries

<India>

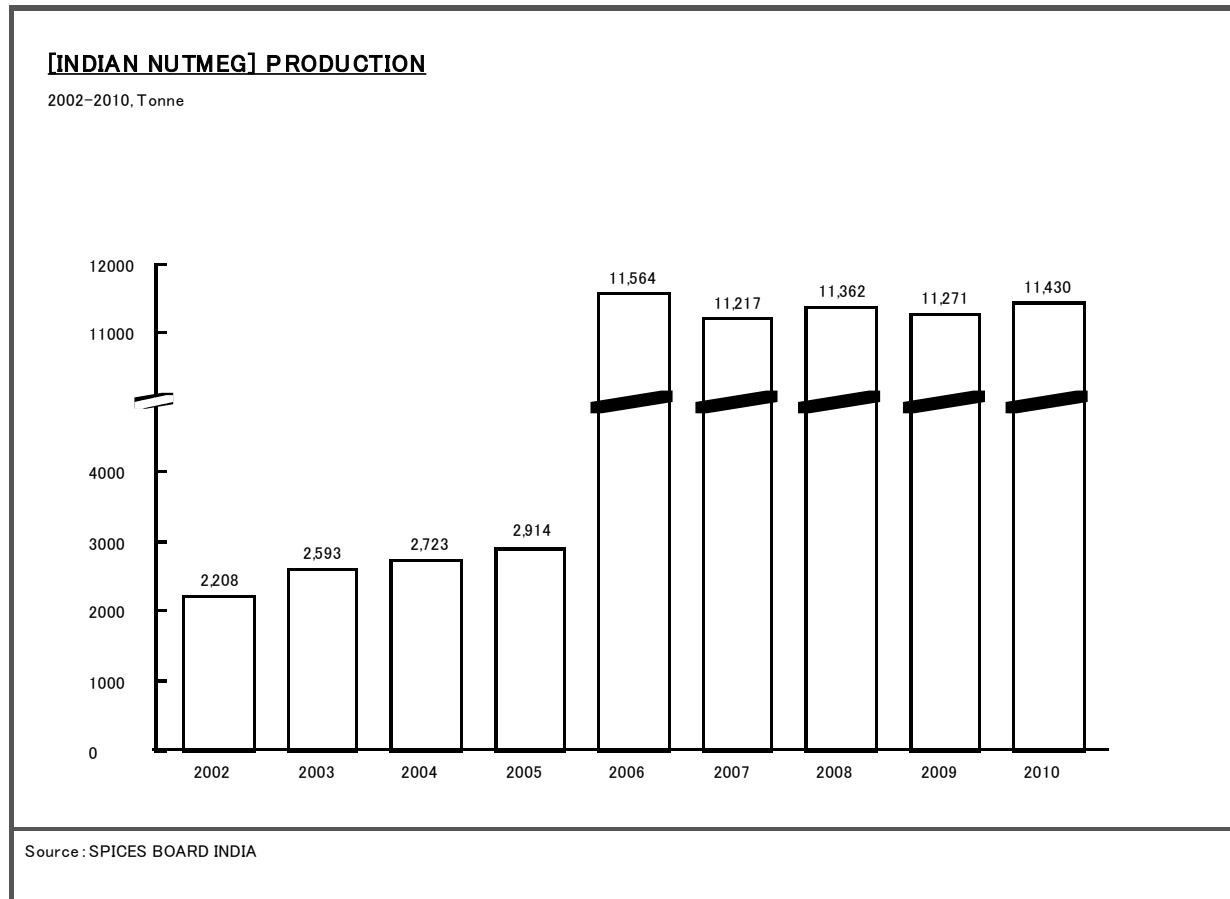
Production area hit the peak of 16,400 hectares in 2008. The speed of expansion till 2008 was 11.2%.



1-2.About Producing Countries

<India>

The figures of about 11,000 tonnes may not be fully accurate since farmers are small and holdings fragmented and it is difficult to get accurate production figures in such circumstances.

