

# Indonesian Spices, Problem and Practical Solution: Improving Food Safety and Traceability



by  
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## Nutmeg export in the last 5 years (BPS, 2008-2012)

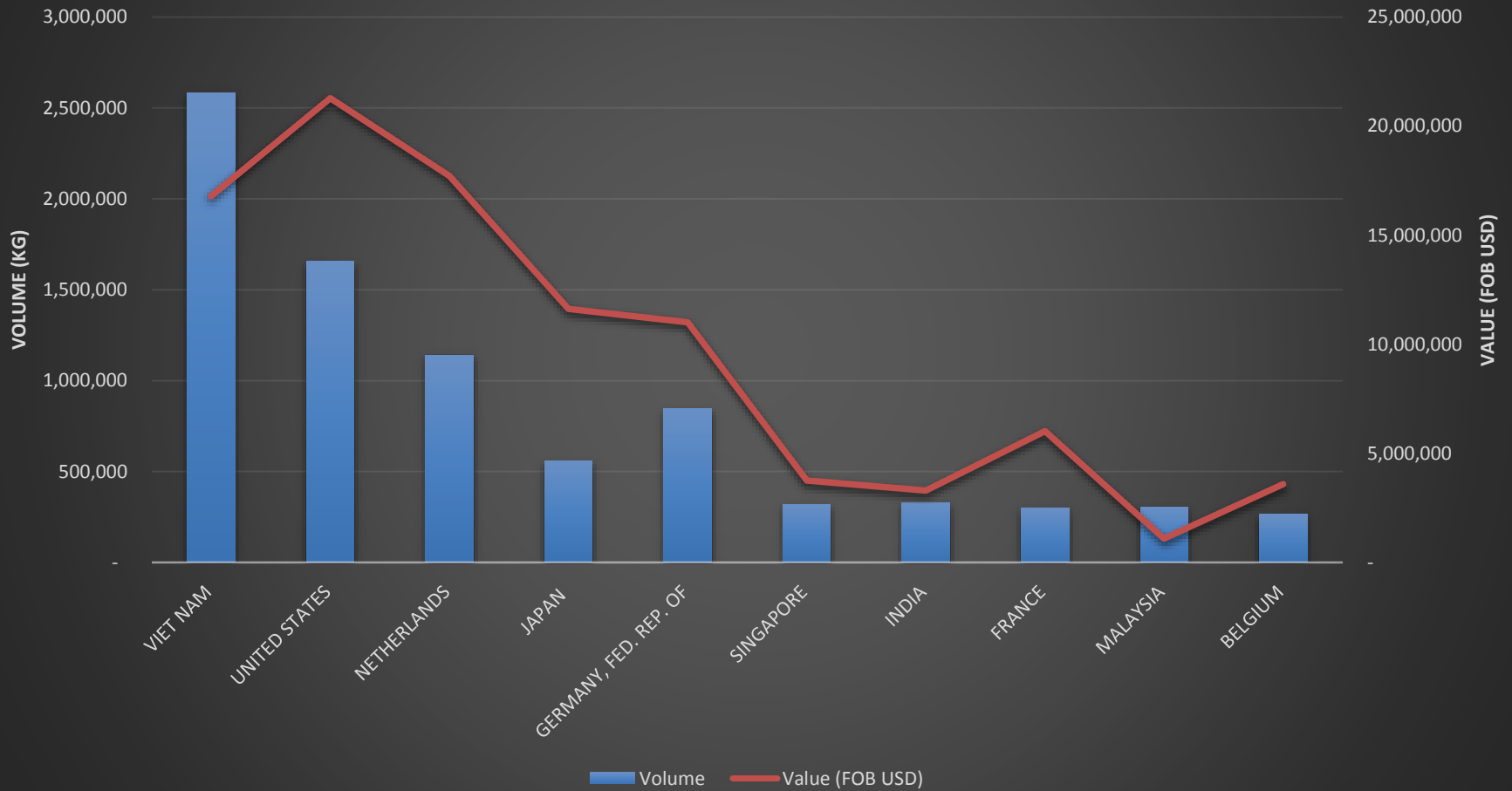
YEAR	In Shell		Shelled		Mace	
	VOL (KG)	VAL (FOB USD)	VOL (KG)	VAL (FOB USD)	VOL (KG)	VAL (FOB USD)
2008	1,776,083	6,684,008	4,401,803	12,336,447	3,148,980	16,660,395
2009	1,601,026	5,519,389	7,663,061	27,120,538	3,025,459	16,392,770
2010	1,953,967	9,620,466	8,788,930	43,038,606	3,442,974	33,437,008
2011	6,455,894	14,770,143	<b>9,069,902</b>	78,220,903	3,228,469	39,172,614
2012	1,969,612	29,222,680	<b>6,744,516</b>	68,810,370	4,093,327	41,984,662

