

GCP21 IVTH INTERNATIONAL CASSAVA CONFERENCE

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Cassava Transformation in Africa

RESEARCH

PRODUCTION

PROCESSING

CONSUMPTION

**Cassava markets, value chains and livelihoods in Asia:
when uncertain is the only certainty**

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Cassava markets, value chains and livelihoods in Asia: when uncertain is the only certainty

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CIAT is a CGIAR Research Center

Introduction to cassava in Southeast Asia across scales

As we work through the different scales, consider what a major disease outbreak mean for various stakeholders in the cassava value chain.

1. The global market and trade
2. Local processors and national exports
3. Rural Livelihoods

Cassava farmers and processors in Asia are involved in a constant battle to be competitive



VS



On the demand side – the market outlook for cassava in Asia needs to be considered in the context of substitutes in different applications

1. Cassava for direct consumption or sale into short value chains as fresh roots for food. Competition with other food such as **rice** based on price and consumer preferences.
2. Global markets where cassava chips compete with other forms of carbohydrate for processing animal feed or ethanol such as **maize, sorghum, wheat, molasses – oil, gas.**
3. Markets where cassava starch competes largely on price with substitutes such as **maize** and **potato** starch, **sugarcane.**
4. Markets where the functional properties of the starch are desired. Consumer preferences, clean label segment, gluten free etc.

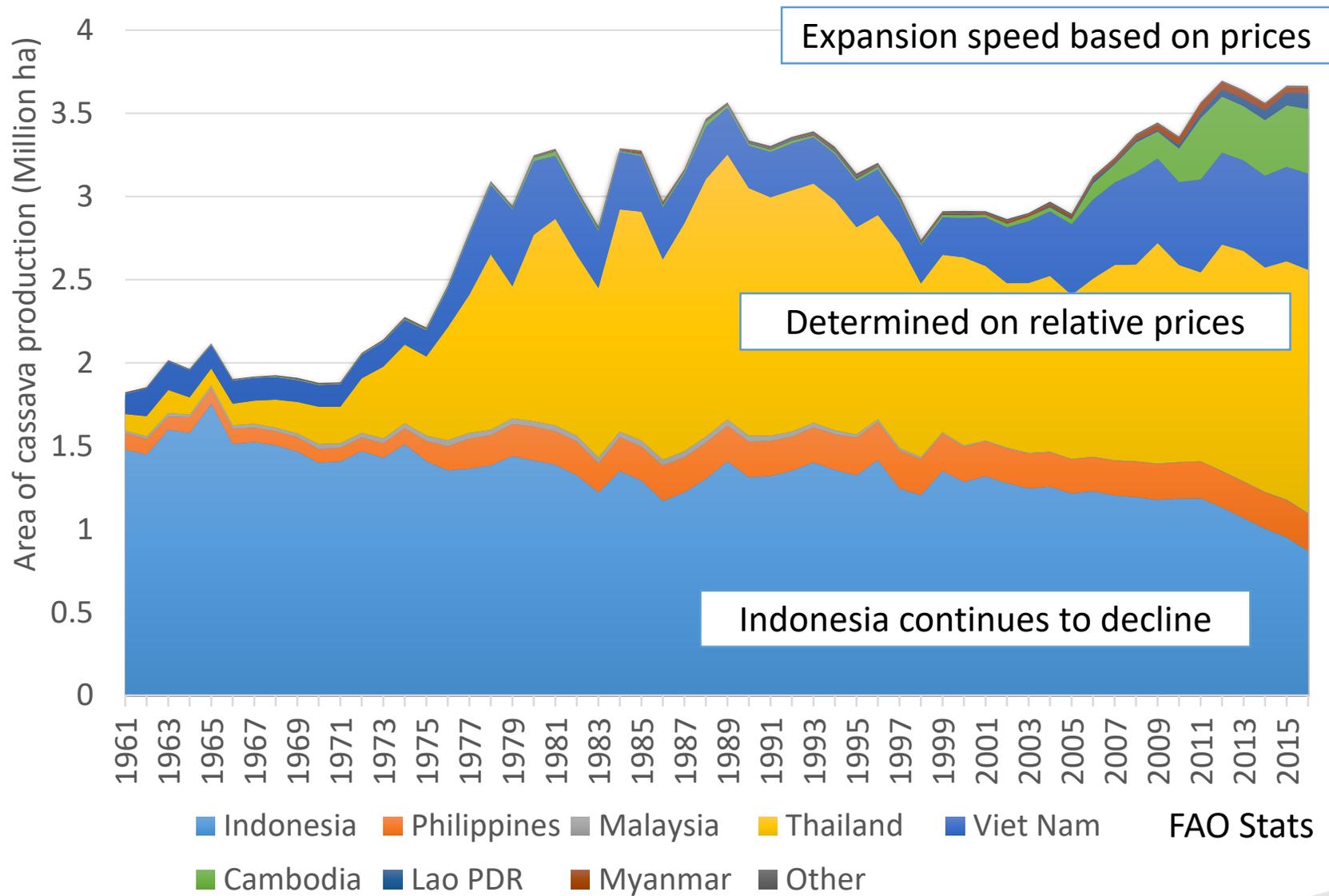


And on the supply side – the relative competitiveness against other land use in the context of different trends and shocks

- Own price and relative prices to other commodities that can be produced in agroecological zones
- Changes in costs of production
 - Changing labour costs and ease of mechanization
- Long term climate trends
- Floods and droughts
- Changes in land suitability and land degradation
- **IMPACT OF PEST AND DISEASE**



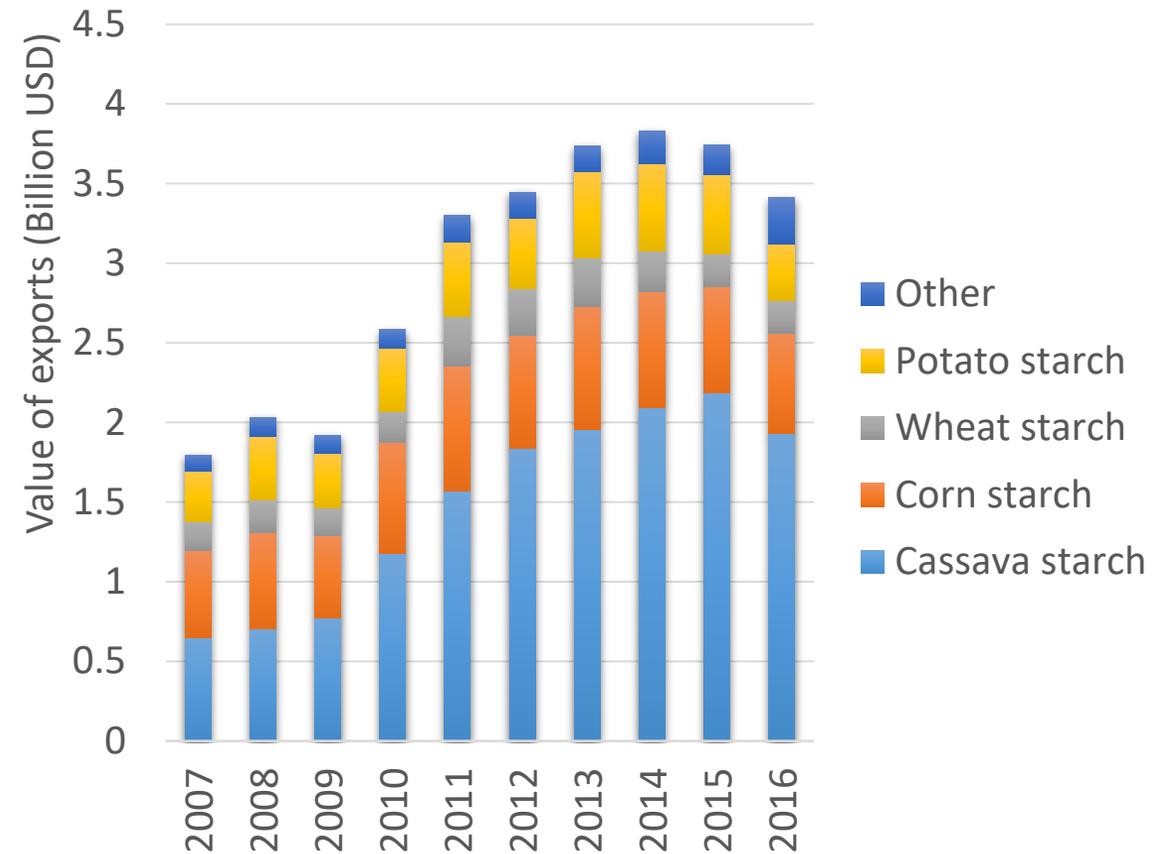
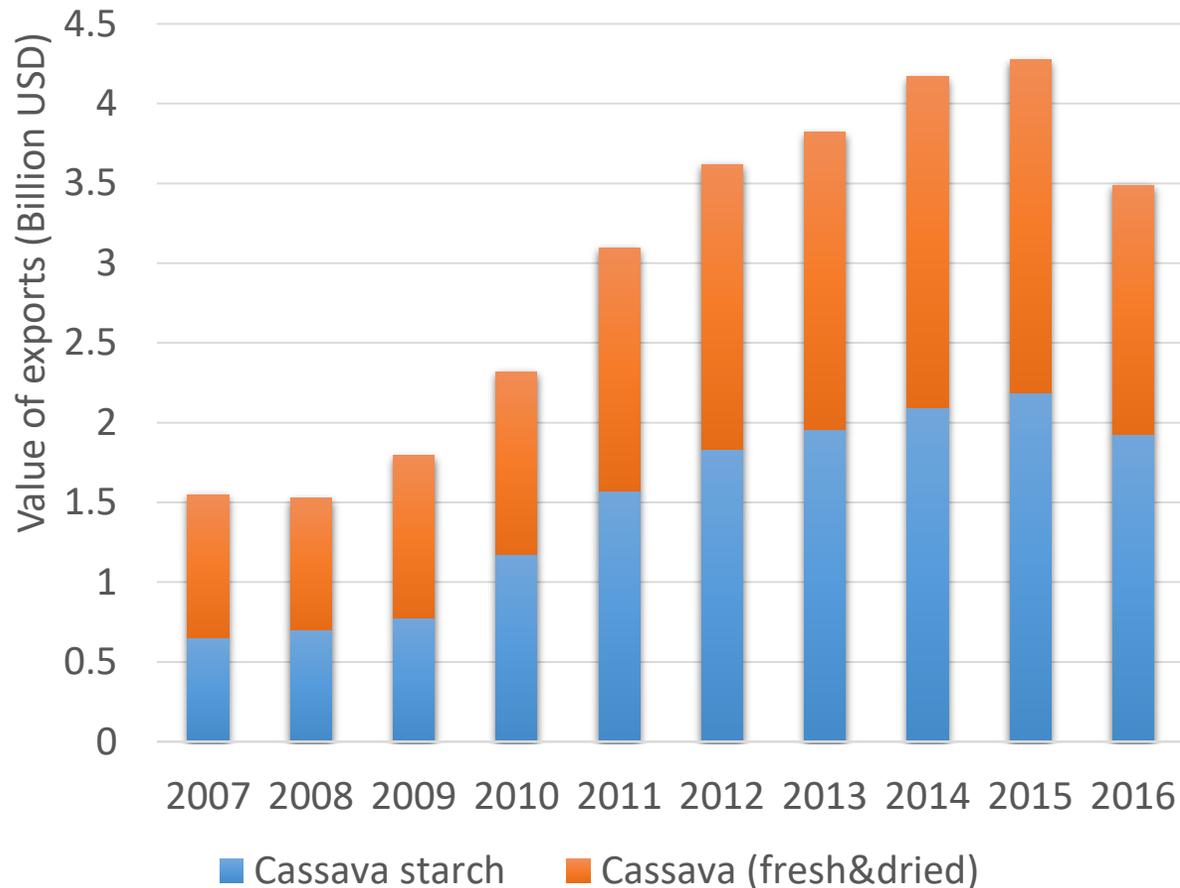
How much cassava is currently grown in Asia? How much next year?



- National statistics typically 2 years out of date.
- Difficult to disaggregate to lower administration levels due to traditional reporting processes.
- Cases of 'political' statistical reporting to achieve policy objectives.

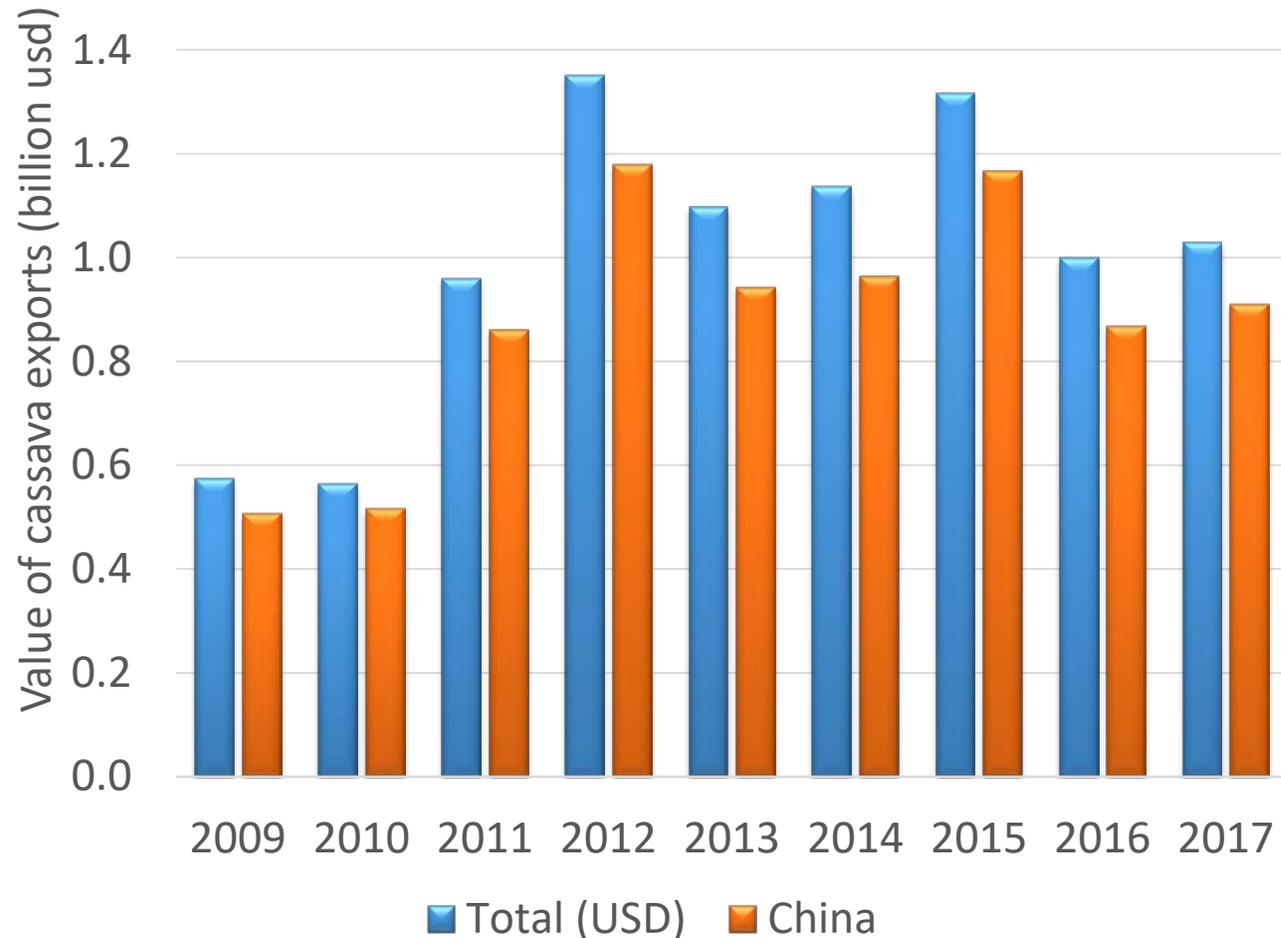
Value of cassava trade and relative importance of cassava starch in global trade