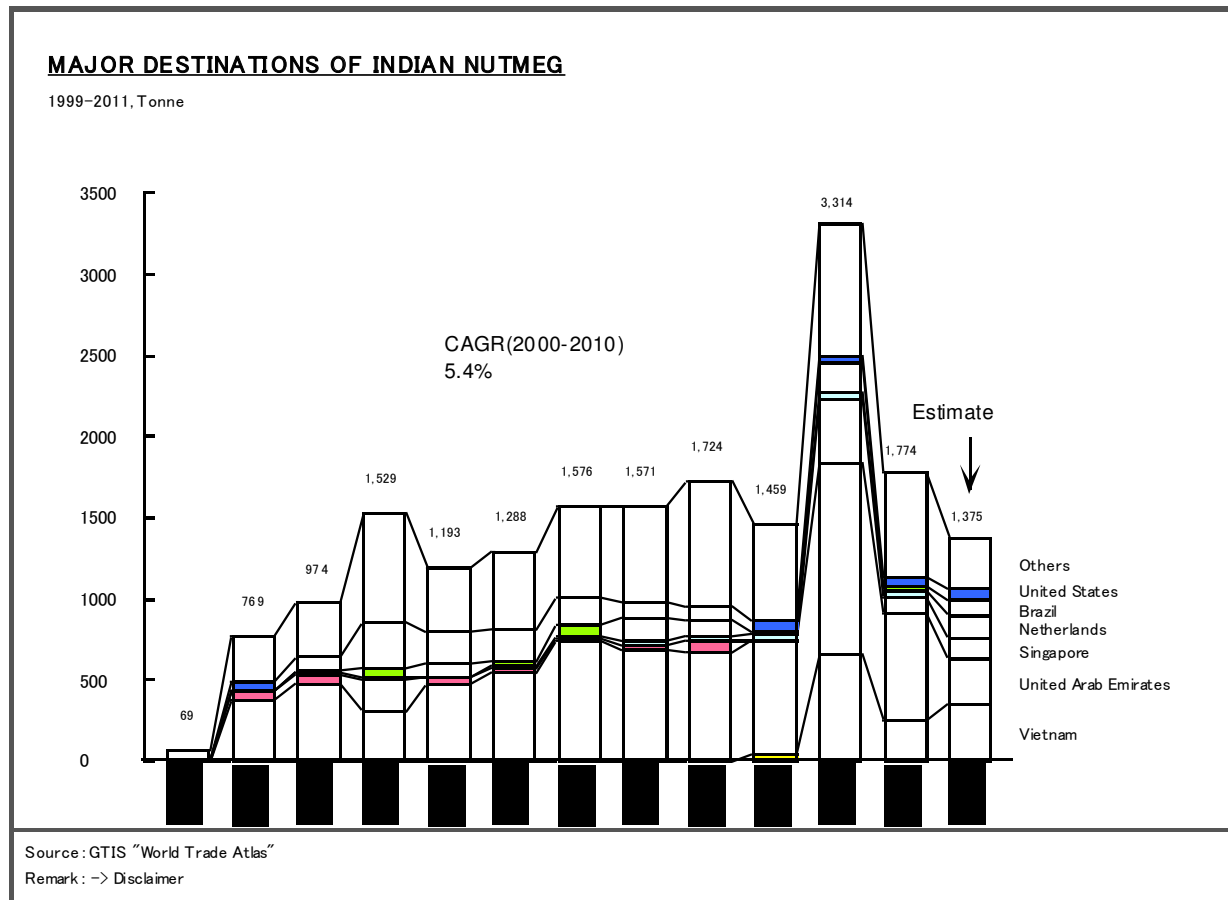


1-2.About Producing Countries

<India>

UAE has been the major destination of Indian Nutmeg.

Vietnam has also been another major destination.