Source: BPS 2013

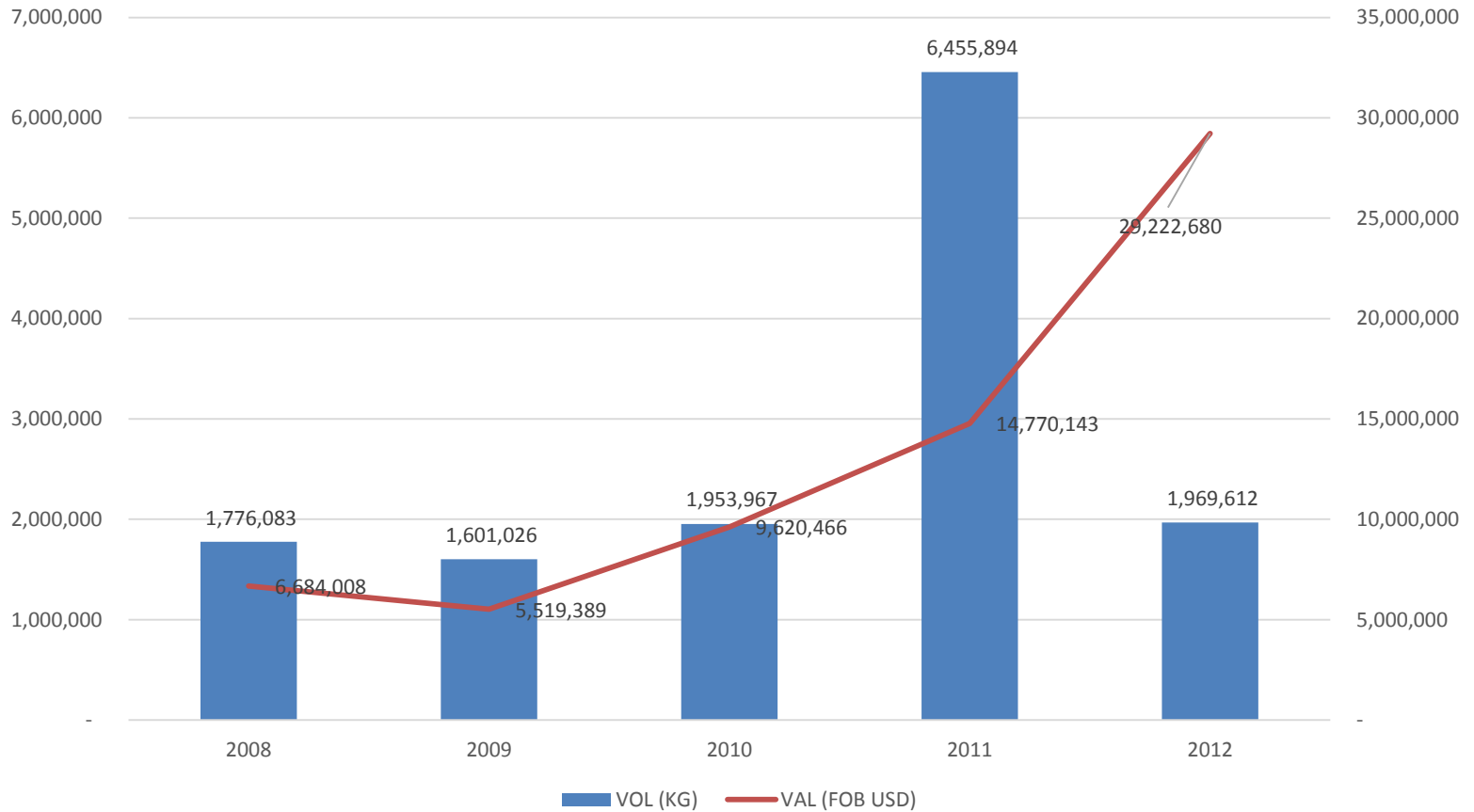
Top Ten Countries Import Nutmeg from Indonesia (refer to value of in shell product, BPS 2012)

