







Shining a light on the global cassava market: exploring the multitude of factors that impact farm gate price and livelihoods

Jonathan Newby, Cu Thi Le Thuy and Erik Delaquis
ACIAR CASSAVA PROGRAM FINAL REVIEW JULY 2020

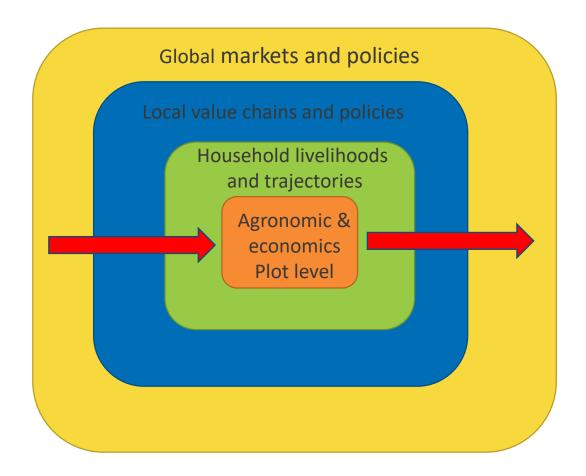
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Bioversity International and the International Center for Tropical Agriculture (CIAT) are CGIAR Research Centers. CGIAR is a global research partnership for a food-secure future.

ACIAR CASSAVA VALUE CHAIN AND LIVELIHOOD PROGRAM

- 1. Global markets and external polices
- 2. Local value chains and domestic policies
- 3. Household livelihoods and trajectories
- Field level agronomic and economic results
- 5. Implications for household livelihoods
- 6. Implications for local value chain actors





Project objectives

AGB

Objective 1 – Assess opportunities and constraints for smallholder production and marketing of cassava within different value chains

1.1 Understand the macro-level drivers for the development of the cassava industry including changing market and policy arrangements for cassava (starch, feed, chips) and substitutes (e.g., maize, potato, and sugar) and the potential benefits and risks to value chain actors

ASEM

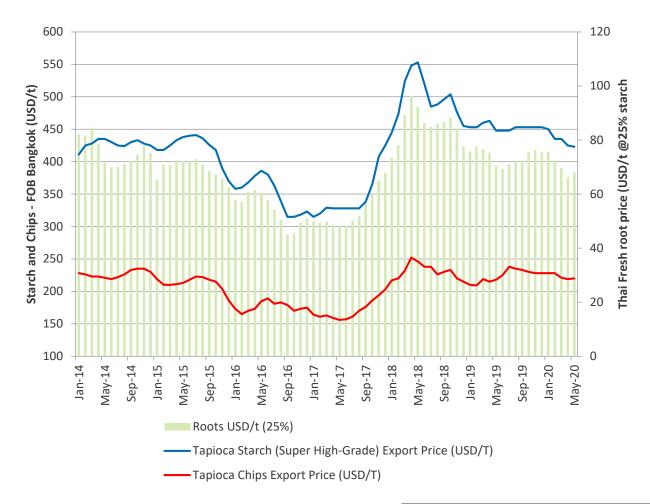
Objective 1 – Assess the current production, marketing, and institutional arrangements for cassava in major agroeconomic zones and value chains in Laos and Cambodia.

1.1 Understand the macro-level drivers for the development of the local cassava industry in different agroeconomic zones in each country, including changing market conditions and policy settings.



Why?

- Understand the trajectory of the industry
- What are the underlying market drivers?
- What are the risks that will impact prices?
- Understanding builds trust between actors
- What does this mean for farm level economics?
- What does this mean for livelihoods?
- What does this mean for industry competiveness?
- What does it mean for the incentive for actors to engage in either the adoption or scaling of new technology?





Activity and output

Activity

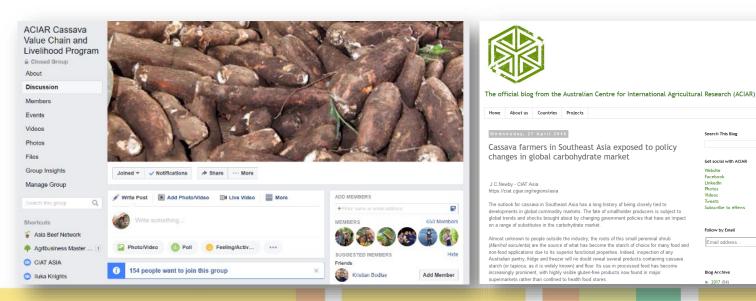
Review information on global and national cassava production, utilisation, trade, and policies.