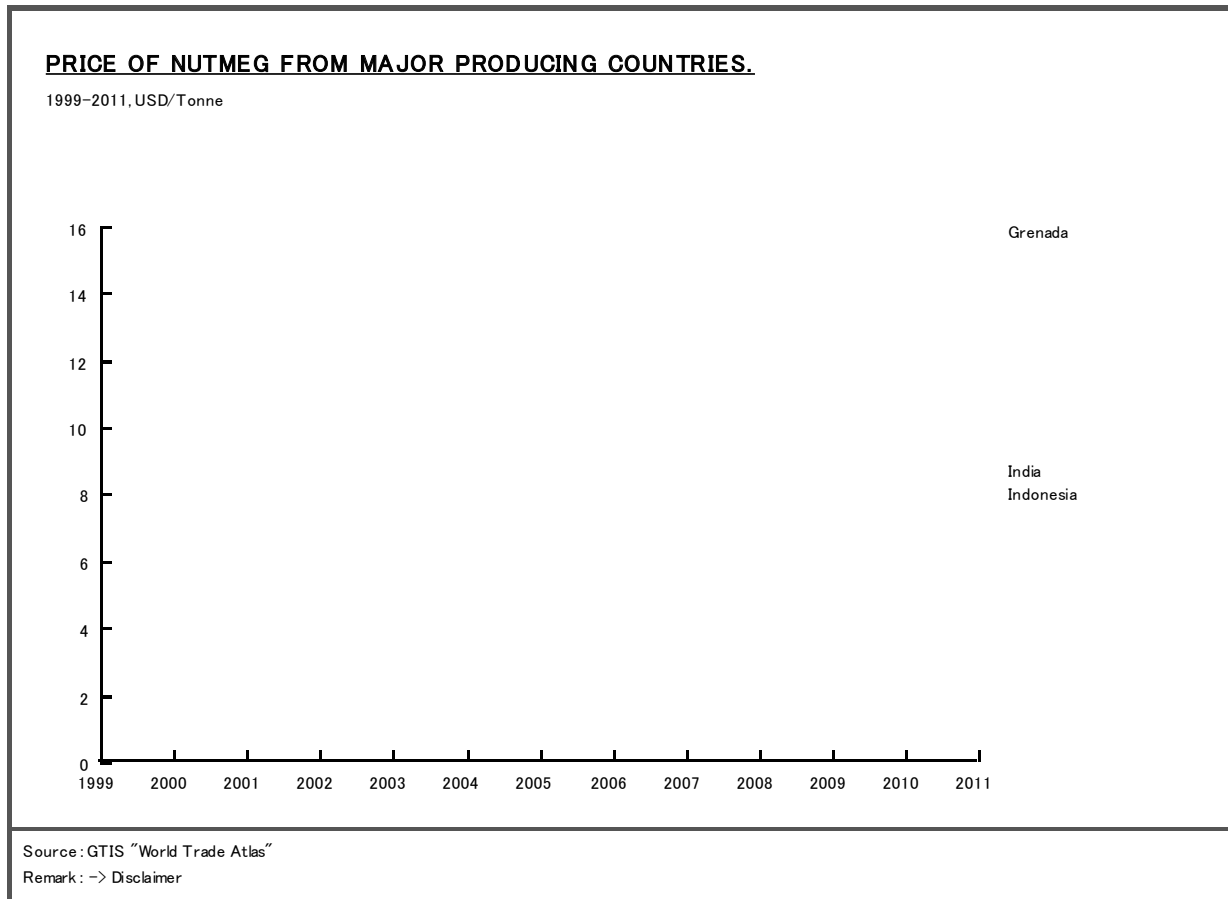


2.Price

2-1.Historical Price

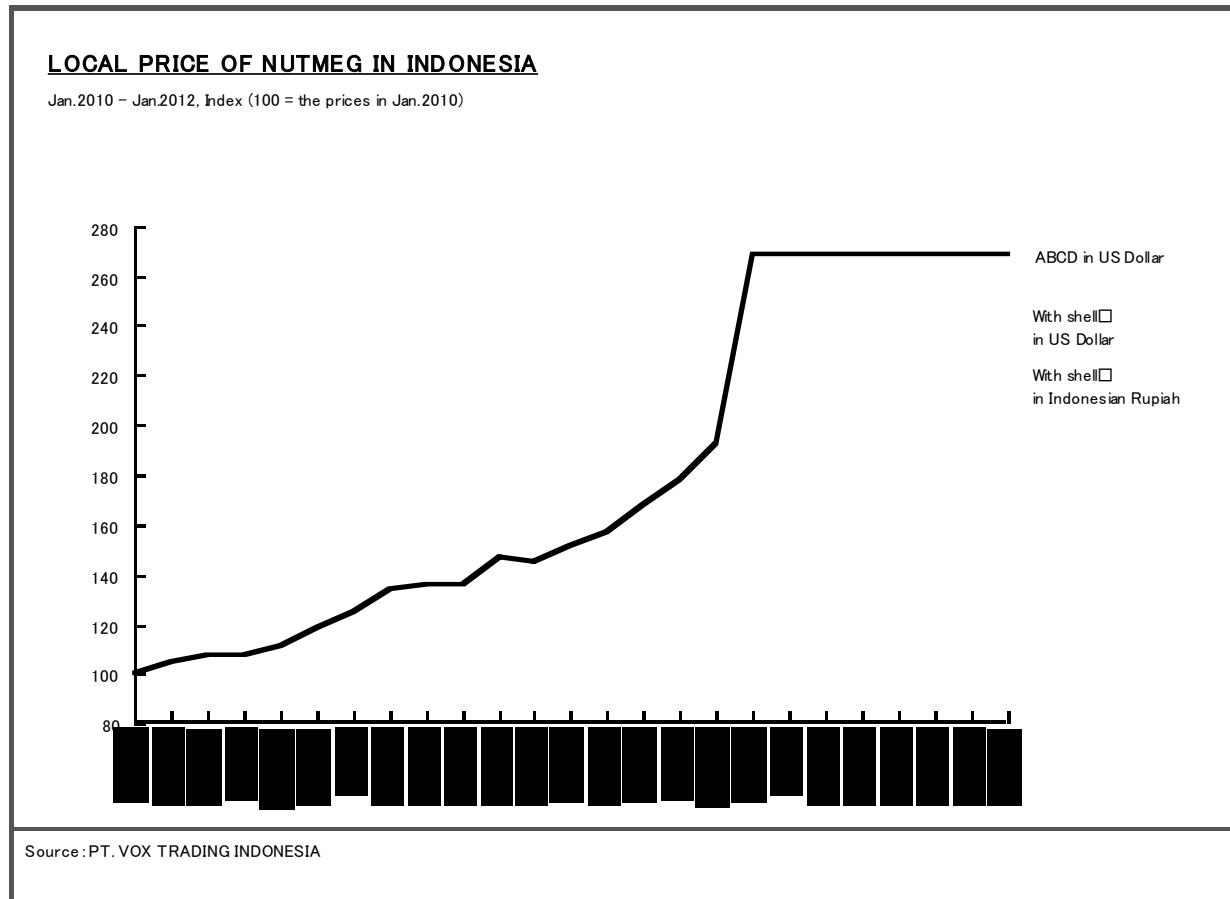
2-1.Historical Price

Price has been moving up since 2007 as global stock getting smaller and smaller.
In 2011, the bullish trend was accelerated because of shortage.



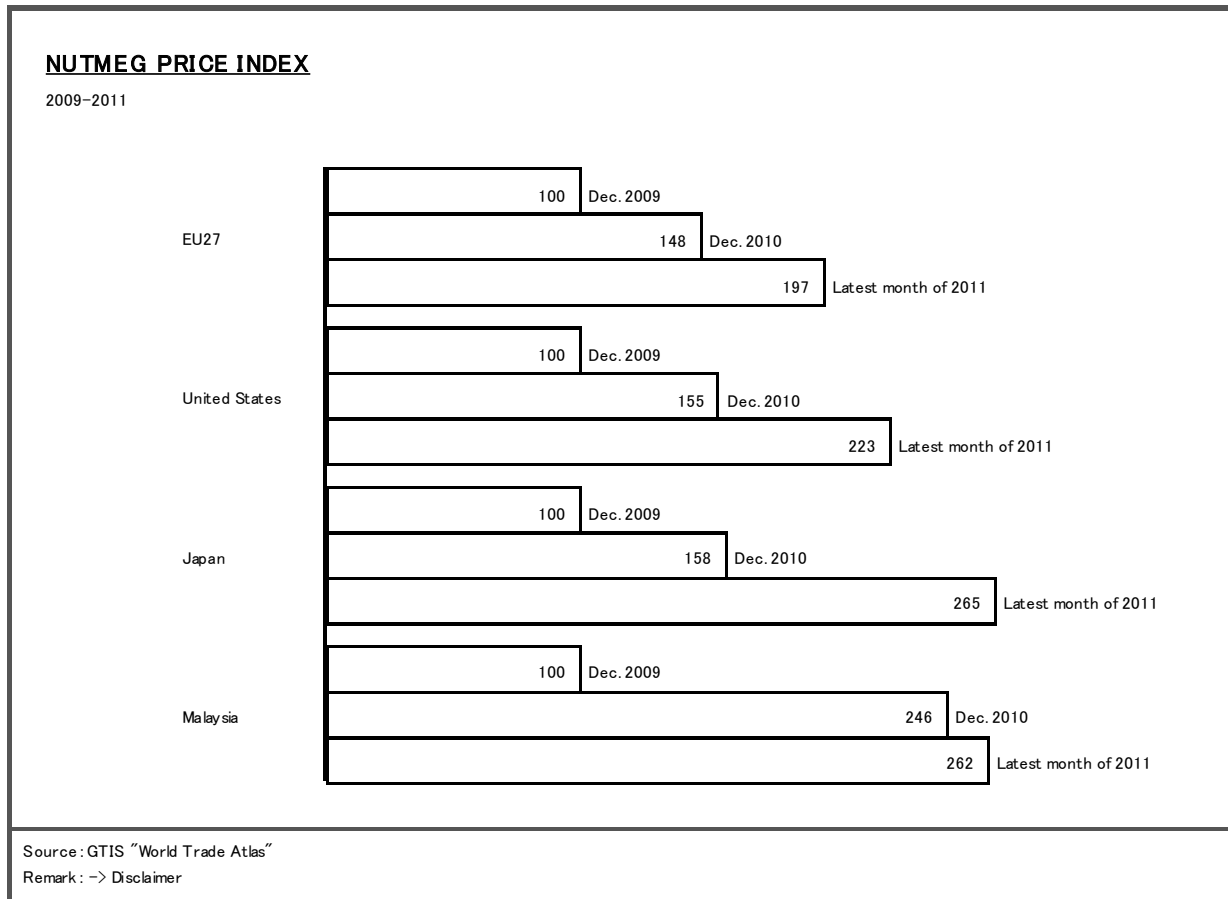
2-1.Historical Price

Export price showed the same movement as Local price until May 2011.
But Price of ABCD (and SS) suddenly jumped up in Jun.2011 because of serious material shortage.
There were many delivery delays in this period.



2-1.Historical Price

In the last three years, the price went up to 200 – 265%.