No.	Countries	In Shell		Shelled		Mace		Total	
		Volume (kg)	Value (USD FOB)	Volume (kg)	Value (USD FOB)	Volume (kg)	Value (USD FOB)	Volume (kg)	Value (USD FOB)
1	VIET NAM	2,338,428	15,437,675	175,030	676,743	70,329	672,831	2,583,787	16,787,249
2	UNITED STATES	965,971	11,533,342	643,796	8,686,086	45,050	1,063,184	1,654,817	21,282,612
3	NETHERLANDS	718,937	10,588,566	80,503	1,618,930	340,820	5,505,158	1,140,260	17,712,654
4	JAPAN	464,290	9,443,468	64,917	1,511,883	28,800	669,398	558,007	11,624,749
5	GERMANY, FED. REP. OF	441,200	4,157,702	165,500	3,217,781	238,550	3,638,467	845,250	11,013,950
6	SINGAPORE	301,311	3,523,937			16,043	231,276	317,354	3,755,213
7	INDIA	200,660	1,695,930	73,760	954,197	54,600	644,216	329,020	3,294,343
8	FRANCE	94,575	1,548,534	204,000	4,476,255			298,575	6,024,789
9	MALAYSIA	305,026	1,093,969					305,026	1,093,969
10	BELGIUM	106,029	865,567	158,913	2,725,424			264,942	3,590,991

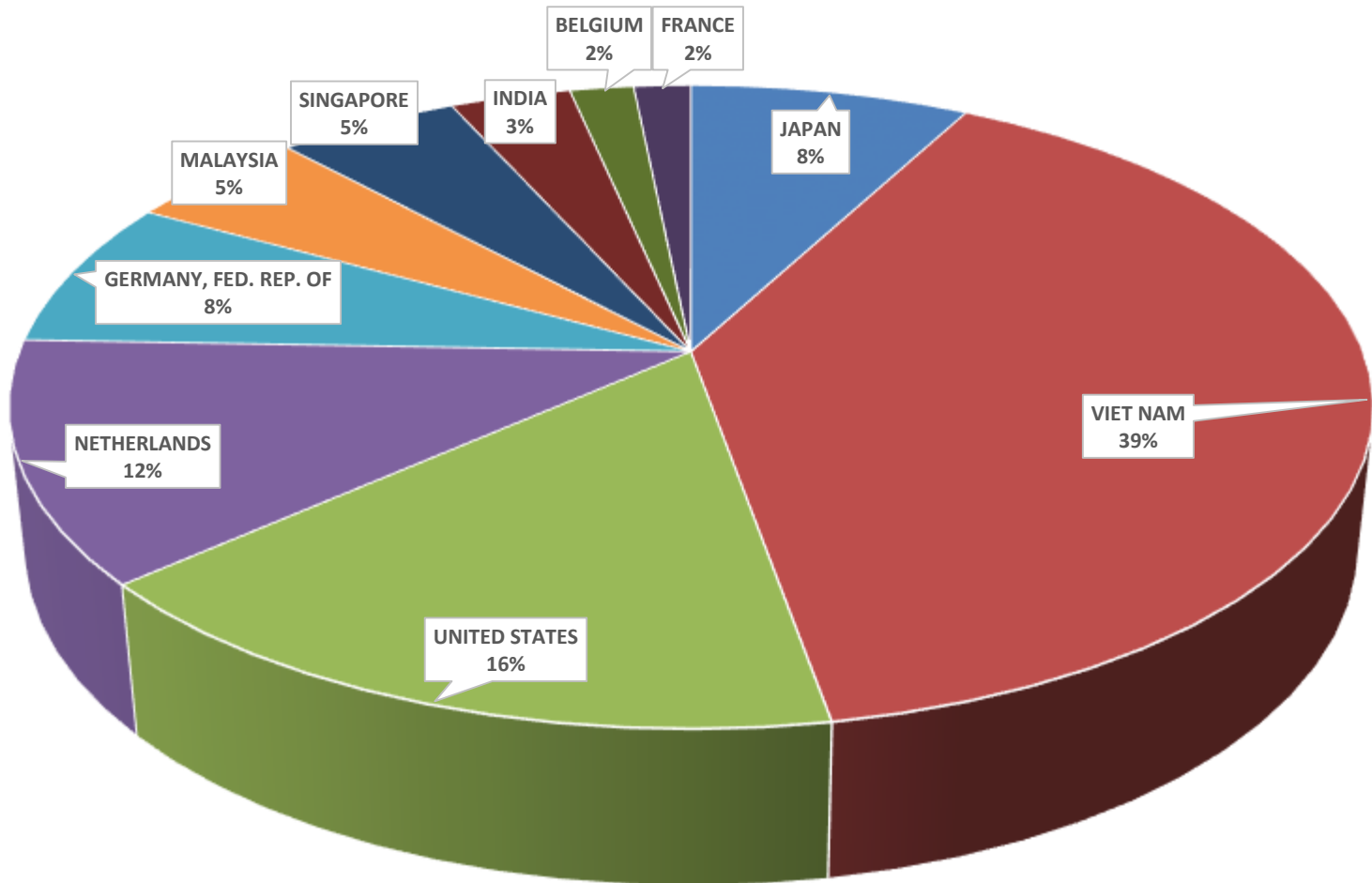
## Total export of nutmeg (in shell + shelled + mace) 2012 by top 10 countries destination