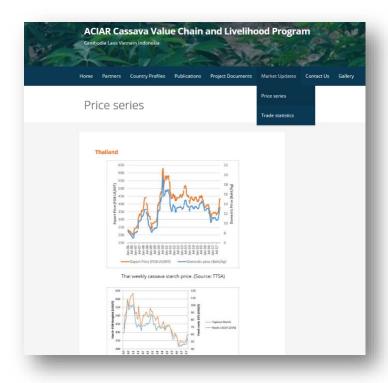
Original output

Annual market update

Actual output

Annual market updates, blogs, presentations, Facebook group, website







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Industry engagement to share information







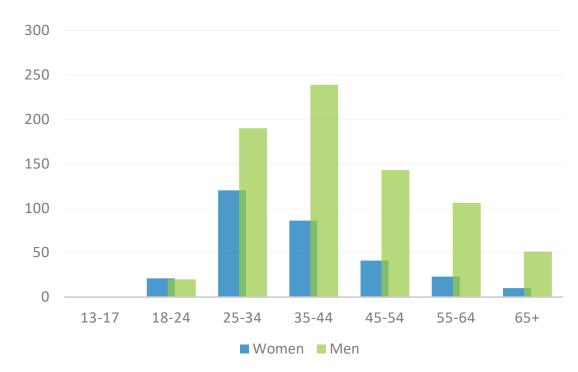
Starch World Asia

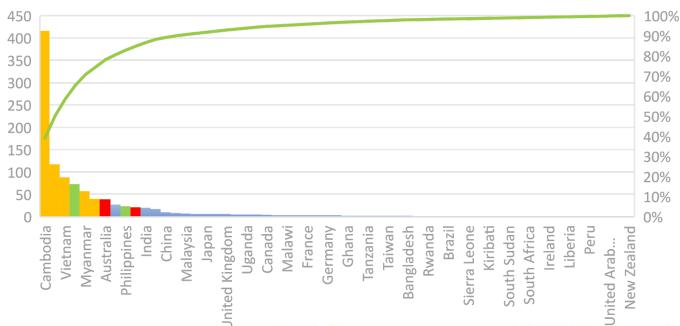
World Tapioca Conference



Meeting between Thai Tapioca Starch Association and Vietnam Cassava Association







Social Media Engagement

- 1070 approved members July 2020.
- 59 Countries
- Over 700 remain active in last 12 months with 658 members active in the last 30days of the projects.
- In the last 12 months of the project there was around 250 posts per year, 303 comments and 4,366 reactions.



Sustainability: Development of 'The Cassava Lighthouse'



Impact: We built a community of information sharing

Cassava industry has been proven successful by collaboration and sharing of knowledge and resources among stakeholders. I believe our community is unique with these core values and I am pleased to see we deploy all available technologies and platforms to communicate and work together to enhance livelihood of farmers and all stakeholders.

Over a thousand of members in this FB group are extraordinary and reflects high interest and enthusiasm to learn and share. We see a number of rapid changes in the world and the challenges going forward. Hope the strong relationship and close collaboration will get us through the situation and re-establish strength and competitiveness of cassava Industry.

Lastly I wish all members be happy, strong and healthy

Boonmee Wattanaruangrong,

Vice President of TTSA

A really informative webinar that gave a good overview of regional developments in the cassava sector. A must watch for all market participants.

Michael Y. Yoong, Business Development Manager, Hung Duy Starch – Vietnam



The material produced by the ACIAR Value Chains Project provided the most comprehensive data set and analysis available and the Facebook site also gave timely updates for on trade and prices, disease management and field trials. As a Policy Officer largely operating at the national level, the interactions with the ACIAR Program provided opportunities to visit the field with an expert team and to learn a great deal about practical aspects of cassava production and disease management. In addition, the Facebook site provided regular updates on progress with field trials, brief statements of the results and a great deal of information relating to trade and prices. This was a valued source of information for me and for others at FAO Cambodia.

Iean Russell

Senior Policy Officer. FAO-EU FIRST Programme, Cambodia

This is a very helpful page to connect with every actor who is involved in cassava sector. To me, I come to Facebook mainly to check on this FB page as to see updates and news feeds as the resources here are quite informative. The coverage of cassava related-info with regional and global focus is an essential part of this page that I like the most. This is because, for a transboundary disease like CMD, it requires a platform with transnational focuses for audience to comprehend the issue with a more reliable sources so that we how to could work individually and collaborate with one another to solve the problems.