2.Price

2-2.Reasons of crazy price

2-2.Reasons of crazy price

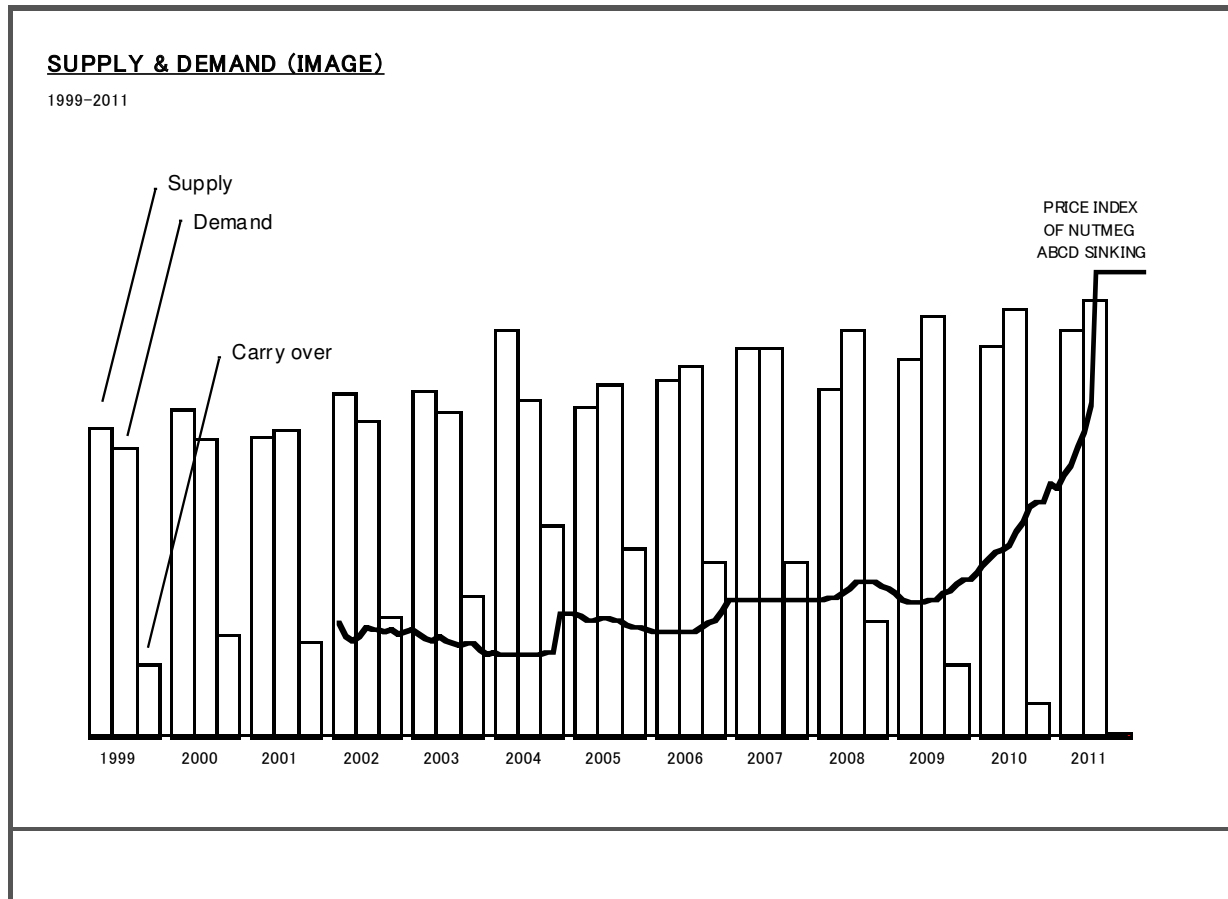
Demand has been continuously increasing both for spice and extracts.
Supply dropped after Hurricane damage in Grenada, which made global stock depleted.

2004
Hurricane Ivan
hit Grenada.

2005
Hurricane Emily
hit Grenada.
Early pick
started in
Indonesia.
La Niña (-06).

2006
Climate change
started in
Indonesia.
Eruption in Siau.
El Niño (-07).

2007
La Niña (-08).



2008
Grenada stock
was depleted.
Extractor in
Indonesia
started buying
dried Nutmeg.
Financial crisis.

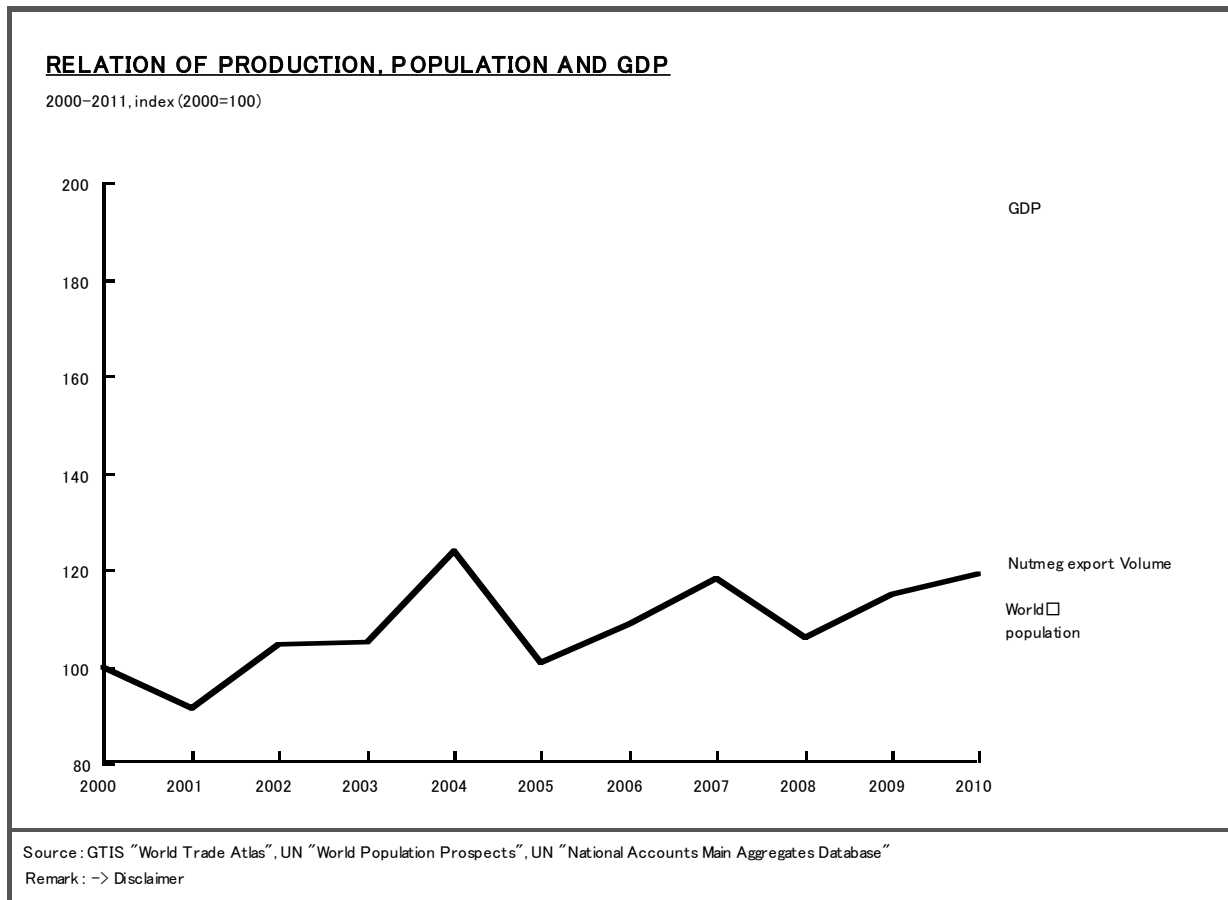
2009
El Niño (-10).