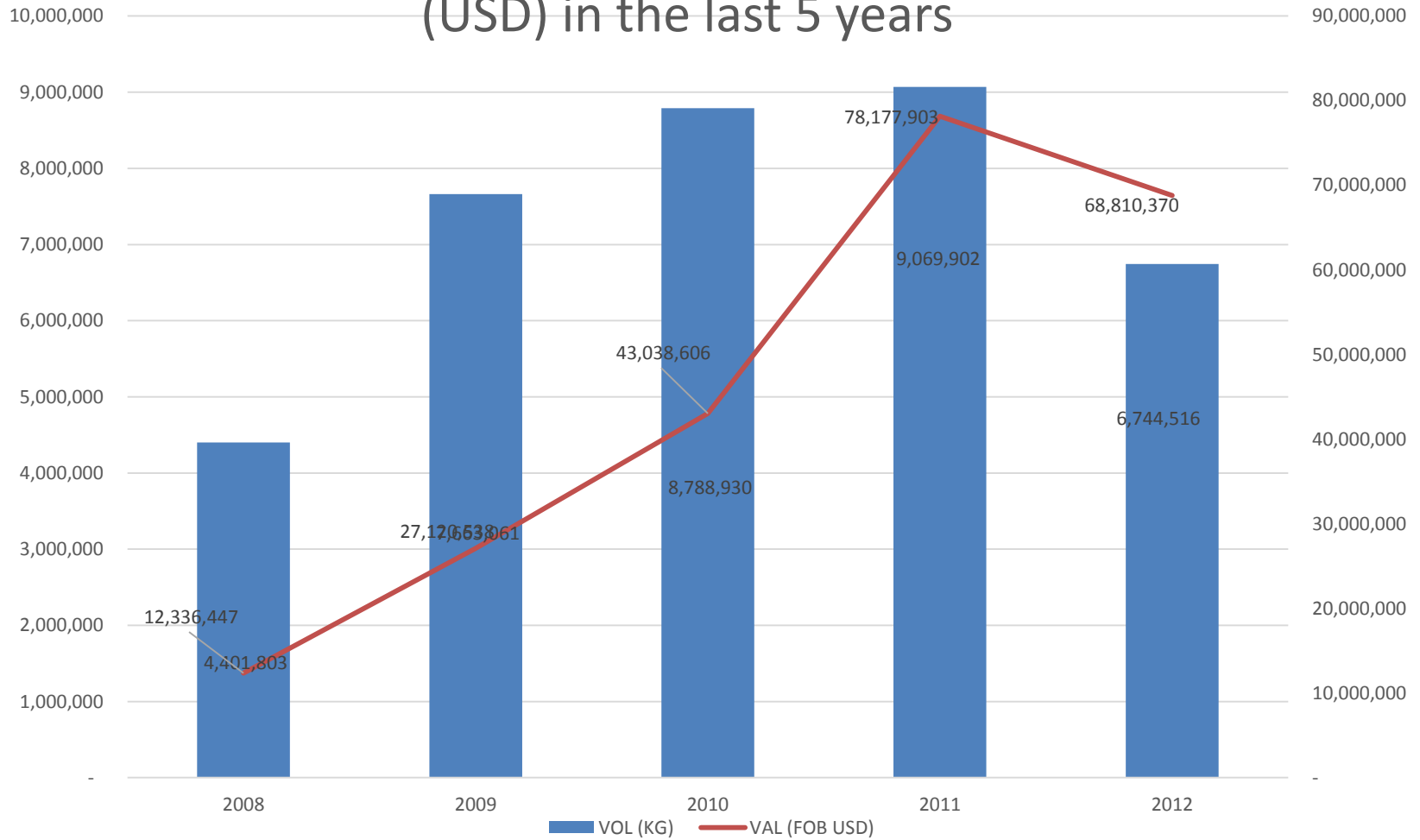
## Nutmeg (in shell) Export Volume and Value in the last 5 years