Neng Por – CAVAC Cassava Program





I am Clair Hershey, former global leader of CIAT's Cassava Program (retired), and currently private consultant. I rely on the cassava value chain discussion group to stay up to date on a wide range of cassava-related issues and research progress. I feel that there is special value in the sharing of innovative approaches to arising major challenges such as the mosaic virus, along with the more general day to day management strategies and techniques of research that can make each program more efficient and more effective. The forum provides up-to-date and on-the-ground understanding of how each country of the region is faring in production, processing, marketing and use of cassava.

I have followed this web site on Facebook for more than a few years now. I read their posts with great interest both to follow their approach and activities and also to learn of what they were doing much of which was and is applicable in West Africa. A most useful site and a model for others to follow

Louw Burger, FOUNDER Thai Farm International and former CEO, Nigeria

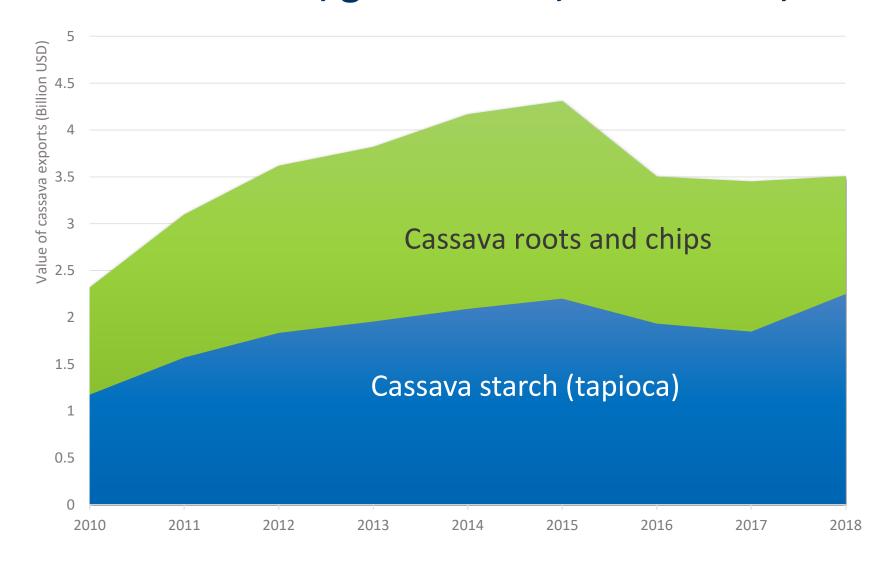


Where to start.....

What is cassava used for?



A multi-billion global commodity most people know nothing about..... Farmers, government, researchers, donors





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

- 1. 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.
- 2. Markets where cassava starch competes largely on price with substitutes such as **maize** and **potato** starch, **sugarcane**.
- 3. Markets where the functional properties of the starch are desired. Consumer preferences, clean label segment, gluten free etc.





CLARIA® Functional Clean Label Starch

CLARIA® Functional Clean-Label Starches empower manufacturers to meet increased consumer demand for cleaner labels enabling formulations with similar

functionality to a modified food starch.



INTRODUCTION DOWNLOADS APPLICATION HOW WE APPLY IT

Introduction to CLARIA® Functional Clean-Label Starch

Also known as

Clean-label starch, functional clean label starch, starch

CLARIA® Functional Clean-Label Starches labels simply as starch yet perform similarly to modified starches.

Tate & Lyle's line of CLARIA® Functional Clean-Label Starches empowers manufacturers to meet increased consumer demand for cleaner labels enabling formulations with similar functionality to a modified food starch. Globally, consumers are demanding convenient, great tasting foods that have recognisable ingredients on the label. In fact, one-in-four new products today is launched with "cleaner-label" claims. All CLARIA® Functional Clean-label Starch products are certified as non-GMO.



At Tate & Lyle, our texturants range now offers a comprehensive array of Non-GMO offerings for all regions, providing our customers with choices to fit their needs. Our non-GMO ingredients offer the same functionality as their traditional counterparts without compromising on taste or texture, meaning you can offer your consumers everything they're looking for in the foods and beverages they love.