2010
Indonesia stock
was depleted.
Extractor started
operation in
North Sulawesi.
Eruption in Siau.
La Niña (-11).

2011
Serious material
shortage in
Indonesia.
La Niña (-12).

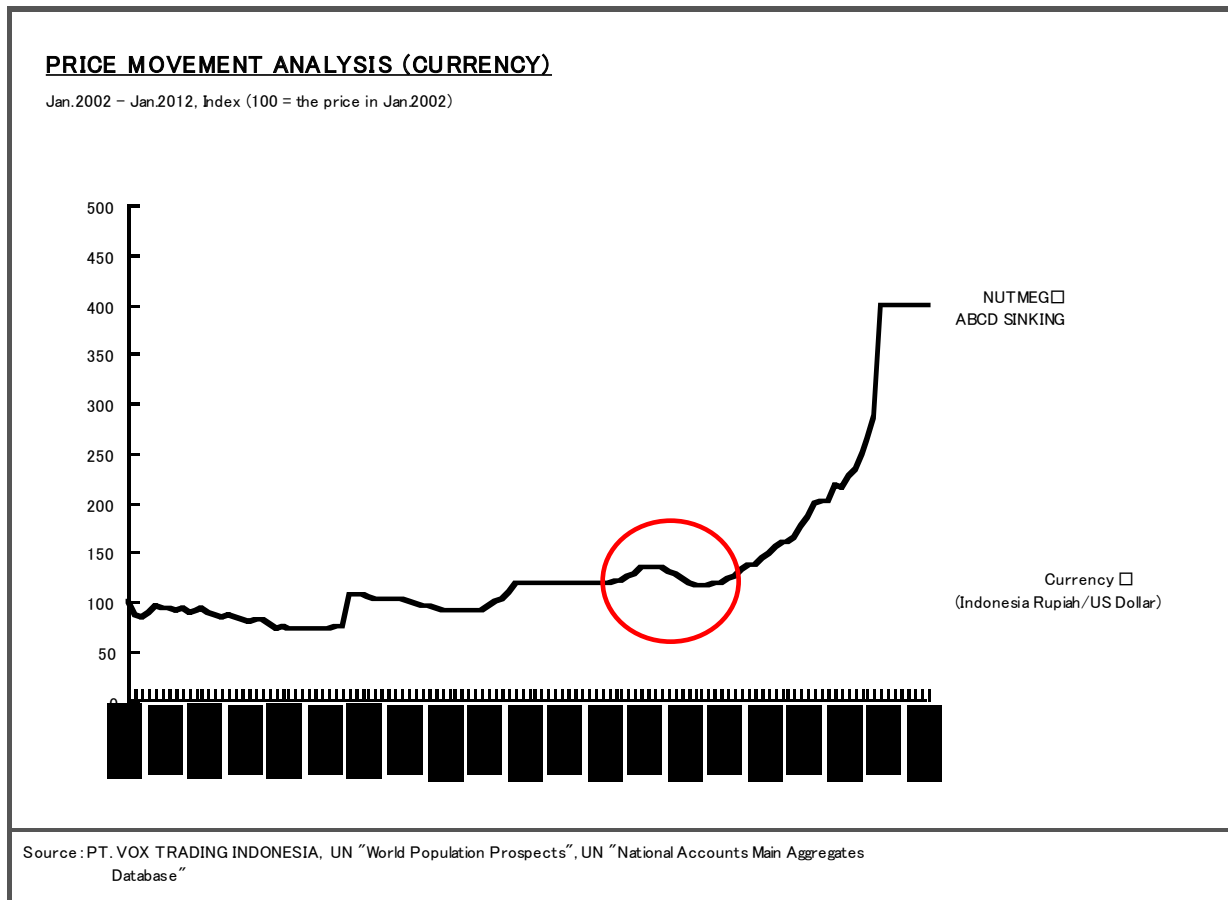
2-2.Reasons of crazy price

Nutmeg export volume showed same trend as World Population.