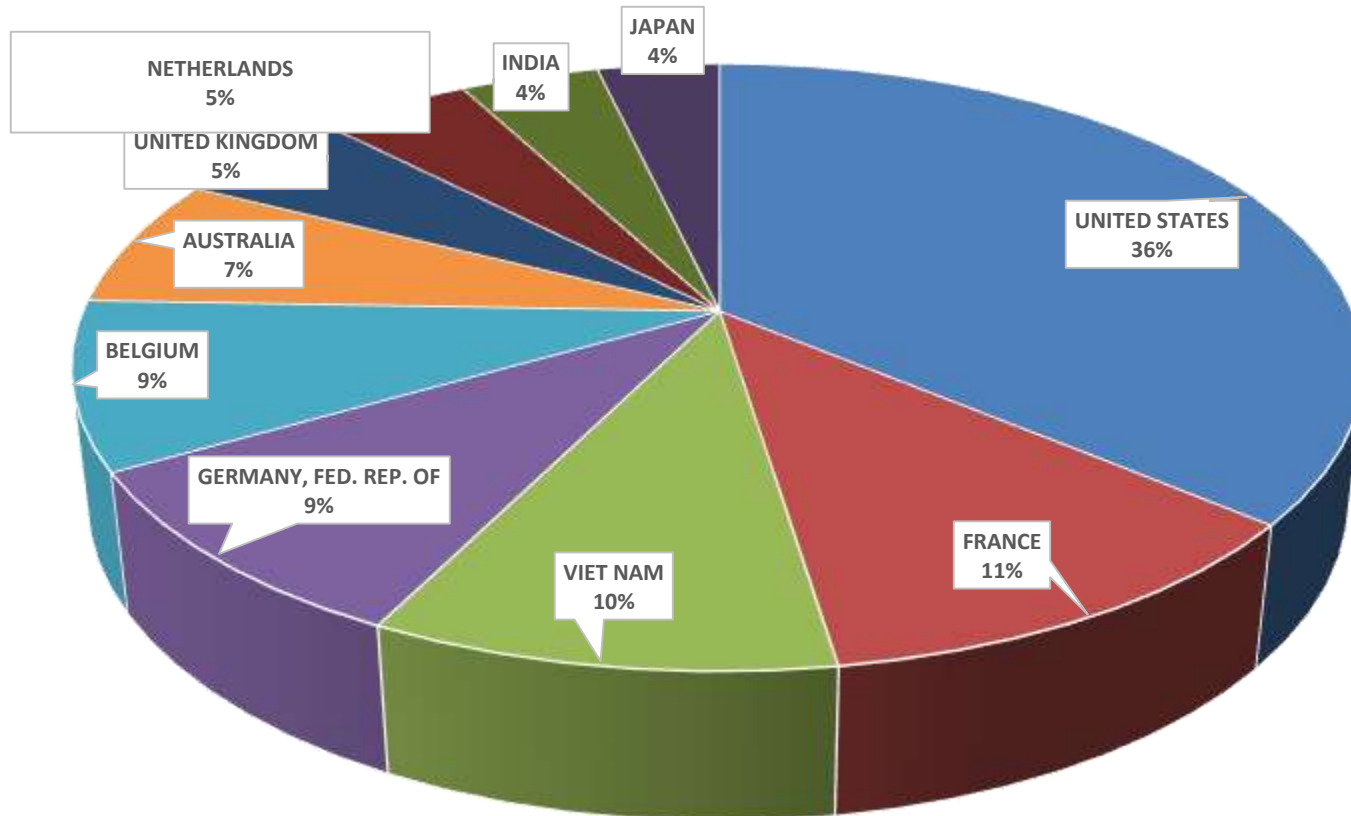
## Top 10 export of nutmeg in shell by destination countries in 2012 (BPS, 2012)