Global trade largely is Southeast Asia exporting to East Asia and Southeast Asia



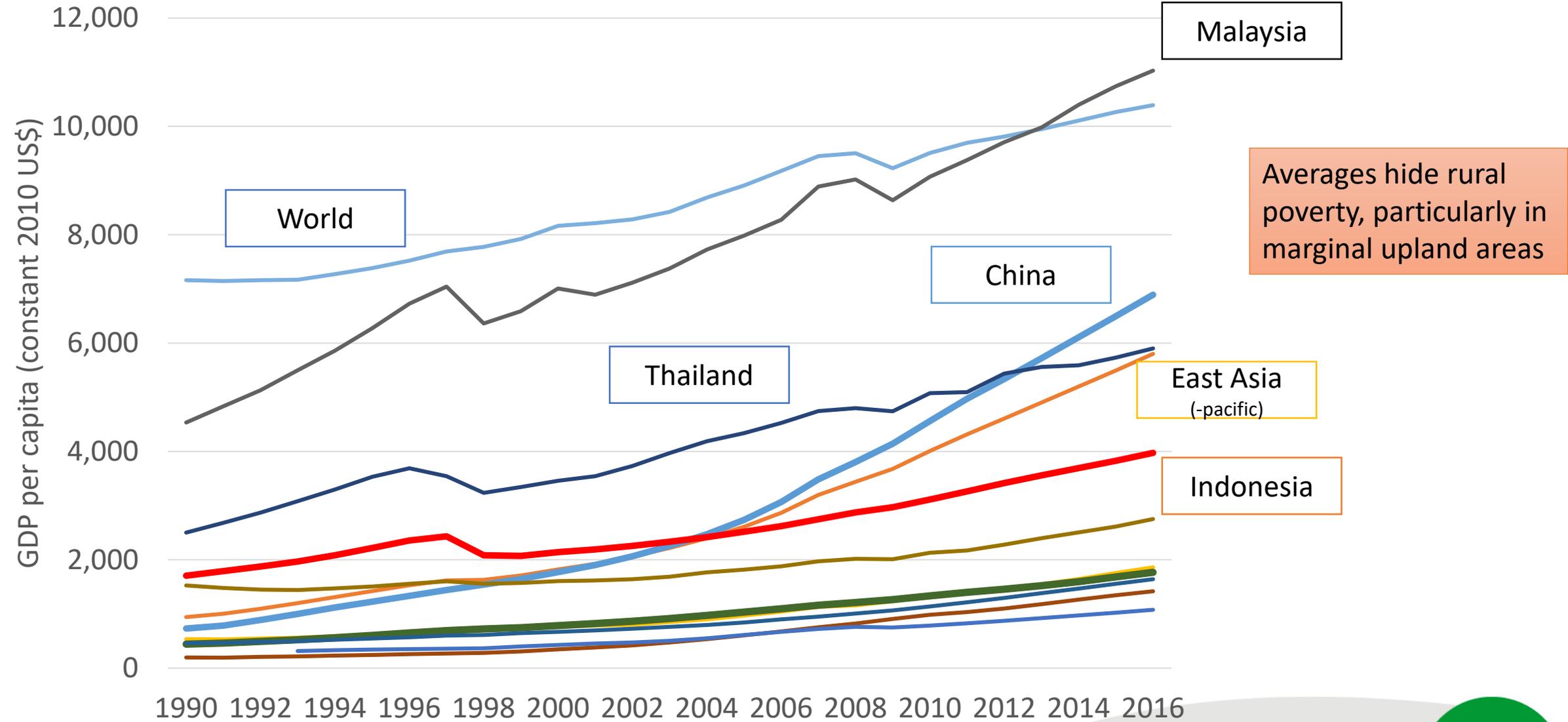
A billion dollar export crop for Vietnam for the past 6 years

Value of cassava exports (2009-2017)



- A billion dollar USD export earner for Vietnam for starch and chips
- Domestic utilisation in
 - MSG,
 - Paper and cardboard
 - Animal feed (chips and starch)
 - Noodles
 - Sweeteners and syrups
 - Traditional food

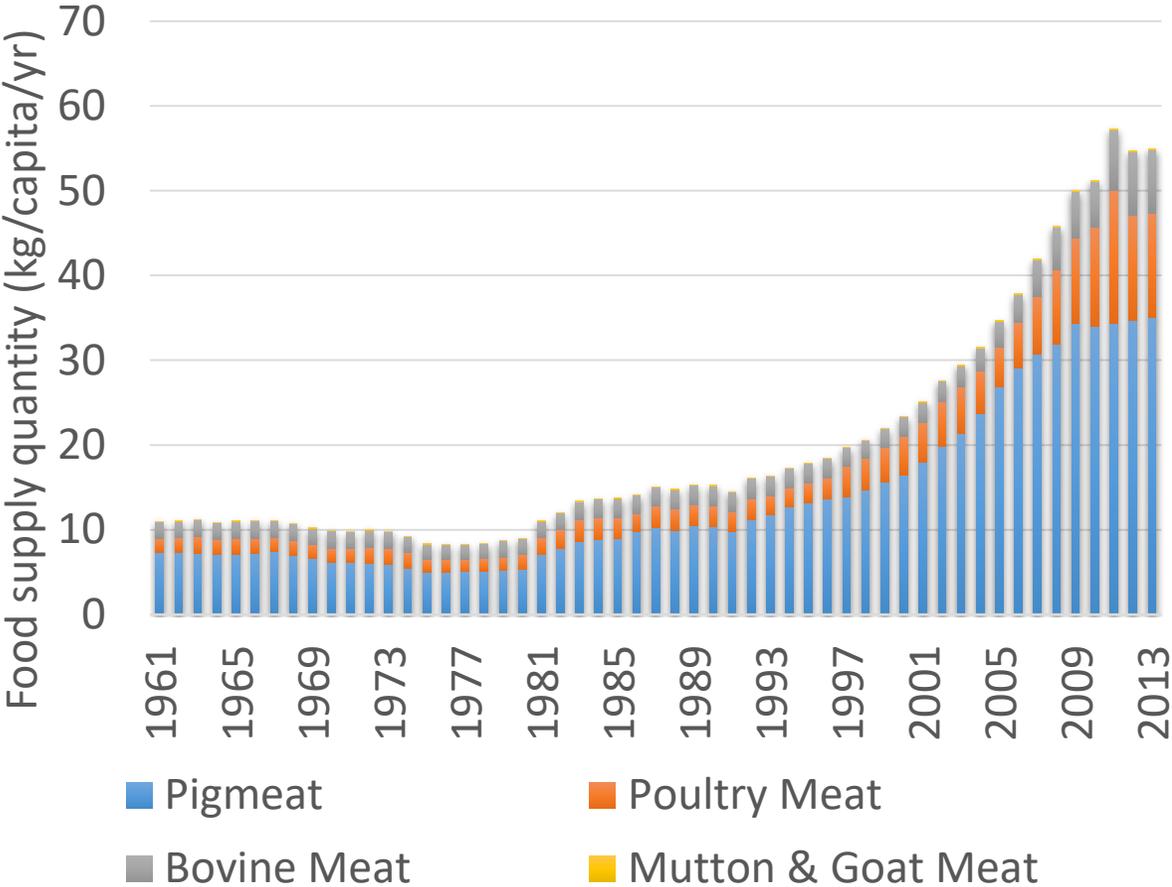
Rising incomes in Asia: changing diets and consumption



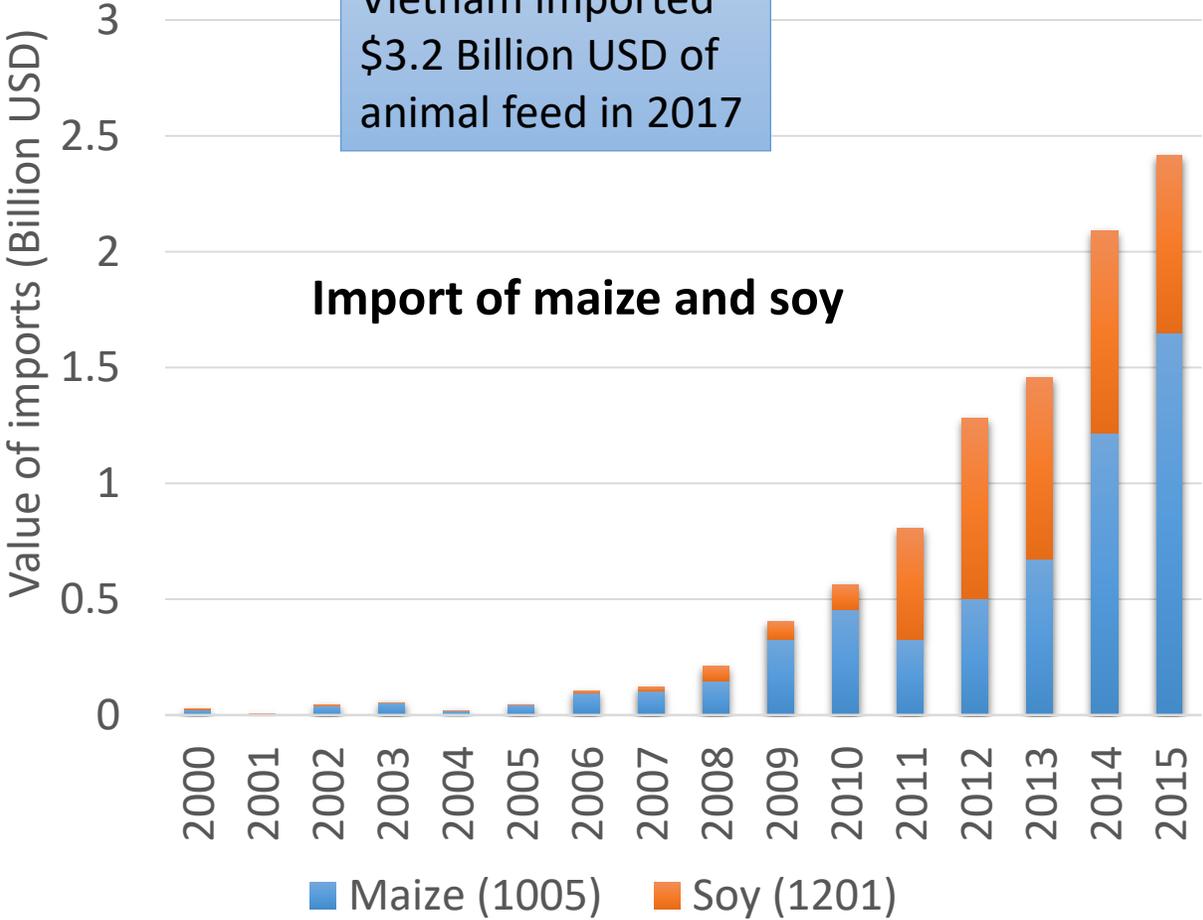
Averages hide rural poverty, particularly in marginal upland areas

Demand for animal feed in Vietnam (not self-sufficient)