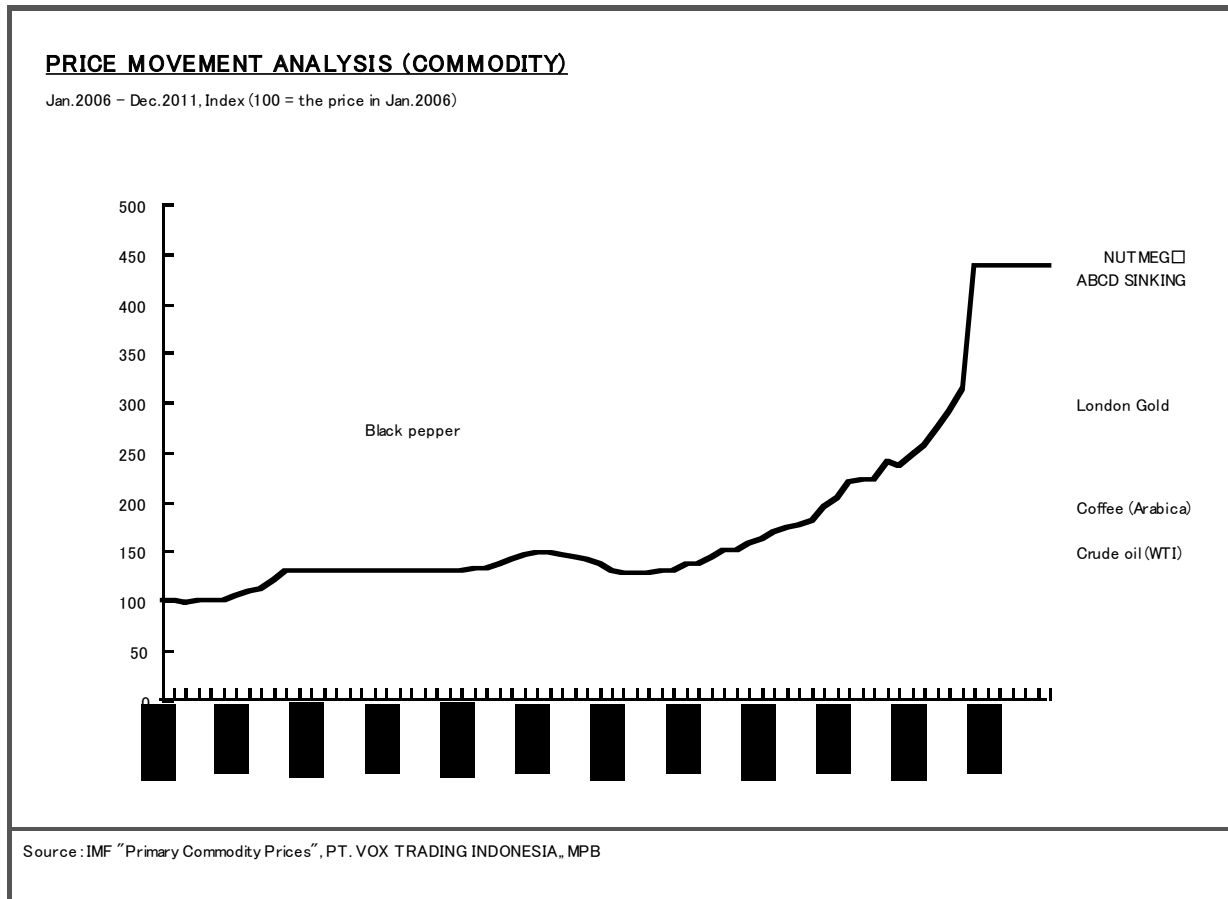
2-2.Reasons of crazy price

Only during the Financial Crisis, Nutmeg export price showed same movement as Indonesian currency.



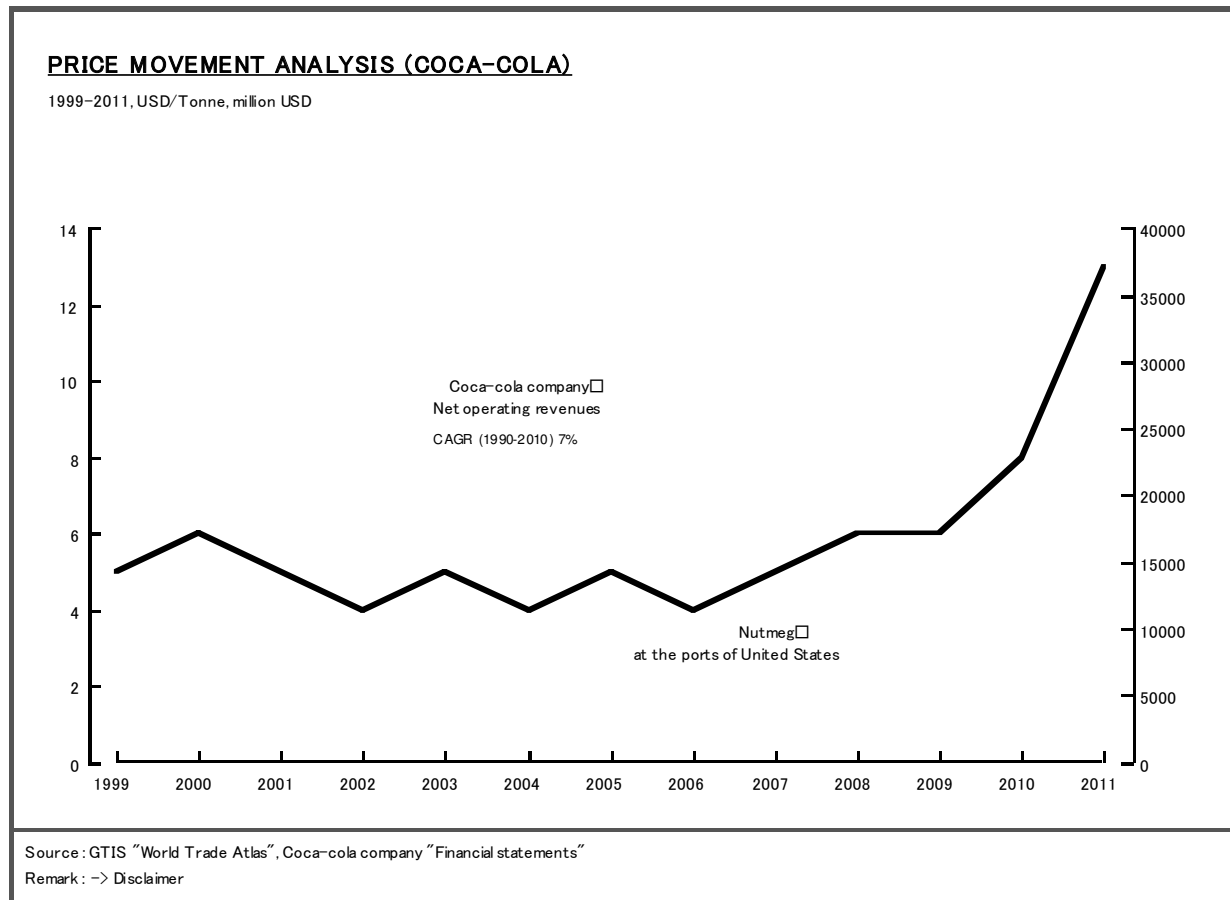
2-2.Reasons of crazy price

Commodities showed same trend as Nutmeg.
Excess liquidity pushed up commodity price.



2-2.Reasons of crazy price

Coca-cola, who is the giant user of Nutmeg essential oil, has aggressively increasing its sales globally.