Home > Products & Services > Food and Beverage Solutions > Starches > Tapioca Starch Ingredients

Overview Sorghum Flour

Ingredients

Wheat & Corn Starches

Tapioca Starch

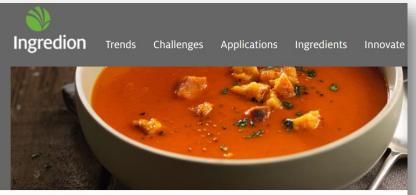
Tapioca Starch Ingredients

Clean delicious taste and texture with a gluten-free, non-GMO starch



Tapioca Starch

Tapioca starches from ADM deliver great taste and texture that's also on trend-and satisfies consumer demand for clean label offerings. Non-GMO and gluten-free, our tapioca starches offer all the functionality to deliver superior texture, plus a clean, neutral flavor profile for the ultimate consumer-pleasing taste in your products, especially in applications where the flavor of a traditional starch is not desirable



Ingredients > Starches > Functional Native Starch

Clean up labels with functional native starch

Our portfolio of more than 25 NOVATION® clean label starches lets you formulate on-trend, clean label products rici texture and taste, across a broad range of applications

As the pioneer in clean label ingredients, we offer the broadest range of speciality clean label starch solutions and formulation expertise available. Having identified the clean label trend in its infancy and helped turn the trend into way of life for food manufacturers, we know all there is to know about clean label.

As consumers grow ever-more health conscious, clean labels are becoming increasingly important to them. People of to know exactly what's going into their food. That's why you need simple recipes, with ingredients they recognise a trust.

OUR CUSTOMER BENEFIT PLATFORMS











OFFERINGS

PROVIDING BETTER INGREDIENTS FOR PRODUCT PERFORMAN AND IMPROVEMENT, ESPECIALLY IN YIELD, PROCESS ABILITY AND

PRODUCTS







—— New Product Highlights ——

Explore our new product highlights with highest performance to catch up food & beverage trends and advance your products to the next level

D-PERSE® CAP the shortcut to transform oilbased ingredient to powder

Read more

SMS

Deliver clean label yogurt to health lovers with Natura® Y808

Read more

Serving the favorable soup & sauce texture with GENIGEL® M78

Read more

KREATION® N-BIND - an excellent binding ability for plant-based meat





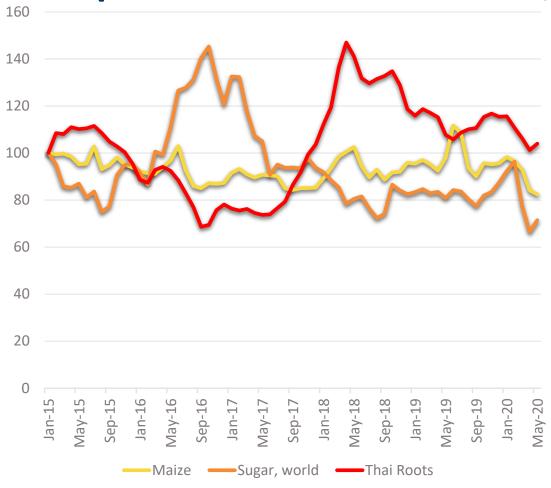
And on the supply side – the relative competitiveness against other land use in the context of different trends and shocks

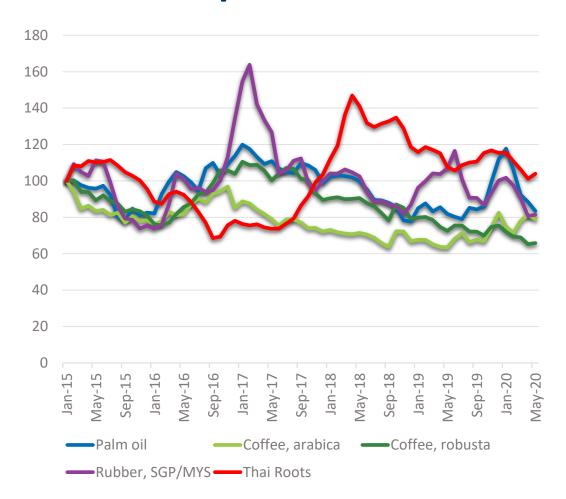
- Own price and relative prices to other commodities that can be produced in agro-ecological zones
 - Influenced by a range of policies
- Changes in costs of production
 - Changing labour costs and ease of mechanization
- Long term climate trends
- Short term Floods and droughts
- Changes in land suitability and land degradation (both ways)
- Impact of pest and disease





Index of Thai cassava roots against global commodities that compete for smallholder land, labour and capital







Vietnamese sugar: "Unsuccessful" in 2019, worried about 2020

13:59 | 02/12/2019



Sign Up to see what your friends like.