Consumption of meat per capita

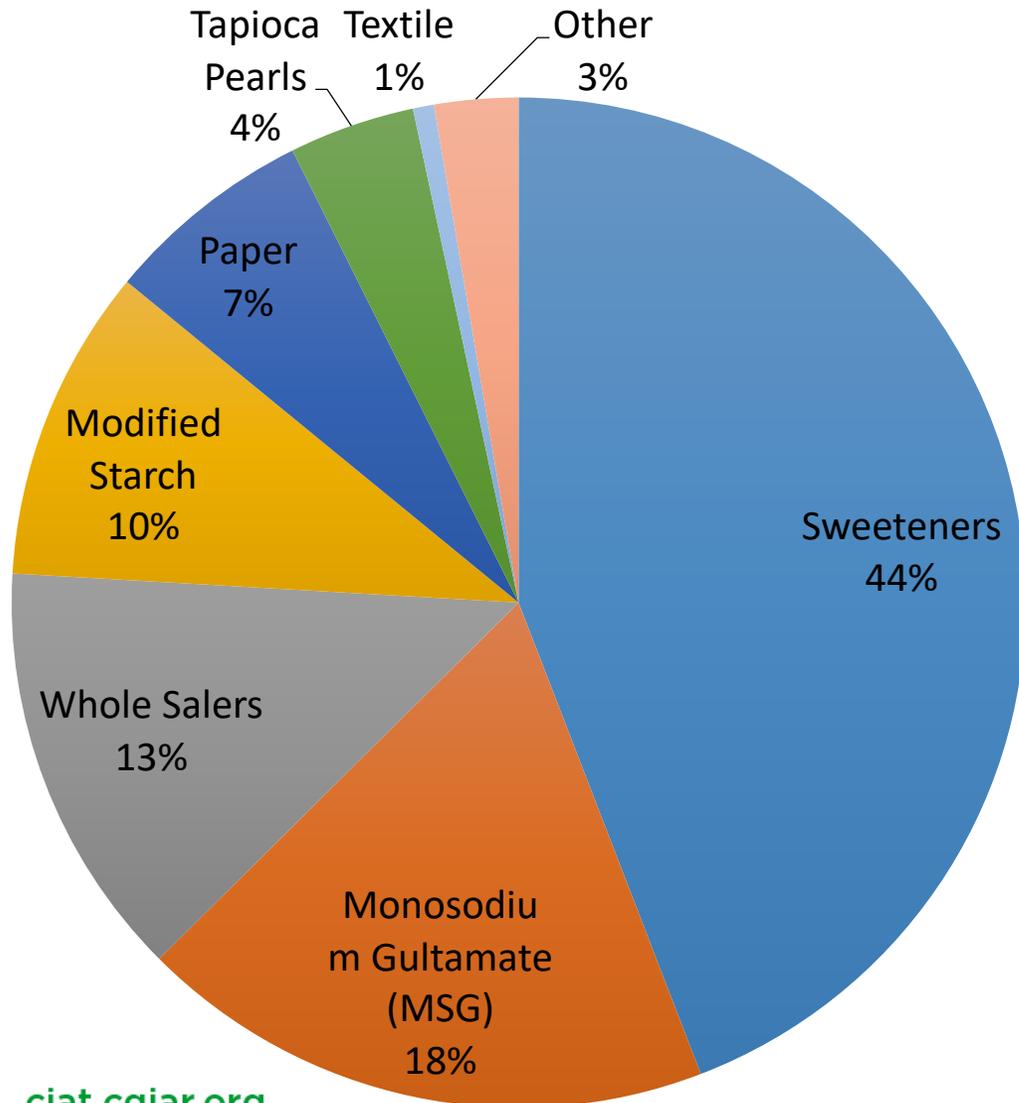


Vietnam imported \$3.2 Billion USD of animal feed in 2017

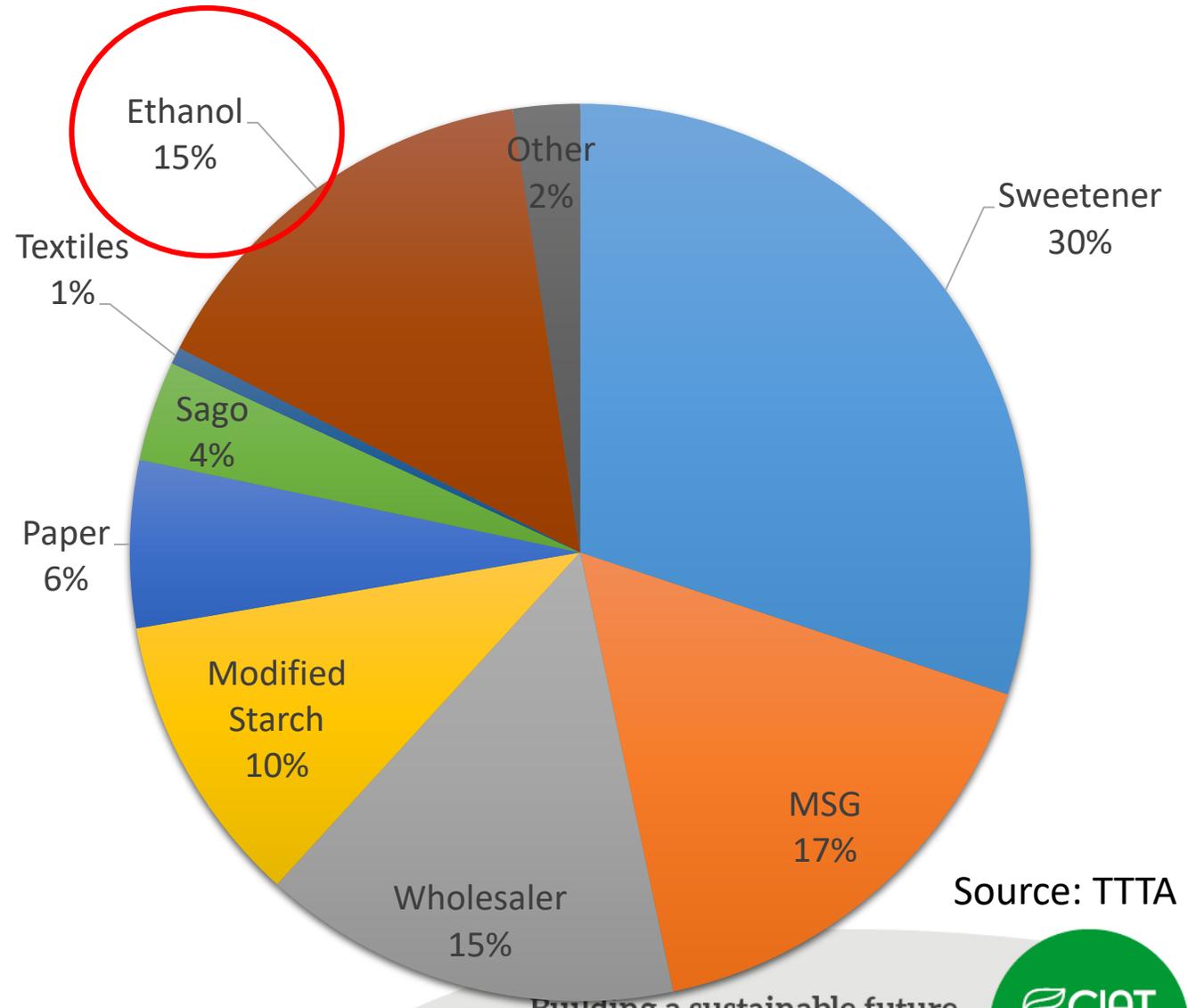


Domestic utilisation of starch in Thailand (14.5% Root Equivalents)

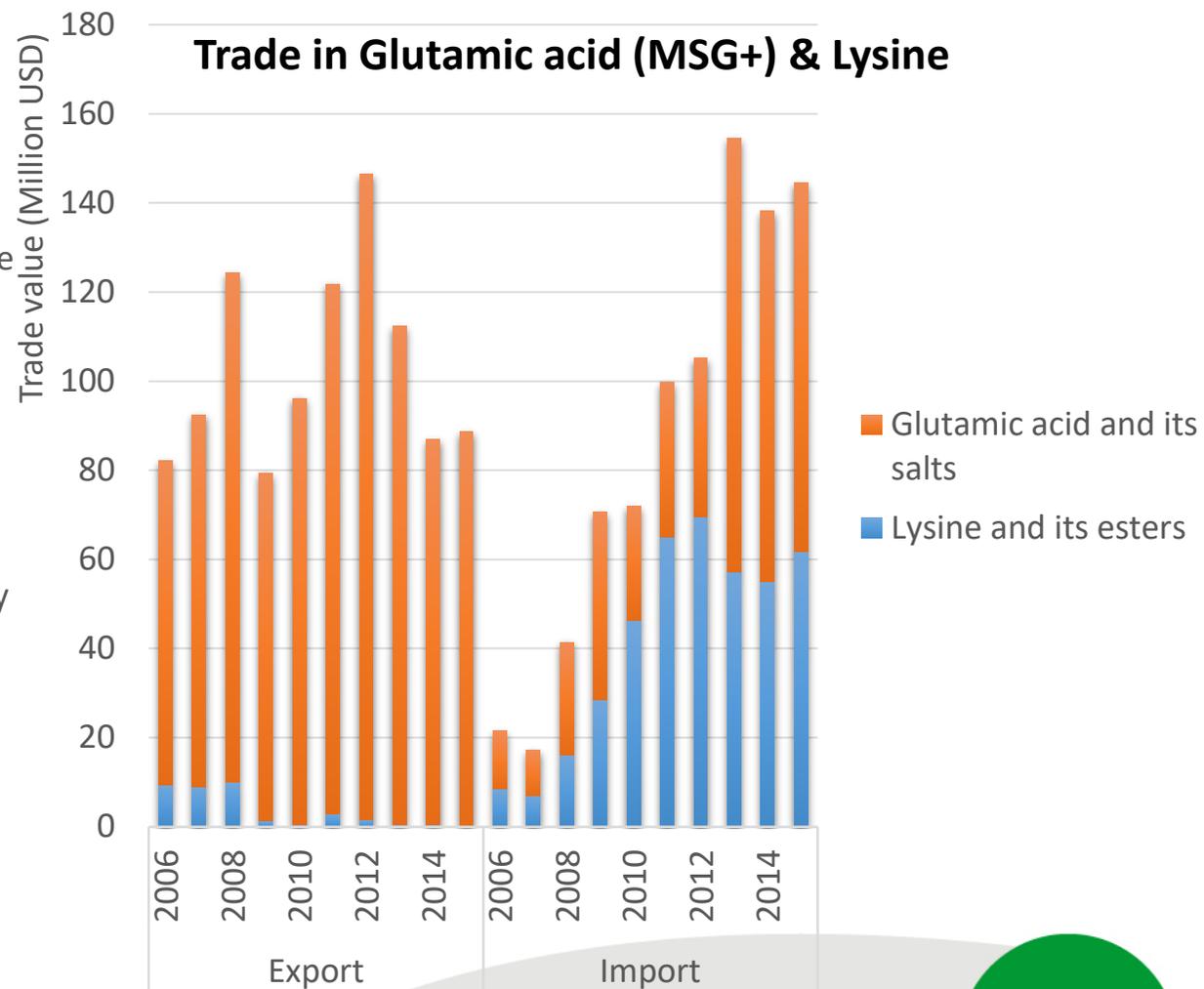
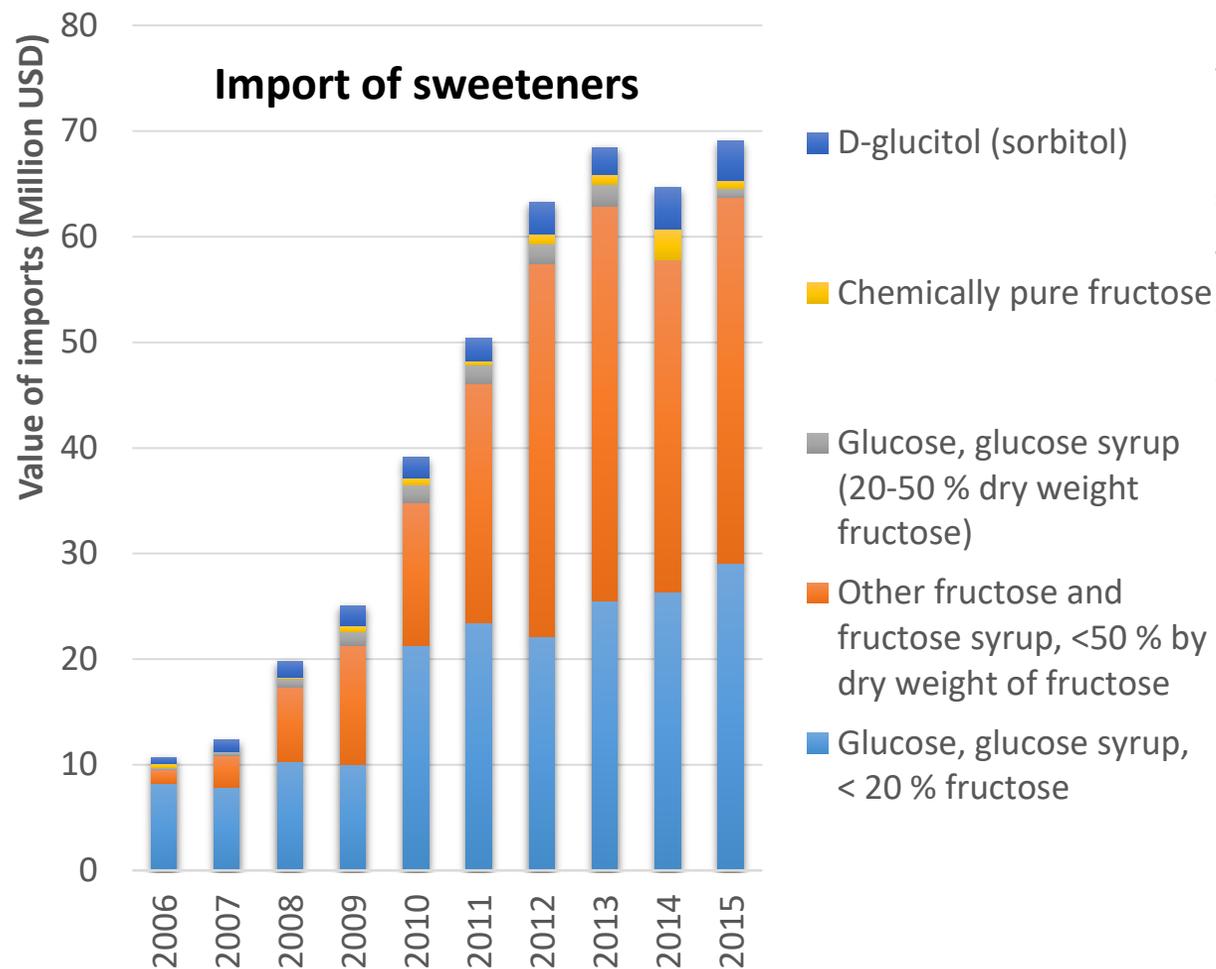
2015 – 1.495 Million MT Starch