# Nutmeg (shelled) export Volume (kg) and Value (USD) in the last 5 years

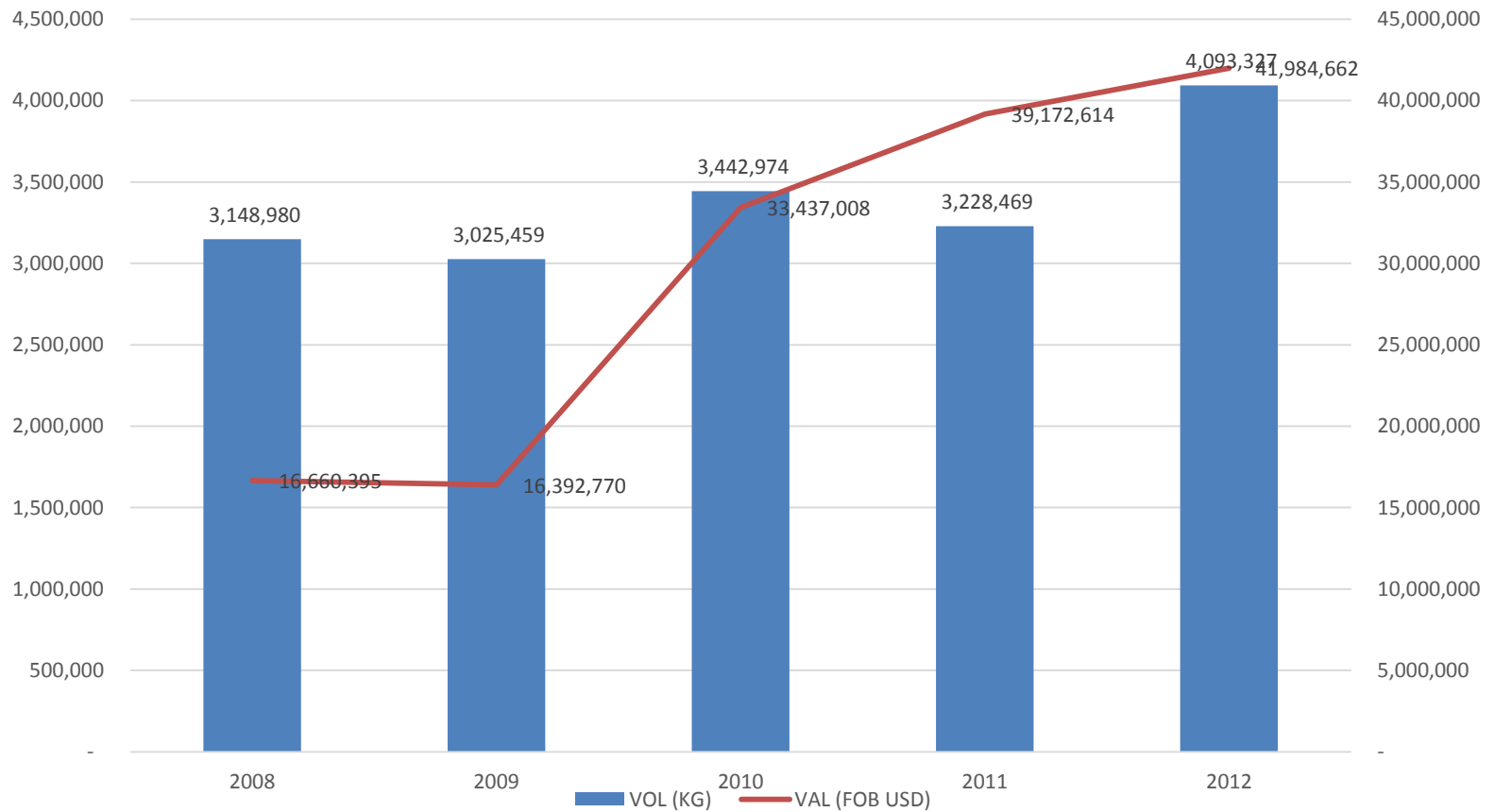


## Top 10 Export of nutmeg shelled by Destination Counties in 2012 (BPS, 2012)





# Mace Export Volume and Value in the last 5 years



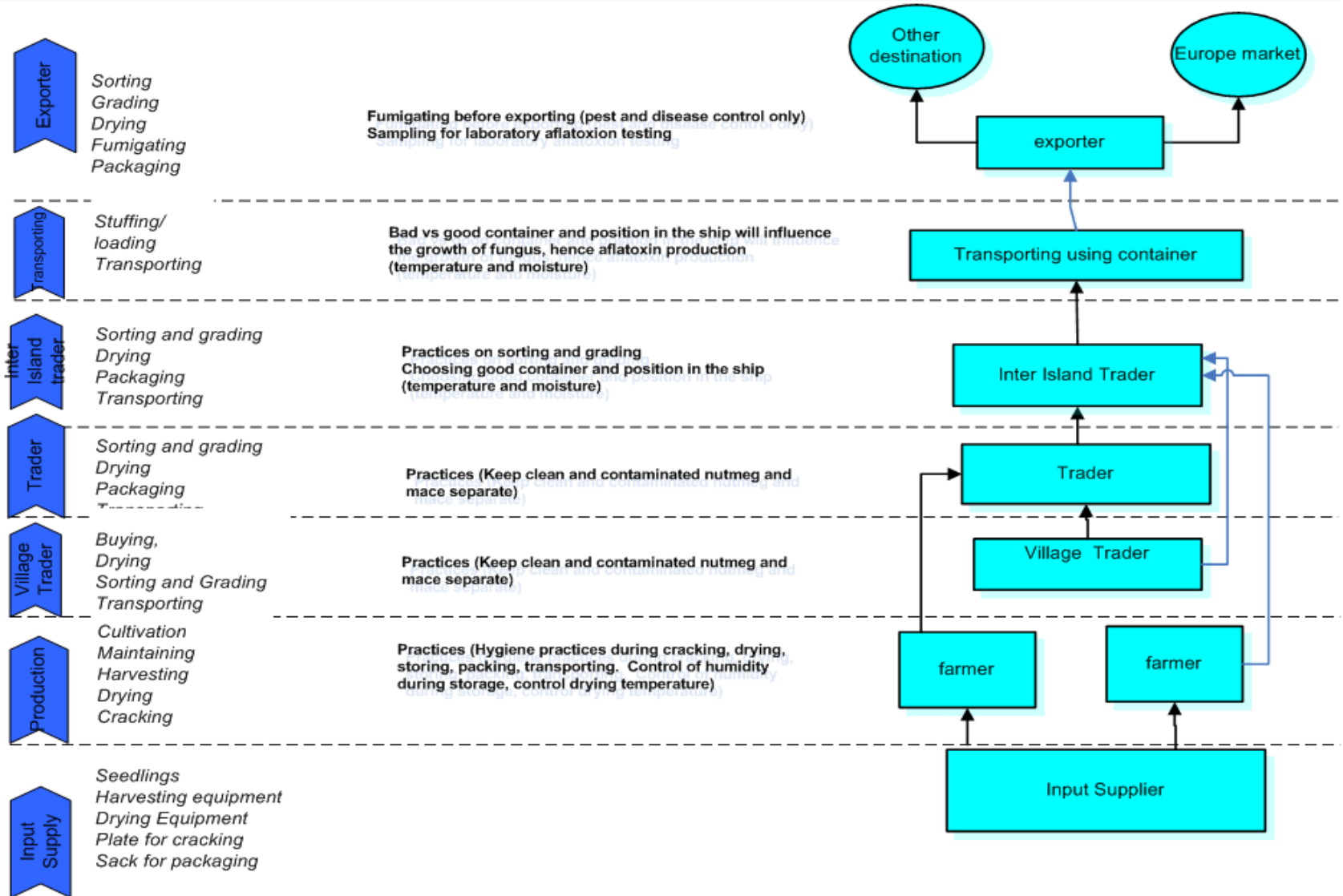
# Problem in Export:

- Until 2012, there 12 consignment rejected in EU Border on Inspection
- July 2012: due to aflatoxin problem, at Border of Inspection that 20 percent sampling for nutmeg from Indonesia should be taken

# Production Nutmeg Area in Indonesia



Nutmeg value chain and parameters influencing mycotoxin production



# HOW to Solve it?

- Trade Support Program II EU
- Government Assistance
- Improving capacity of GOI with support from NESO (training on food safety, traceability and react to RSFF)
- Private with assistance with NGO:
  - Mercy Corps and PT OLLOP
  - Uniproduct with Dewan Rempah
  - Multi Rempah and HCC

# Practical solution: improving food safety and traceability

- Food safety: improving quality in reducing aflatoxin can be achieved by:
  - GAP:
    - Harvest time (harvest in the right time reducing shrivel that cause easy to get aflatoxin)
    - Cultivation practices
  - GHP:
- Traceability: registration each farmer and farmer field; LOT number system (this is usually used in organic certification)