VCN - Ending the 2018-2019 crop year, Vietnam's sugar industry is about to enter a new crop with significant anxiety. This is due to the increasing competition pressure when tariff quotas on imported sugar from ASEAN are officially removed from 2020.

- An Giang: Smugglers still use former tricks
- Sugar industry: some die, others thrive
- Sugarcane sector needs new ideas



Laos sees more revenue from coffee

Asia News Network | Publication date 22 June 2020 | 21:26 ICT



Coffee plantations in Champasak province currently cover 50,250ha, 19,716ha in Saravan province, 10,131ha in Sekong province and 2,216ha in Attapeu province. VIENTIANE TIMES

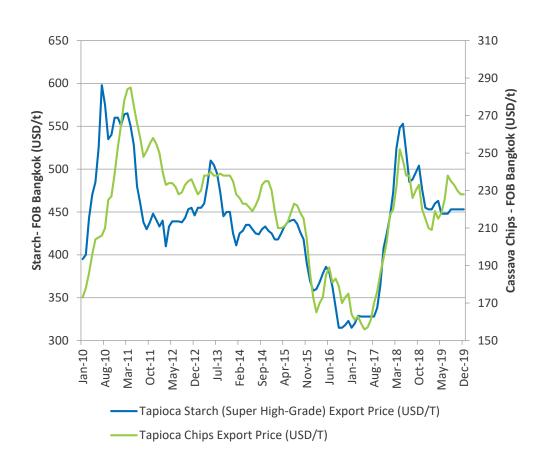
The number of coffee plantations under the Lao Coffee Association (LCA) has decreased by around five to 10 per cent in the first five months of this year as growers shifted to cassava for better incomes.

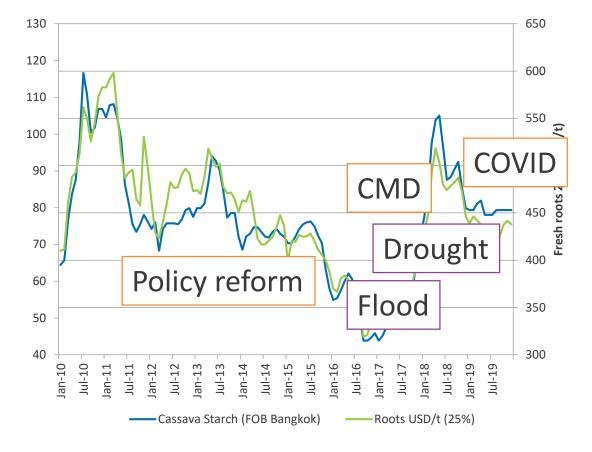
With the price of Lao coffee falling and facing challenges posed by coffee larva, and types of Polyphagozerra coffeae and Acalolepta cervina in recent years, some farmers have shifted from coffee to grow other commercial crops, LCA studies found.

But the value of coffee exported by Laos increased as the price of local coffee beans was better this year, said LCA main coordinator Sivilay Xayasaeng.

During the first five months of last year, Laos exported almost 12,000 tonnes of coffee worth around \$24.9 million, and the figure increased this year to almost 20,000 tonnes worth \$37 million. This year's exports included the Arabica, Robusta, Exelsa and Roasted varieties.

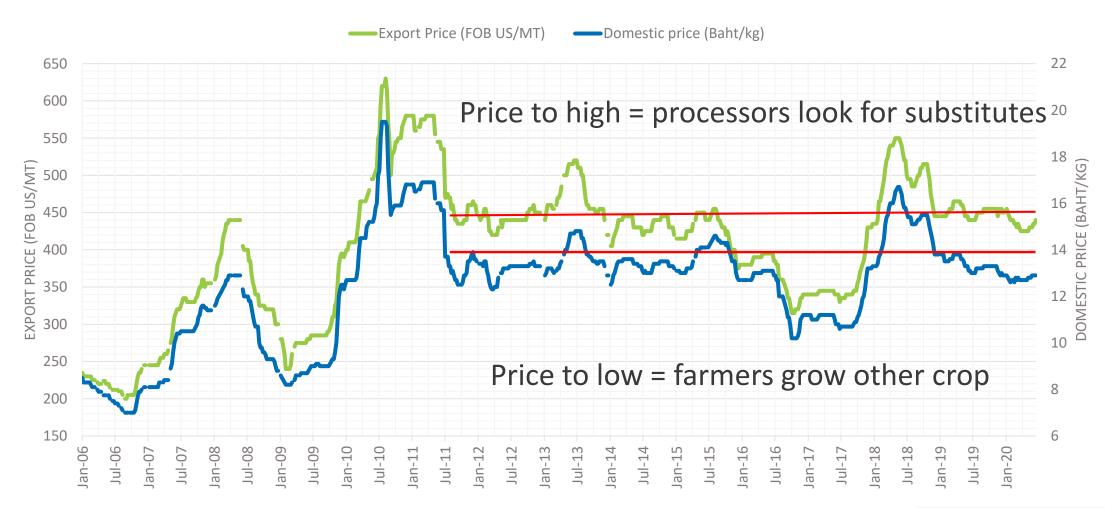
It has been a wild ride for the cassava sector during life of the project!