2017 – 1.66 Million MT Starch

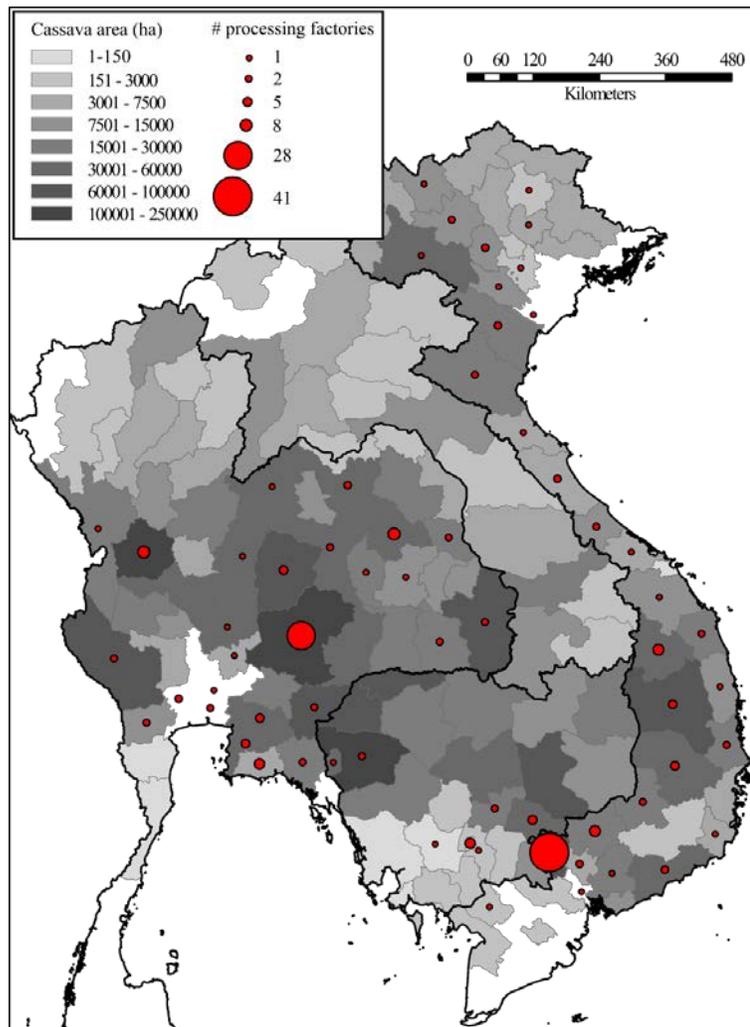


Vietnam trade in syrups, sweeteners and fermentation products

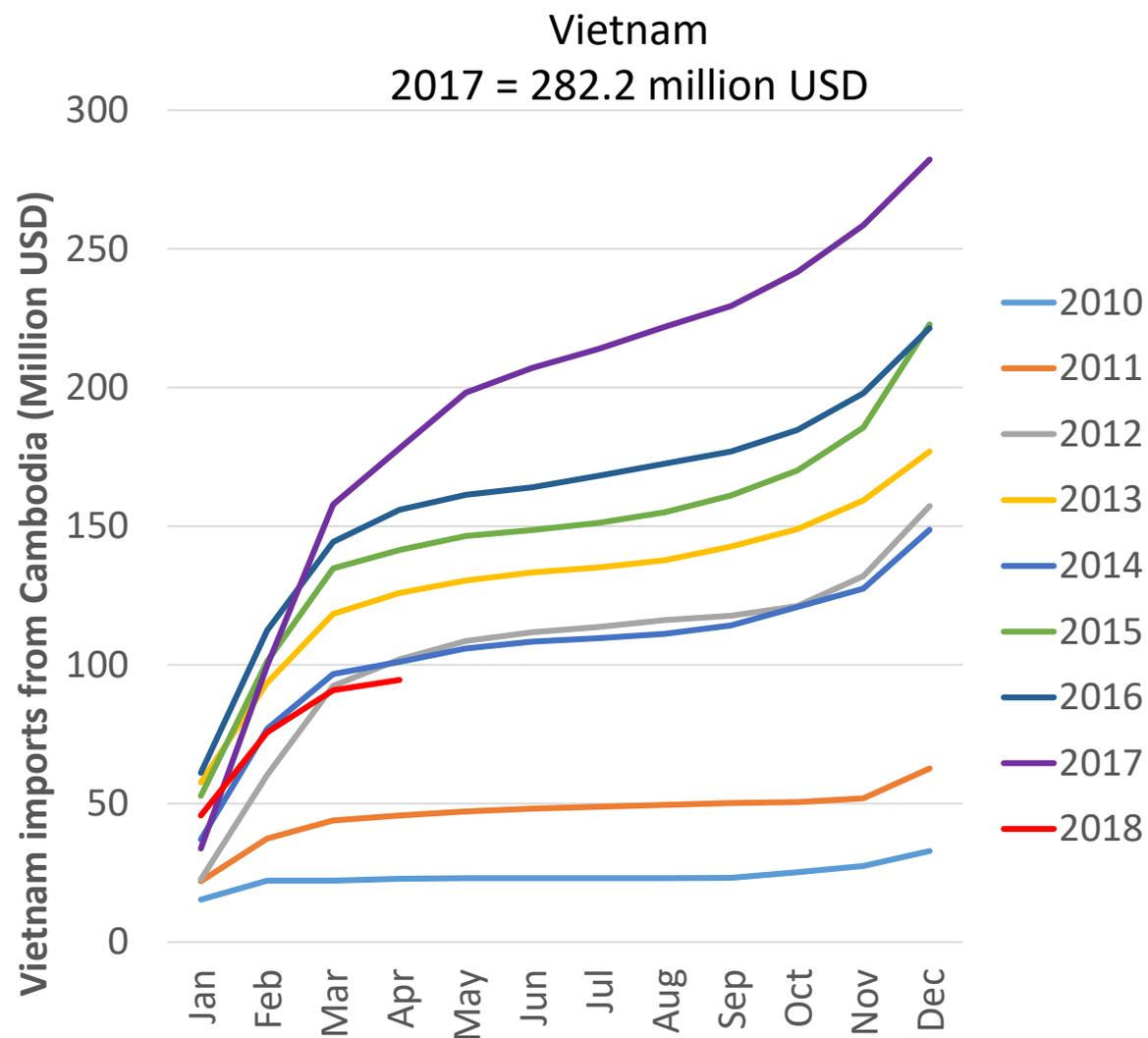
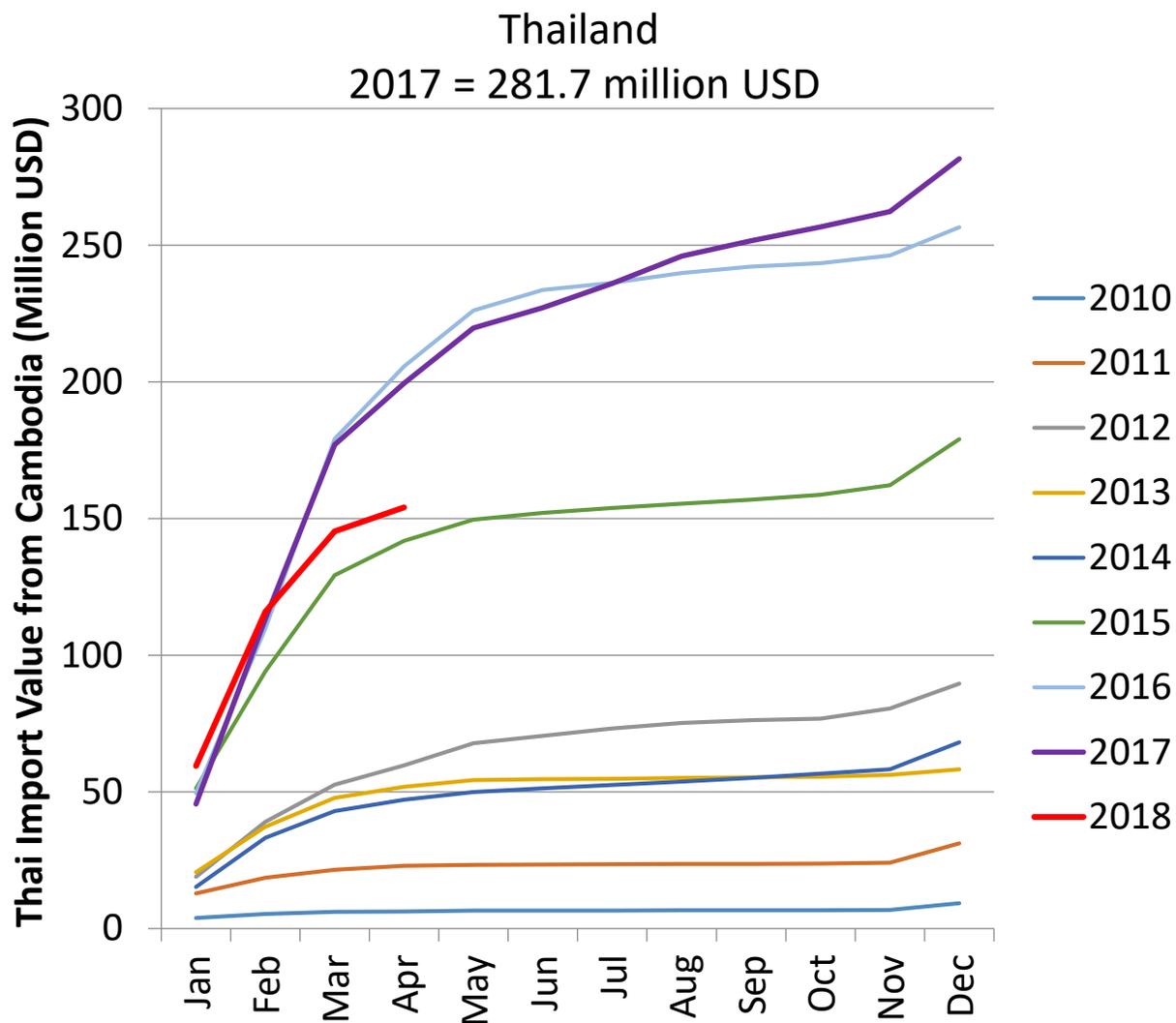


Market uncertainty goes with being part of a global market

The regional value chain for cassava products involves large amounts of cross border trade



Cumulative monthly value of imports of cassava (fresh or dried)



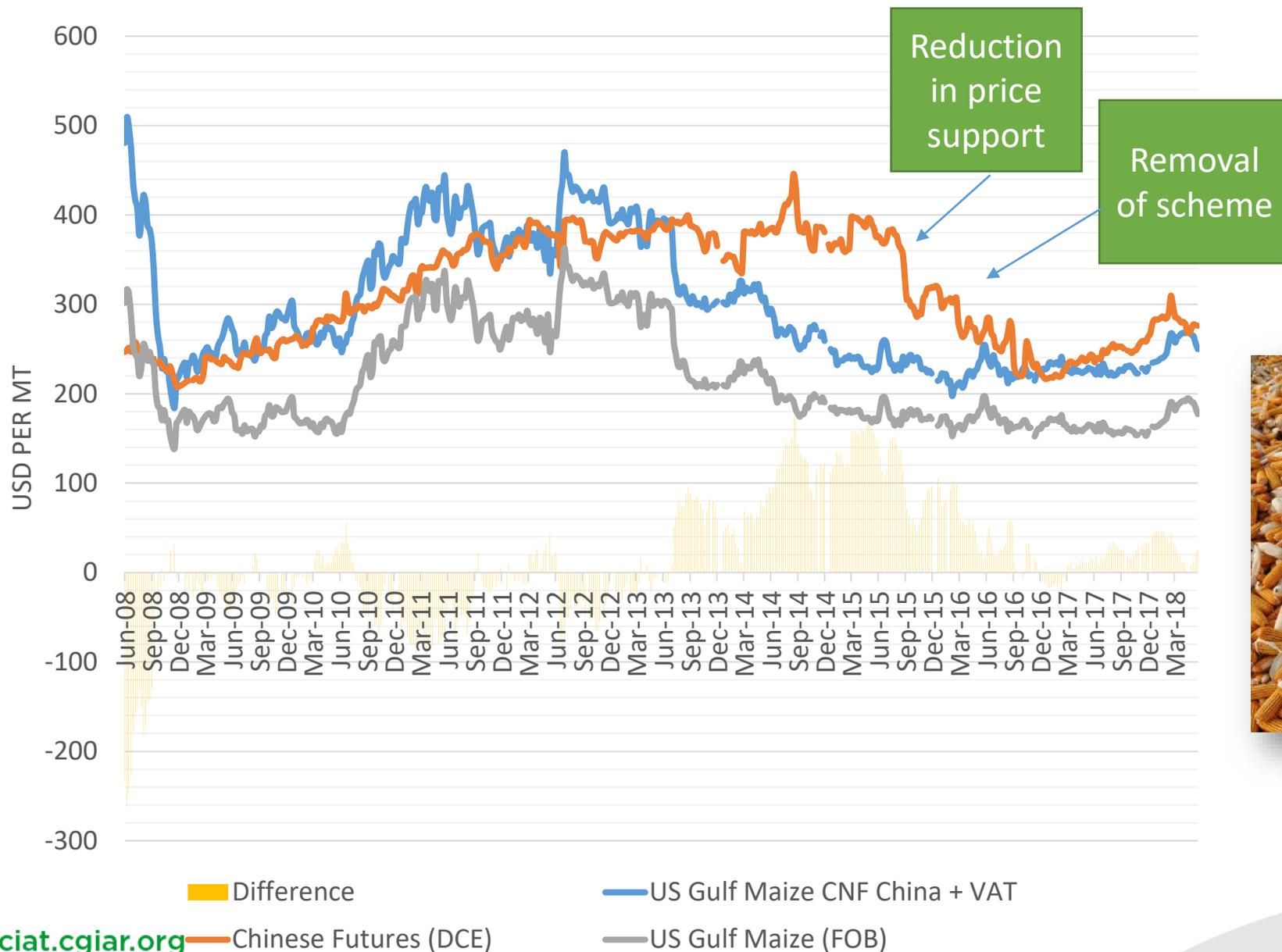
Including large volumes of planting material moving around the region