# PILOT PROJECT with 1300 farmers



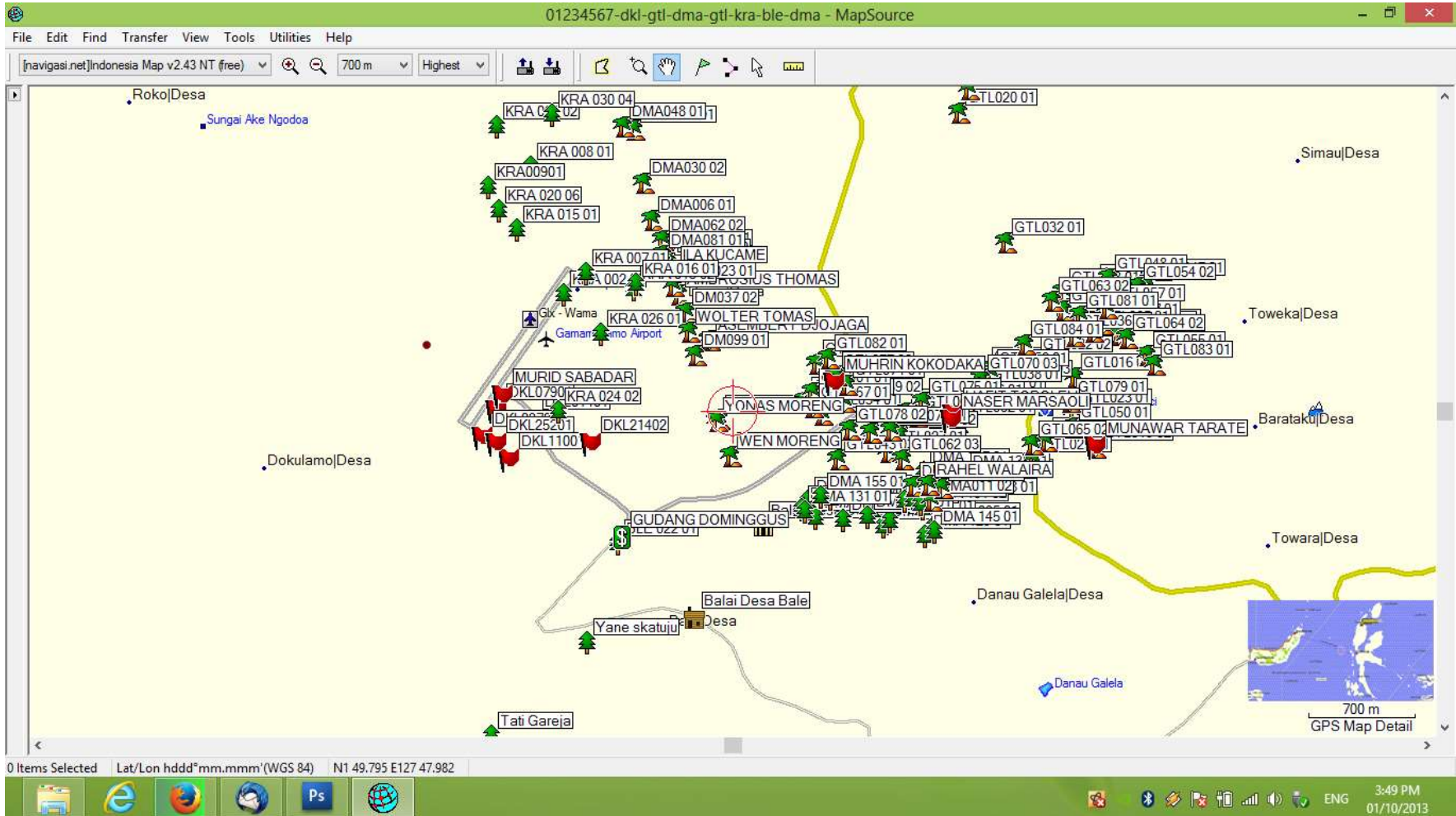
- Traceability through certification:
  - Registration using GPS
  - Internal inspection
  - Committee approval
- GAP
- Good Handling Practices:
  - Drying

# Farmer registration





# Using GPS for each farmer field



# Nutmeg farmer ID card for traceability

## KARTU ANGGOTA ICS TARAKANI

Kode Petani : **DMA05601**  
Nama Petani : Ferdinan Djojaga  
Alamat : Duma, Galela Barat  
Halmahera Utara  
Inspektor Internal : Steven Ewi



# Harvest time



# Quality different harvest time



# Cracking



# Drying



# Sorting and grading



# After sorting and grading





# Farmer group:

- Farmer should be in group for aggregate volume for improved quality nutmeg --→ minimally can be sorted and graded
- Farmer group: it can be farmer group, cooperative or organized farmer group under local trader
- Local trader should be included in the farmer group so he/she can give direct benefit for the improved quality nutmeg

# Food safety

- Improved quality through:
  - Improved Good Agriculture Practices
    - Harvest time to avoid shrivel if the nutmeg harvested too young.
    - Cultivation practices
  - Good Handling Practices
    - Drying: it is very crucial in raining season in the production area. Traditional oven can be used for avoiding the aflatoxin.

# Traceability

- Traceability is need it for tracing back if there is complained from buyer
- Traceability is used to appreciate farmer who has improved quality without mixing with product.
- Simple traceability can be done by applying LOT system number.
- Farmer group under its certification process much easier in applying traceability
- For loose farmer group, local government services assistance is need it even much better if link directly with local trader.

# Conclusion

- Pilot project in North Halmahera with 1300 farmers proved that practical solution improving food safety and traceability can be done in farmer level to the exporter.
- Another series of activities that implemented by Trade Support Program II EU in assisting Ministry of Agriculture and private companies in improving food safety and traceability.
- Capacity Building in Food Safety and Traceability System of Indonesian Spices to Increase Competitiveness of Agriculture Product in International Market funded by NESO

# continued

- With the support of TSP II EU; support of NESO (Dutch Embassy) and good result in pilot project of improving competitiveness of North Mollucas Nutmeg as practical solution for improving food safety and traceability of nutmeg, so Indonesia request to EU for releasing or reducing “sampling of 20 percent in Border of Inspection in EU”.