2.Price

2-3.Future forecast

2-3.Future forecast

[Supply] World production will slowly increase. Negative factors will exist.

[Demand] World demand will gradually increase. European economy may have impact on price.

Supply

Grenada will make a gradual recovery.

New trees in Indonesia will start production.

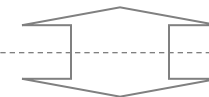
Early pick in Indonesia will continue.

Climate Change in Indonesia will continue.

Price down



Price up



Demand

World population will grow.

World economy will grow.

Extractor's demand will increase.

Recession in Europe may reduce demand.

Price elasticity may push down demand.

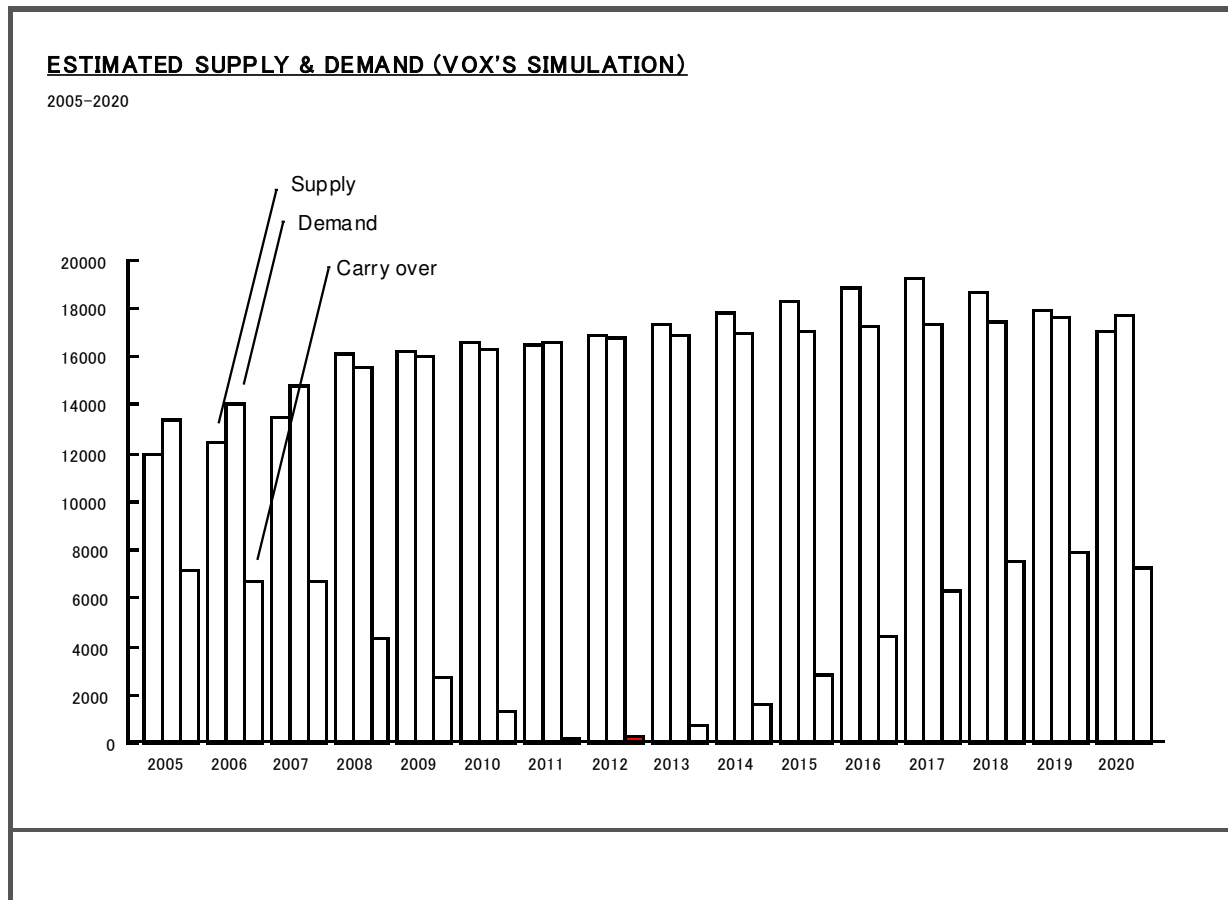
Price up



Price down

2-3.Future forecast

As World population and economy grow, demand for Nutmeg will be increased.
New trees will start its production in the coming 5 years, which will push up production.
But shortage is likely to continue till 2013/2014.



3.Aflatoxin

3-1.How Aflatoxin contaminates into Nutmeg.

3-1. How Aflatoxin contaminates into Nutmeg.

Most of the Aflatoxin contamination of Nutmeg were caused during the post harvest stage.
Key points of Aflatoxin contamination are water activity of material and storage condition.

Condition for Aflatoxin production

Existence of *Aspergillus flavus*
with ability to produce Aflatoxin

Temperature
>10C, 30C is the best
Humidity
>83%, >88% is the best
Water activity
>0.83

Dead food for fungus

NUTMEG

<Harvest - Dry>

Grown in the Tropics

Space inside

Careless dry

<After Dry>

Incomplete dry

Insect

Dew condensation during
transportation

3-1.How Aflatoxin contaminates into Nutmeg.



3.Aflatoxin

3-2.Approaches to control Aflatoxin risk.

3-2.Approaches to control Aflatoxin risk

We may find several possible approaches for Aflatoxin risk control, direct and indirect.

Direct Approach

Block Aflatoxin contamination.

Remove Nutmeg contaminated with Aflatoxin.

How to reduce Aflatoxin risk?

Find a buyer who do not care Aflatoxin.

Indirect Approach

Relaxation of regulations for Nutmeg

Use insurance or create a fund.