FANTASTIC IN THE ABSENCE OF PEST AND DISEASE



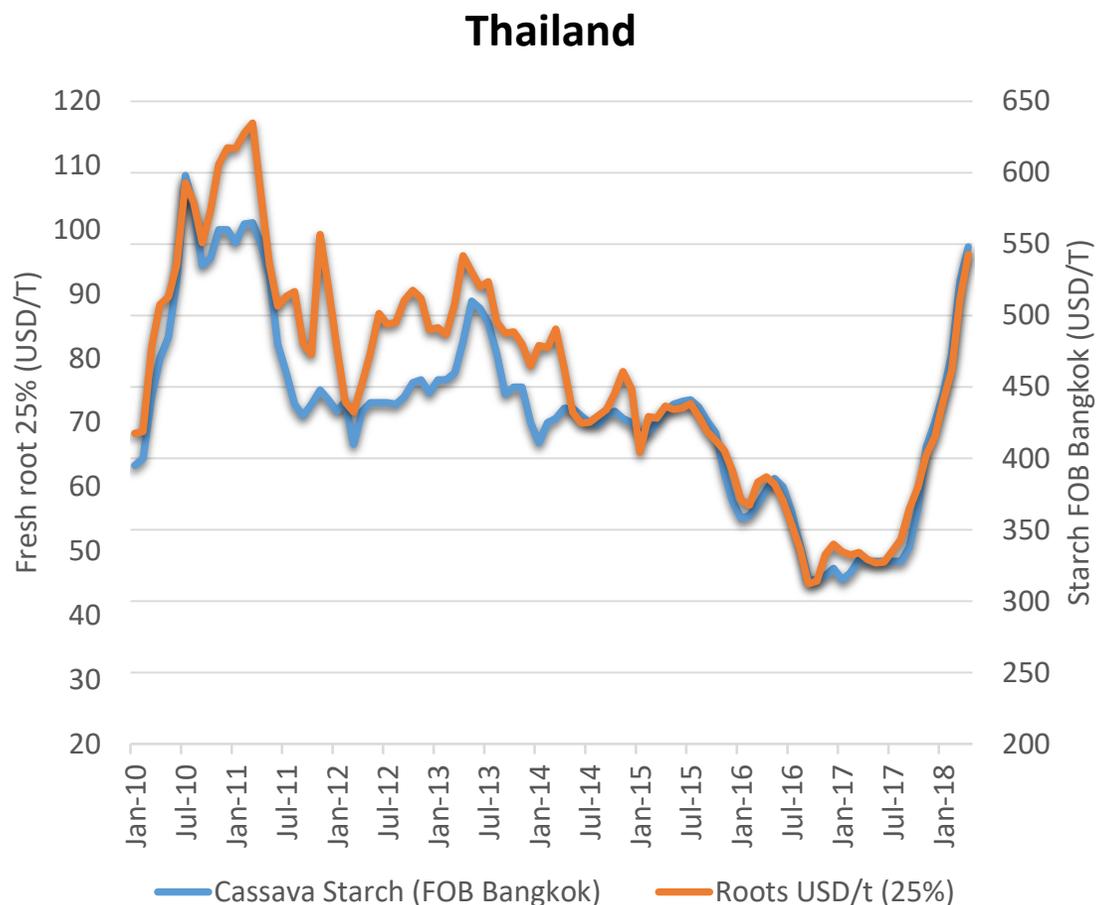
Smallholders cassava farmers part of a larger global carbohydrate market



Large stockpile remains:
Rabobank still forecasts a
230m MT of stocks

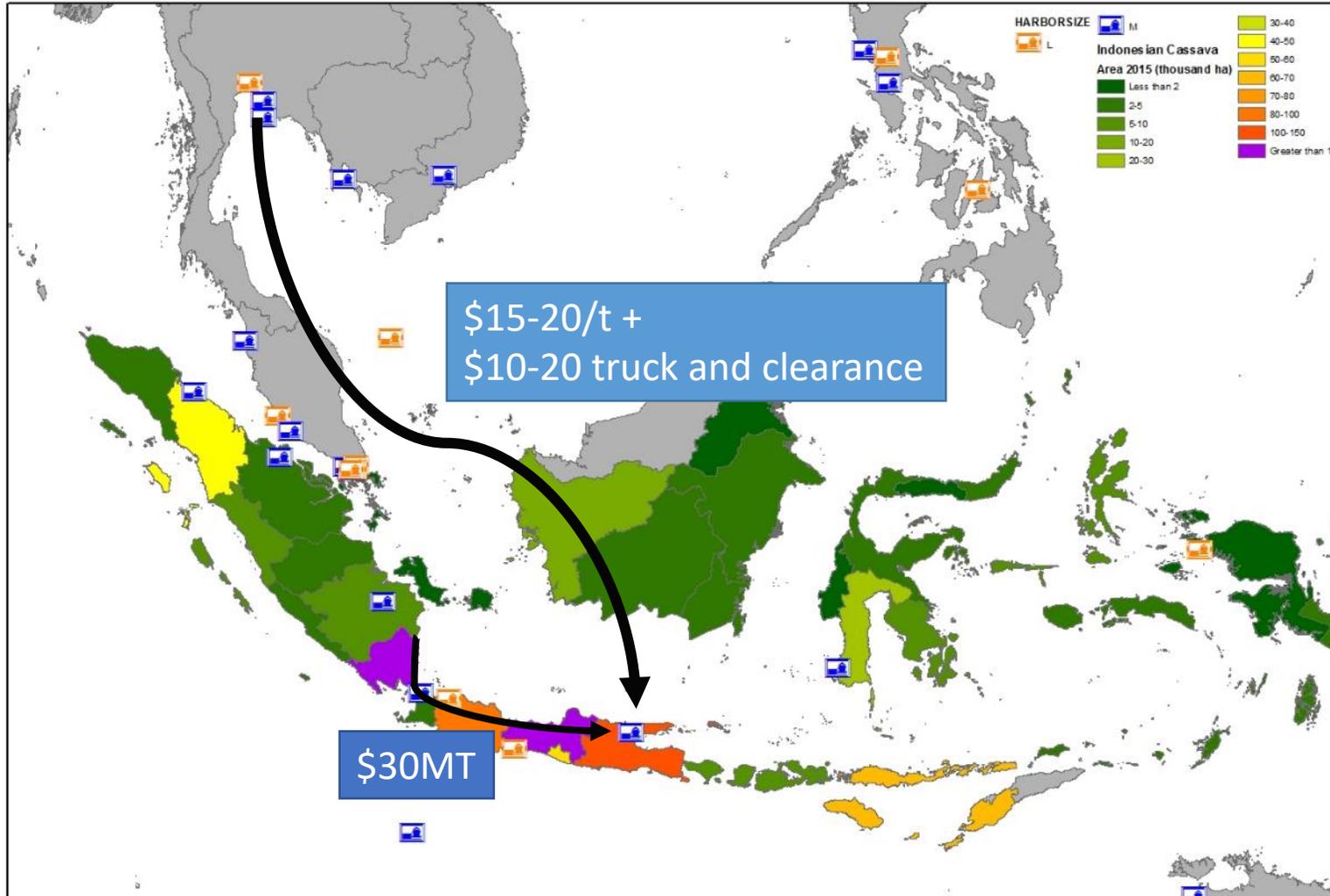


Cassava root and starch prices in Thailand and Indonesia



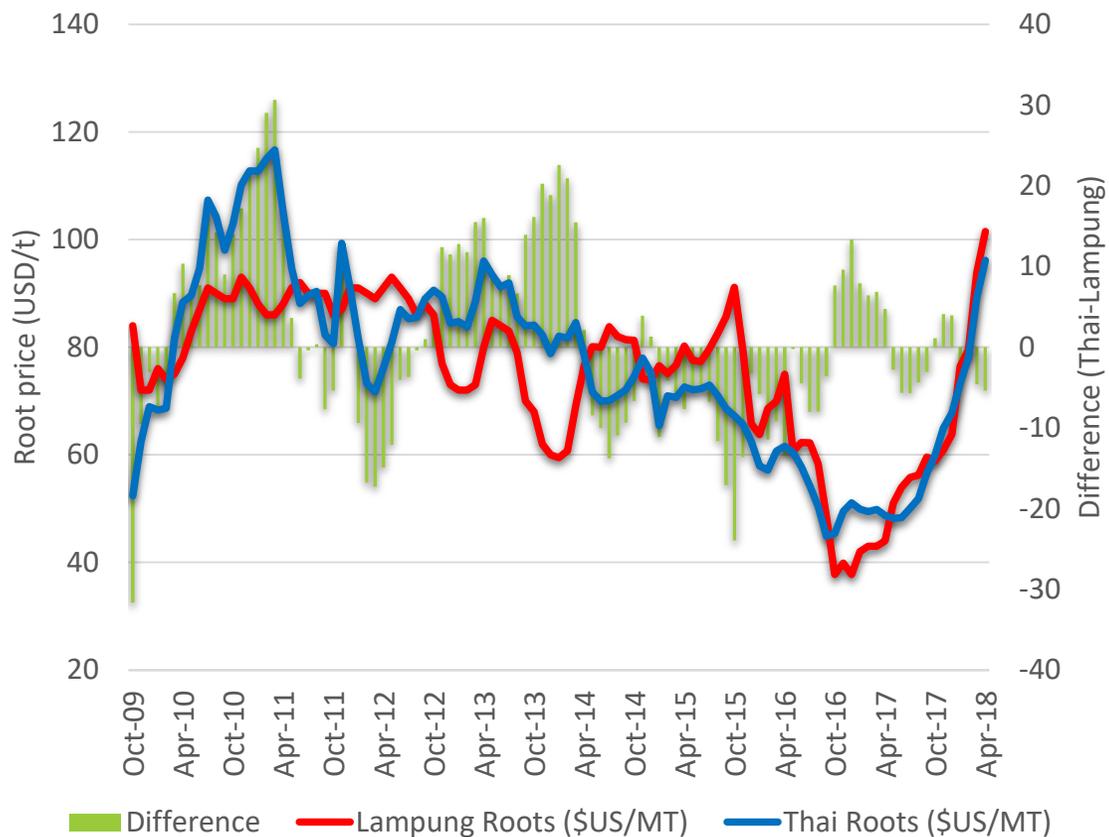
Reduction in planted area
 Flooding in Thailand
 Maize price in China
 DISEASE ?

Logistics and freight cost are important (back freight helps)

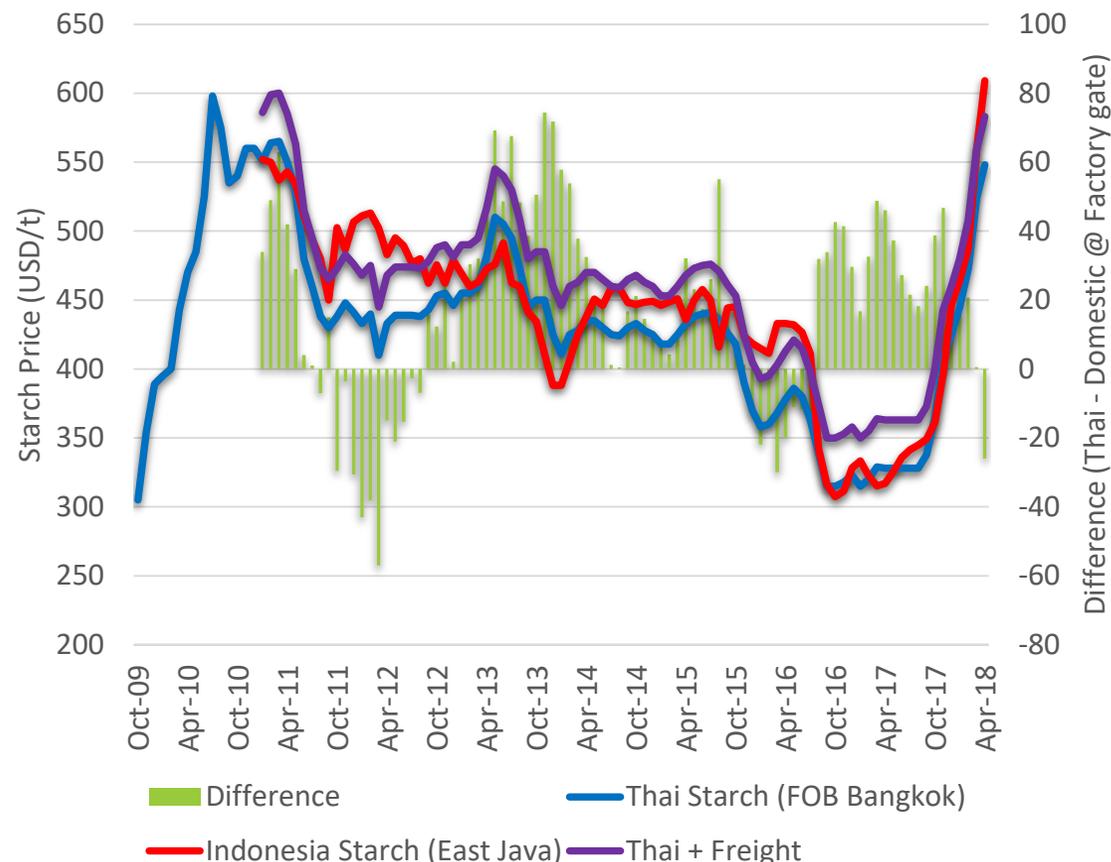


Comparison between Thai and Indonesian prices

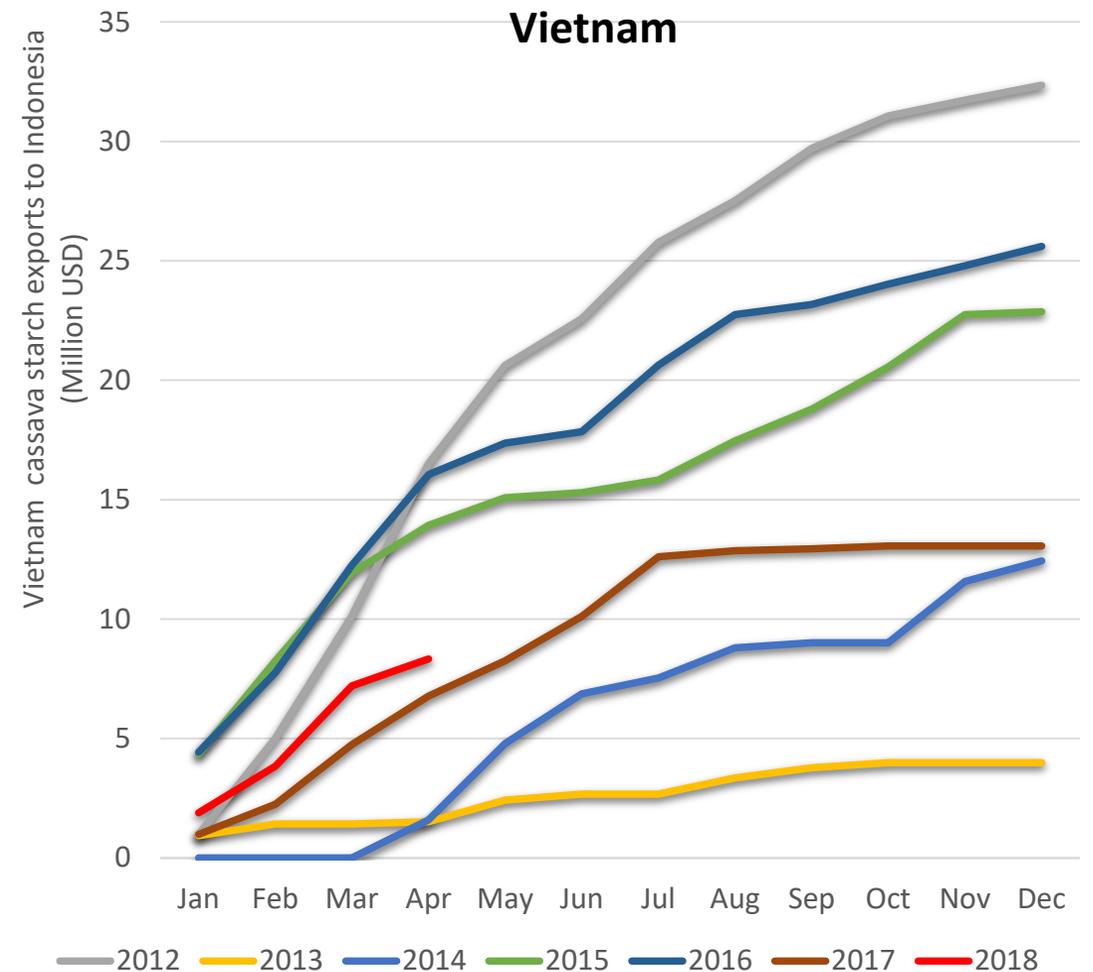
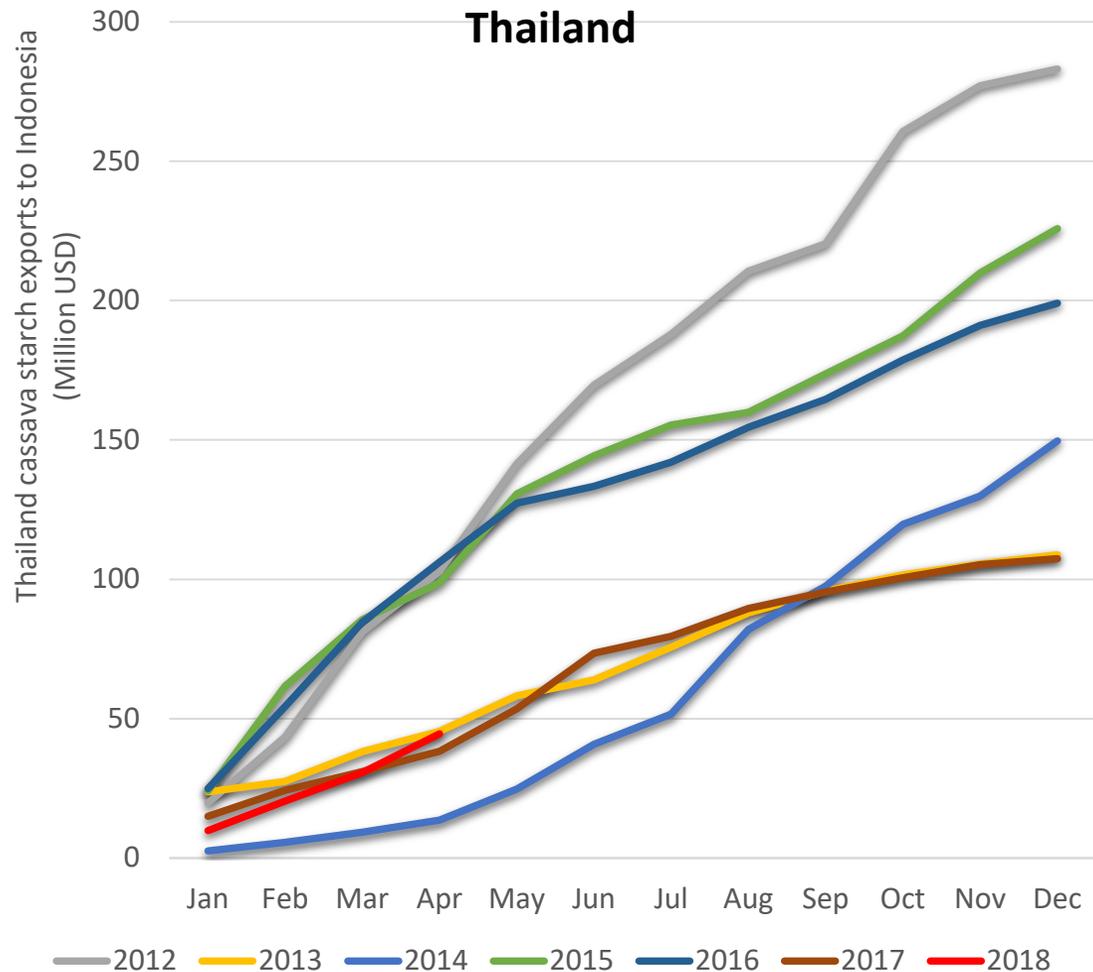
Fresh roots



Starch

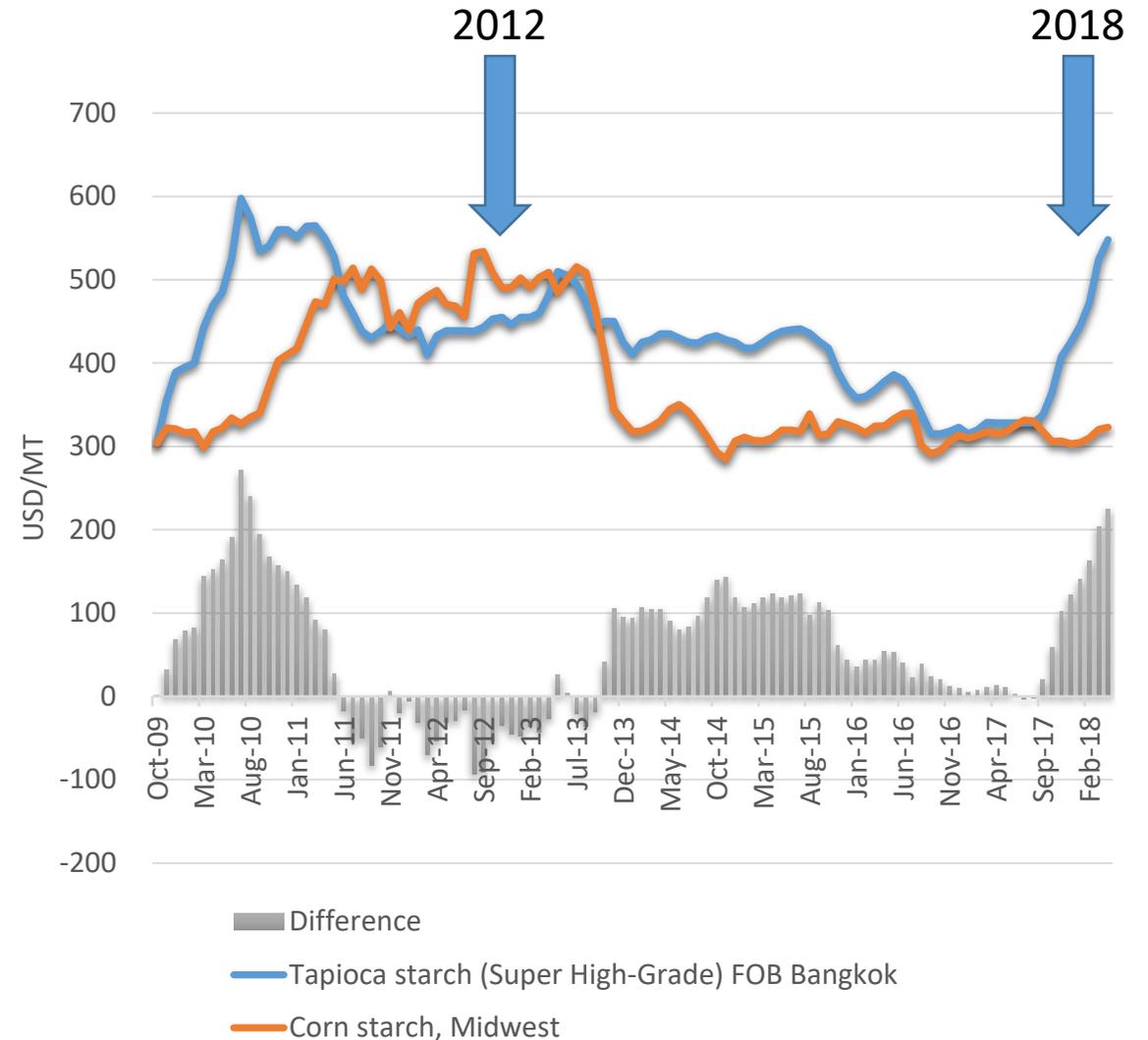


Cumulative monthly exports from Thailand and Vietnam to Indonesia (million USD)

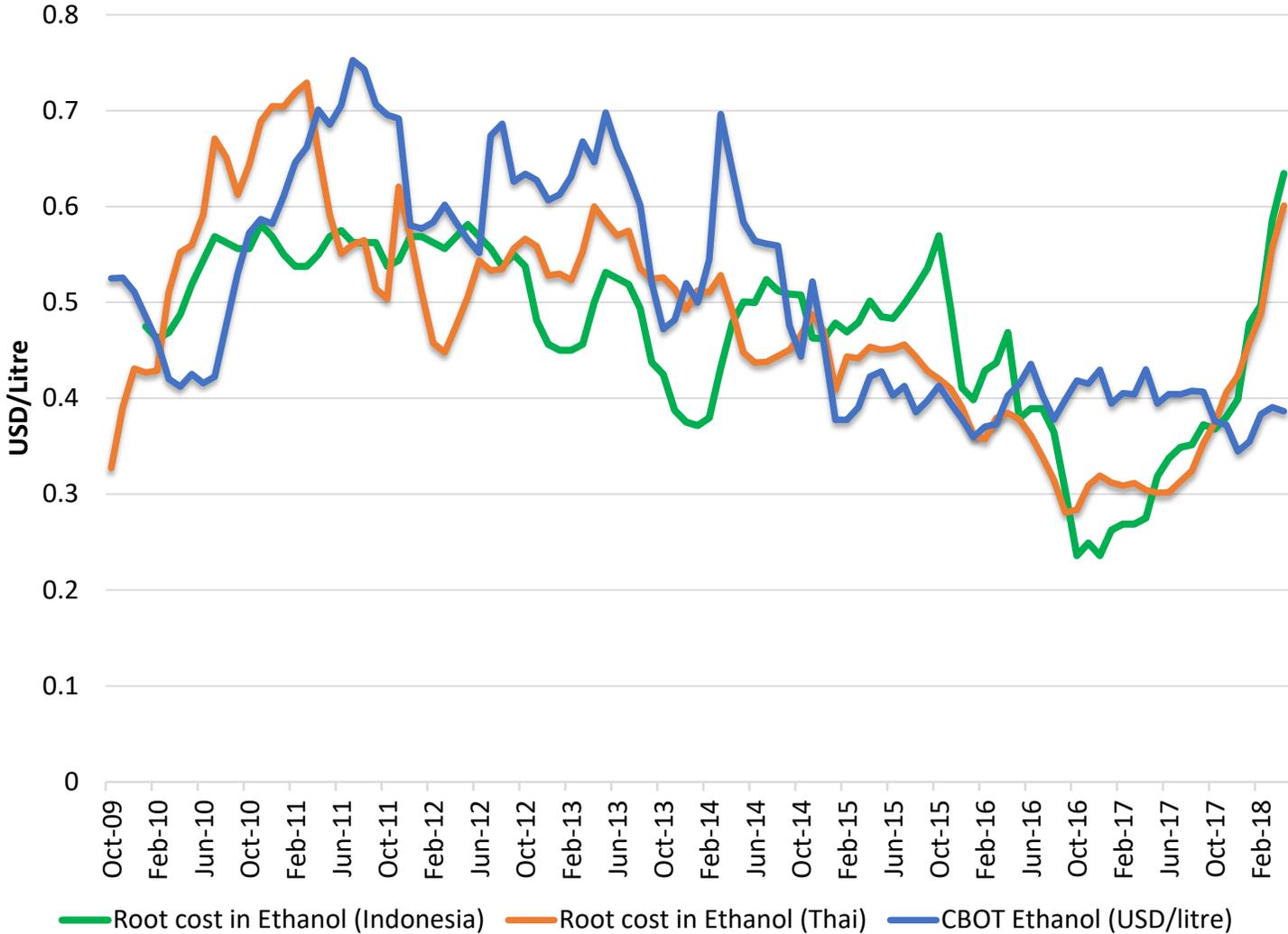


Difference in Thai cassava and US maize starch

- Cassava starch has again become a relatively more expensive feed stock for deep processing
 - Eg. Manufacture of sweeteners
- Short term options for Indonesian deep processors to remain competitive
 - Use alternative feed stock (maize)
 - Import processed products (glucose etc).



Biofuel prices and root equivalent price

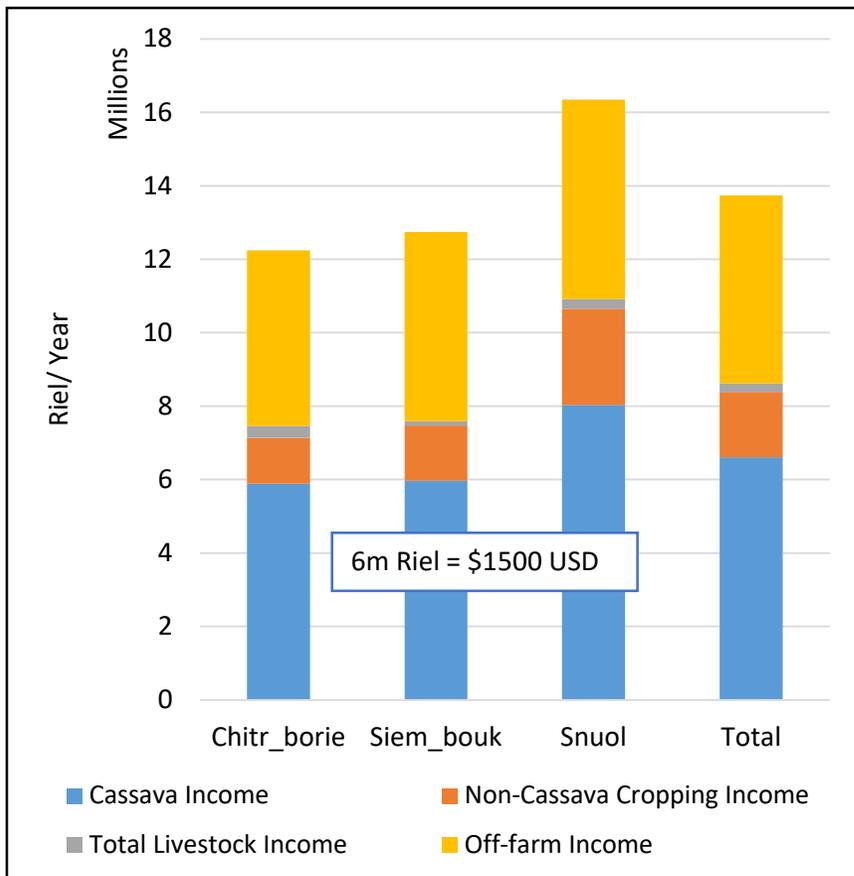


Smallholder livelihood outcomes impacted by these global market trends and shocks