3-2.Approaches to control Aflatoxin risk

Heat dry



Sinking



Hand selection

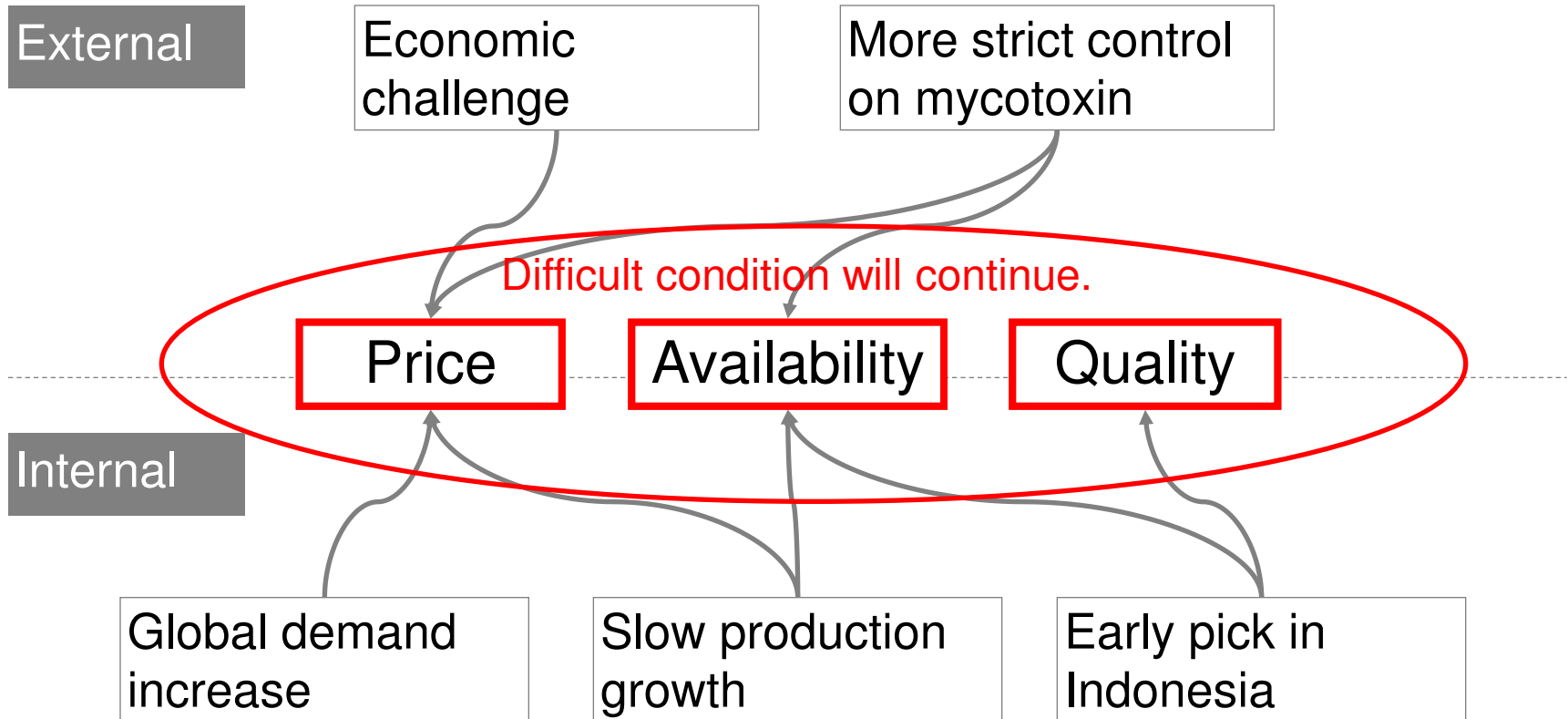


Hand selection



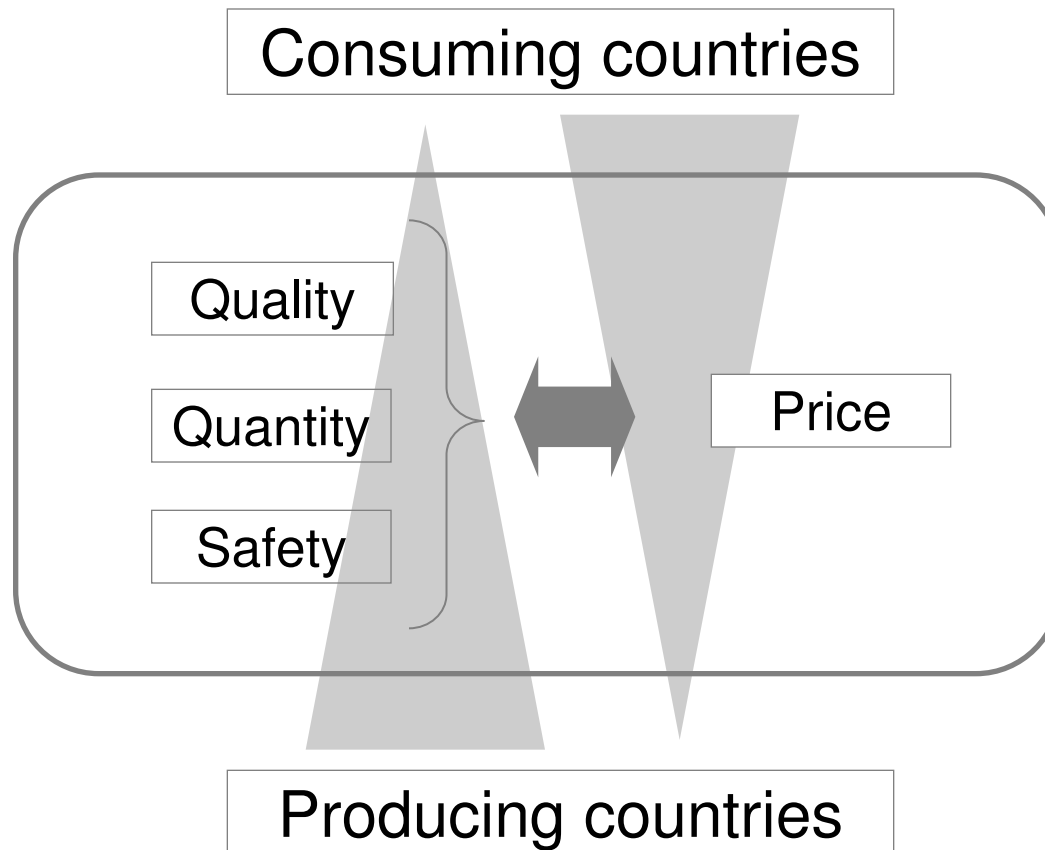
4. Summay

The continuing shortage situation is likely to support the current high price. Weak economy in major consuming countries may not allow manufactures to shift higher purchase cost to selling price. More strict control on mycotoxin may impose extra cost and work to all of us.



4. Summay

To overcome the difficult situation, it is advisable to start integrated-supply-chain approach. Understanding End Users' essential needs and optimizing vertical supply chain are key points.



Thank you.

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