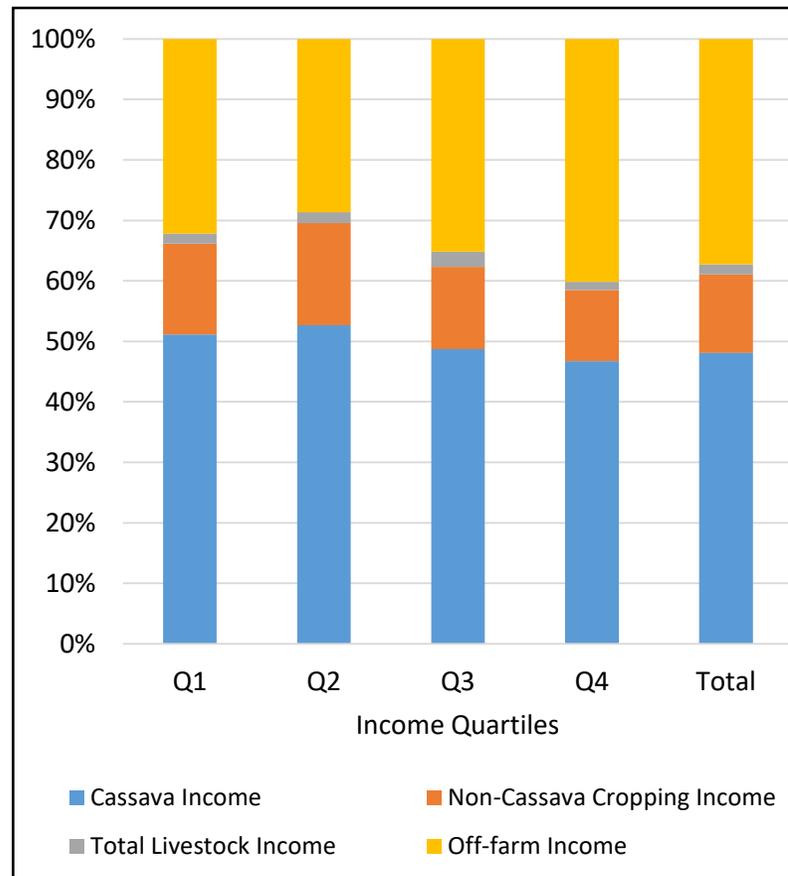


Grown by upland farmers to support livelihood security (Eastern Cambodia)

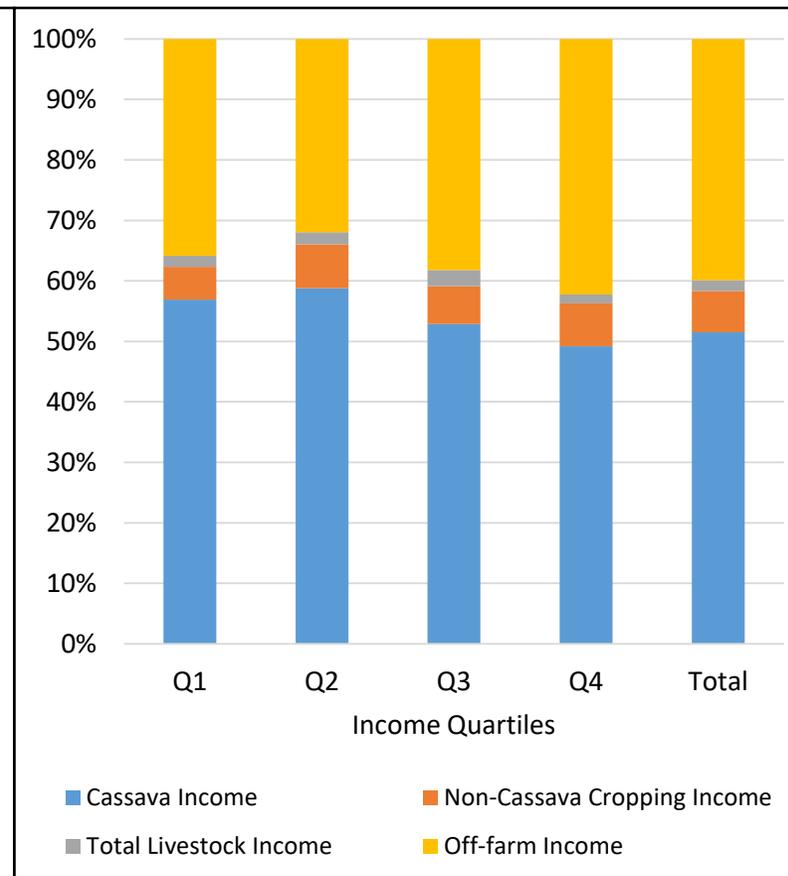
Gross total income



% share of total income

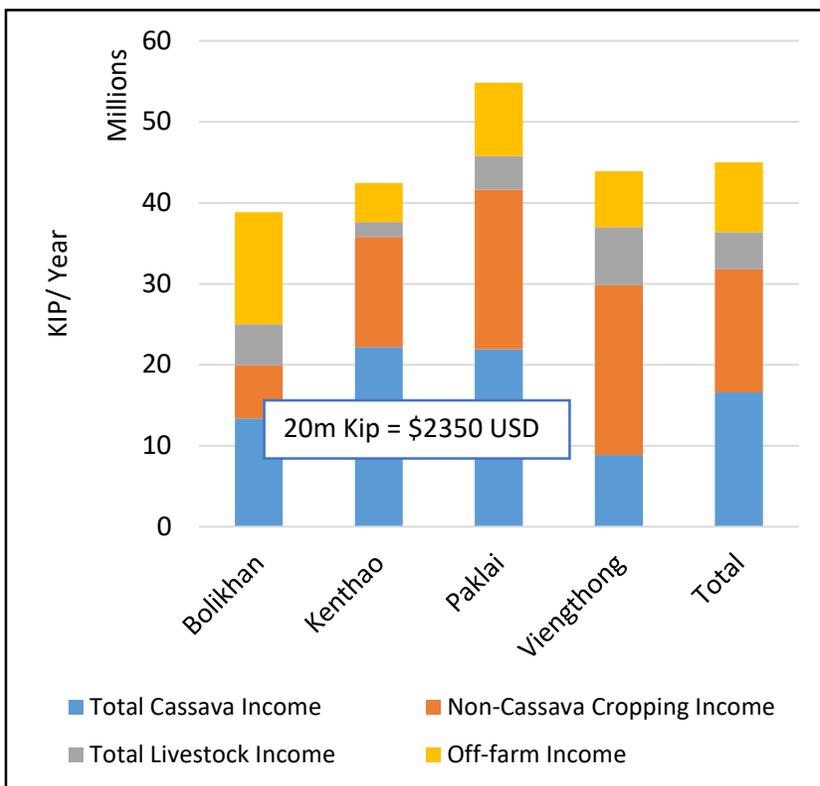


% share of cash income

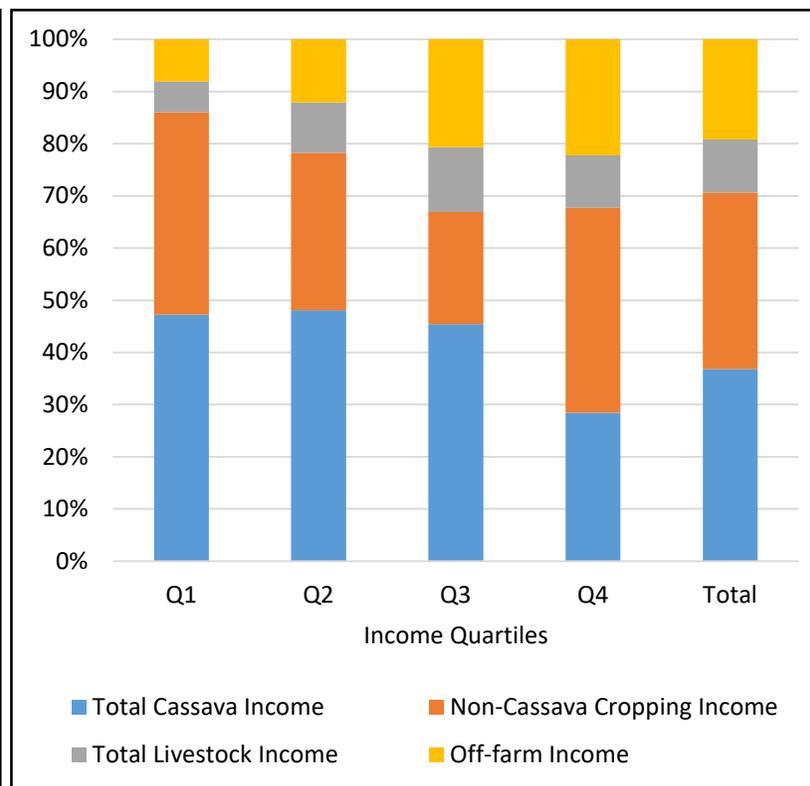


Grown by upland farmers to support livelihood security (Lao PDR)

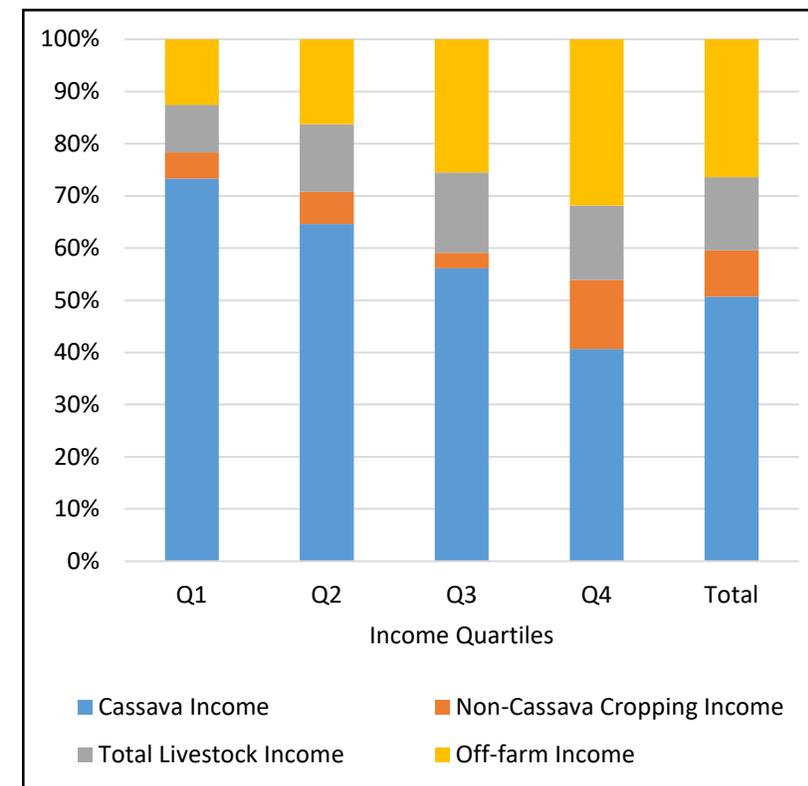
Gross total income



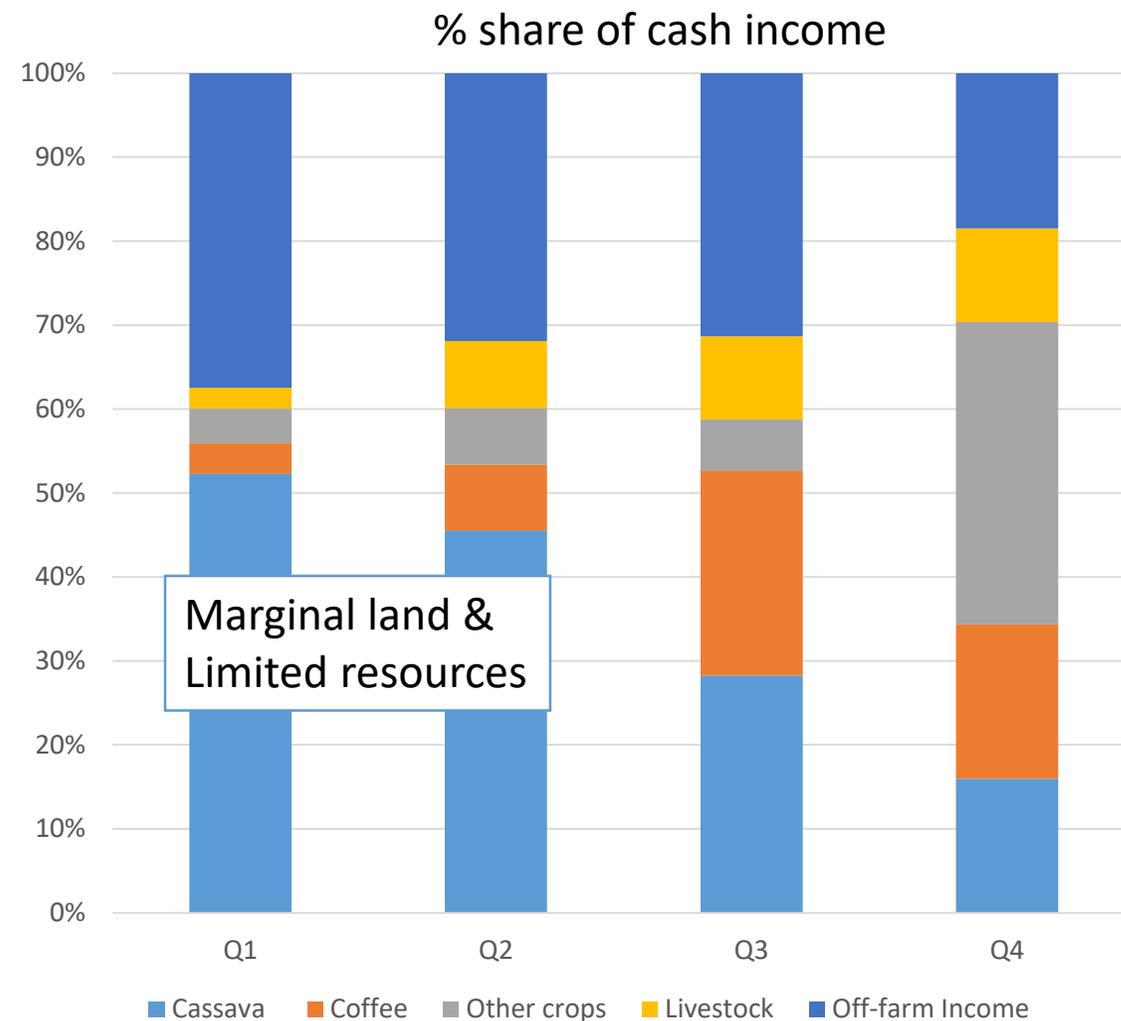
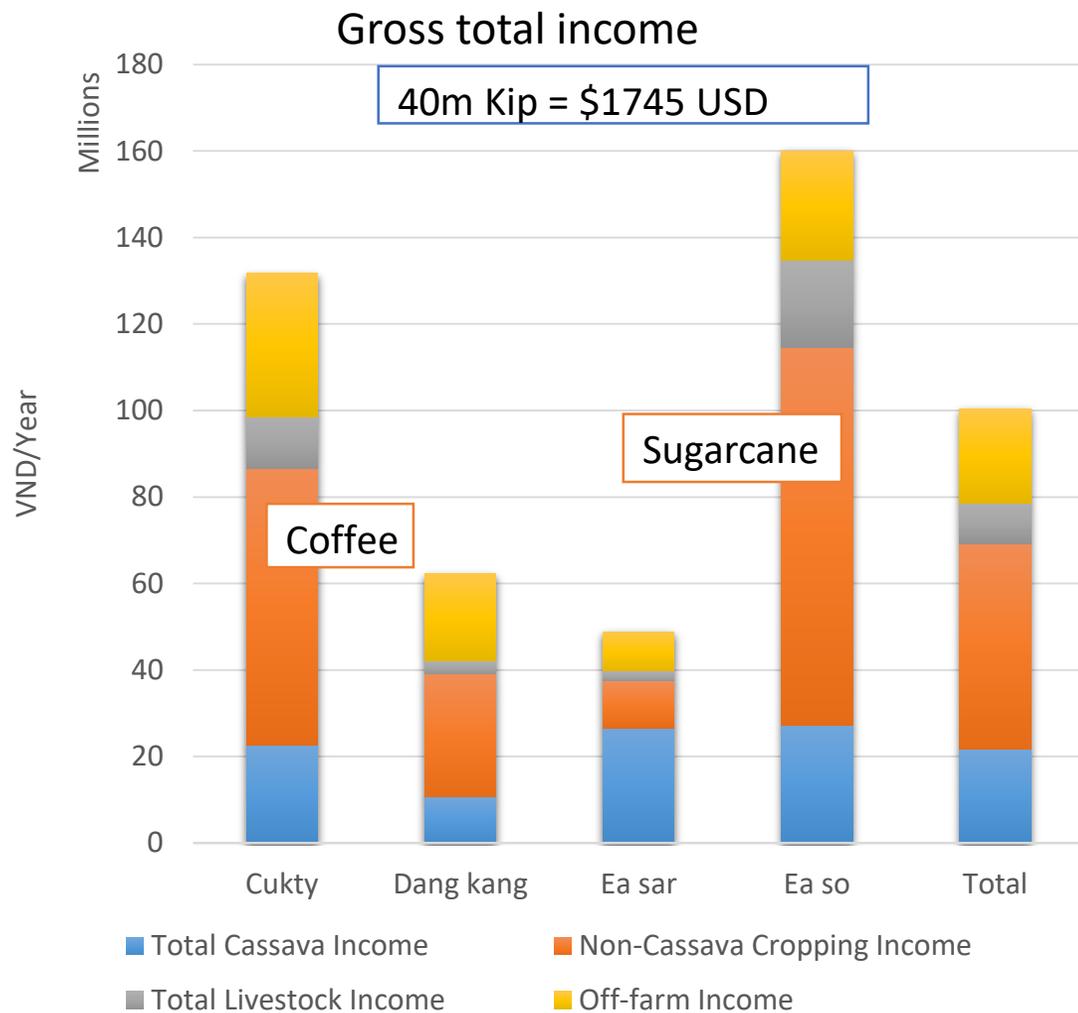
% share of total income



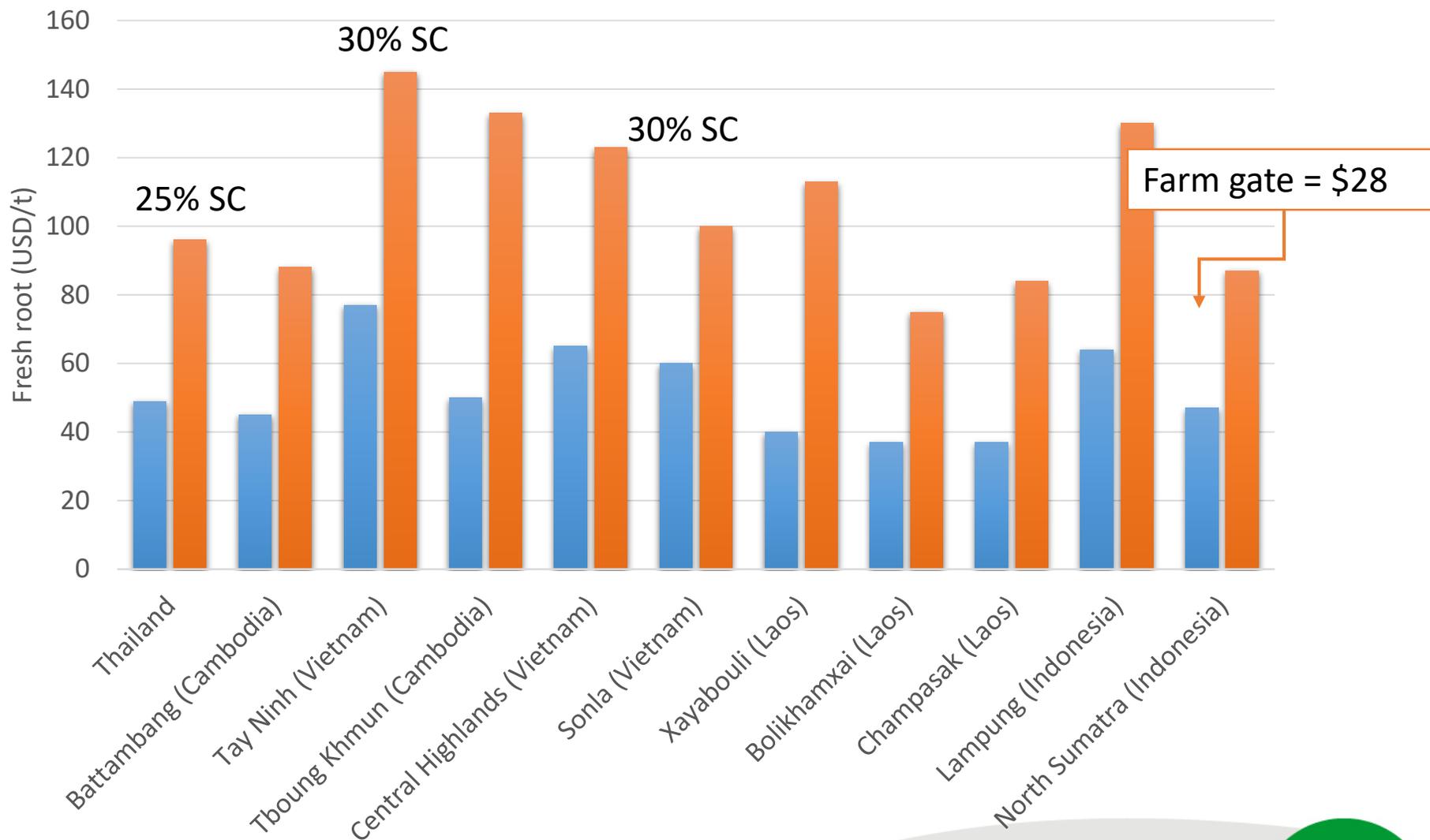
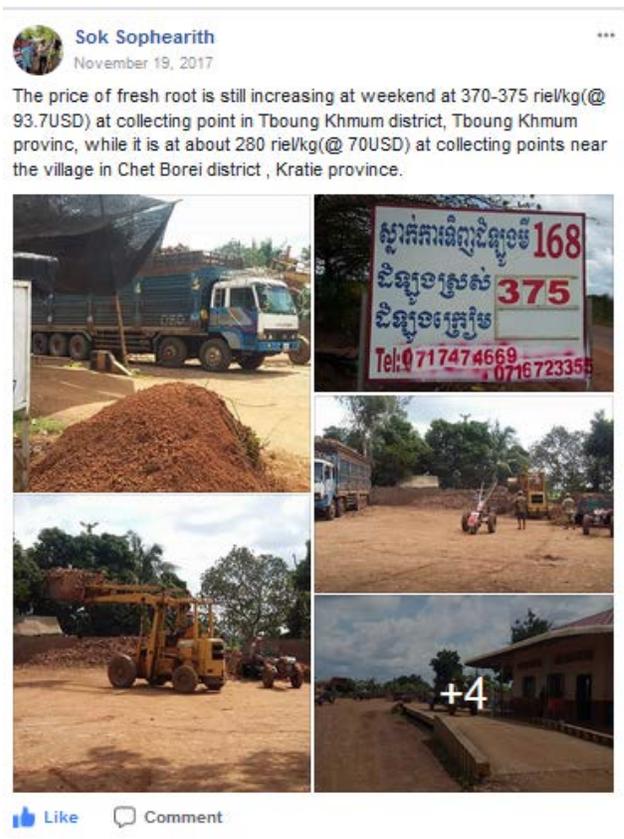
% share of cash income



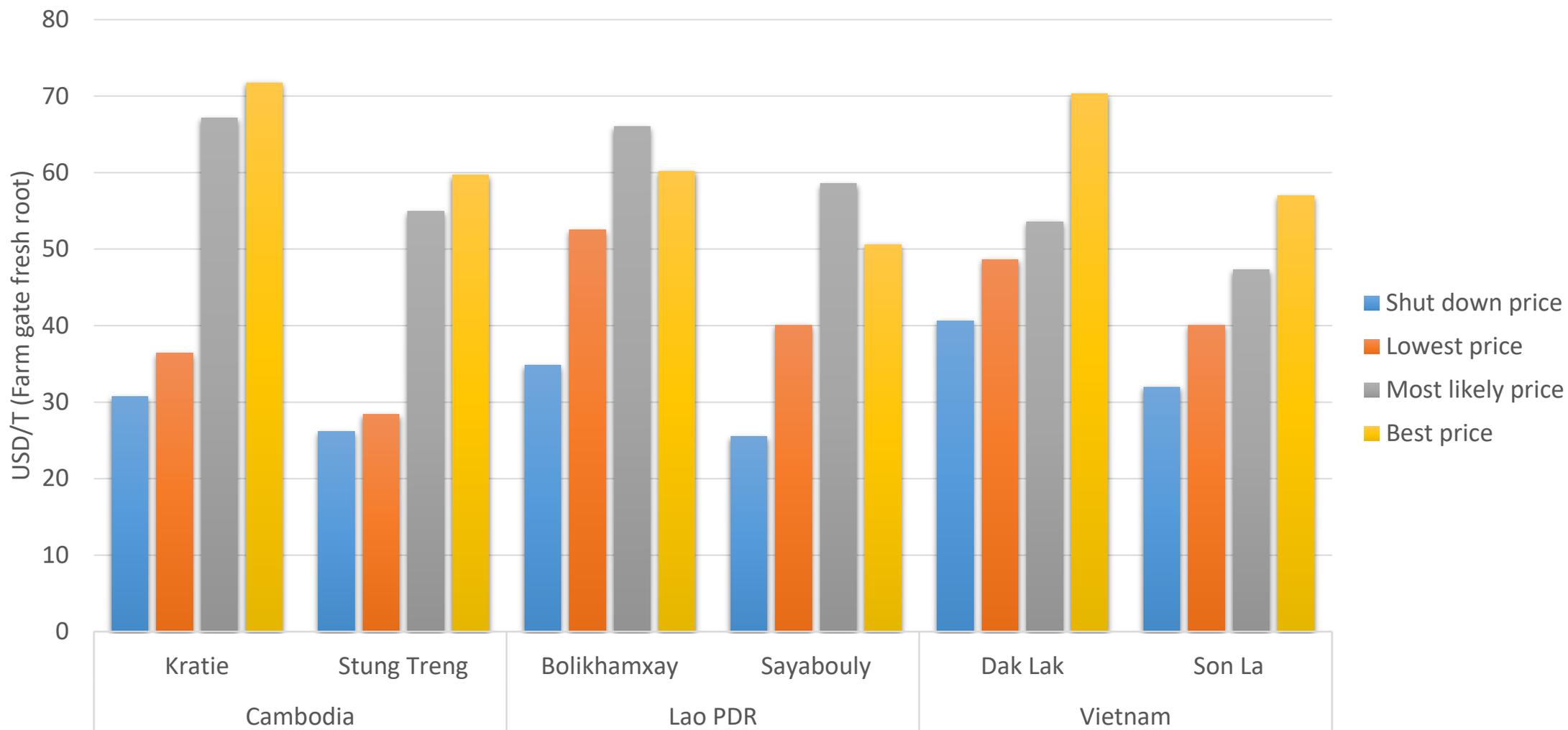
Grown by upland farmers to support livelihood security (DakLak Province - Vietnam)



Large price uncertainty - Fresh root prices at collection points & factory



Farmer experience and perception of farm gate prices (past 5 years)



Survey conducted in July – October 2017

Adding another level of production risk from emerging pest and disease will significantly impact rural livelihoods, industry and national economies

Cassava witches broom disease

Symptom variation of cassava witches' broom disease



Mild

Not very stunted
Leaf is grown and expanded

Severe

Many small leaves with short internodes
Leaf proliferation from the middle of stem
Dwarf plant
Leaf growth is inhibited, with dead leaves





Conclusion

1. Market and production risk contribute to the vulnerability of smallholder cassava farmers in Asia – debt, distressed land sales, migration by necessity, and other undesirable livelihood choices... (collection of UXO, logging, etc).
2. An understanding of the global market context in which localised cassava value chains operate (farmer-trader-processor) helps recognize the market risk that farmers and processors are exposed to – but timely information and decision support tools are necessary.
3. The addition of disease pressure will impact the competitiveness of smallholder cassava farmers in the global carbohydrate market
4. The poorest households in communities are the most reliant on cassava for their livelihoods and the less able to quickly adapt their livelihood portfolio in the face of new constraints.

ACIAR Cassava Value Chain and Livelihood Program

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Thank you!



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