Starch processors would like to stay in the train tracks





Where is cassava grown?



A Southeast Asian supply story, with implication for Africa

cassava remains a Southeast Asian story VALUE OF EXPORTS BY SOURCE (BILLION USD) Eastern Asia Europe Northern America South-eastern Asia ---World 0.5 Re-export

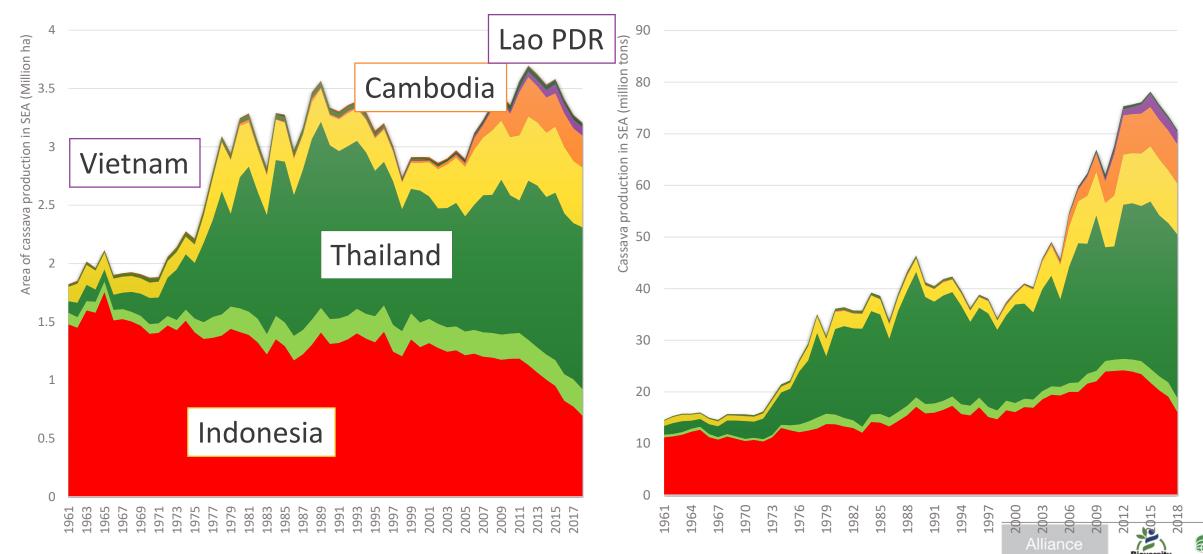


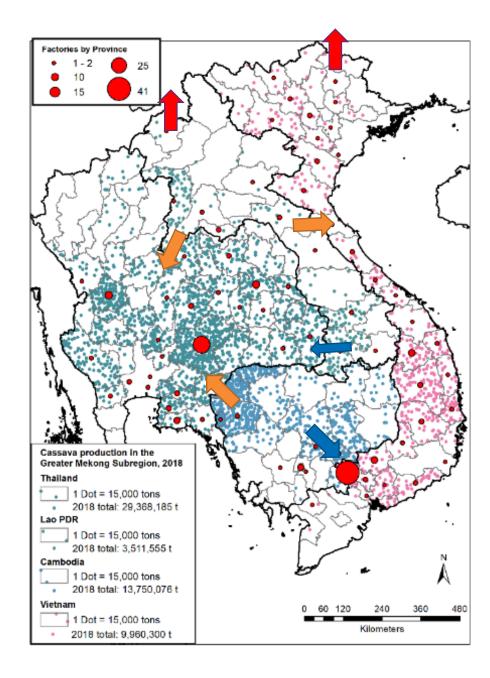
While making up only around 13%

of global cassava area & 25% of

production, the global trade in

Asia's cassava revolution has been a market driven one.... influenced by domestic and international policies

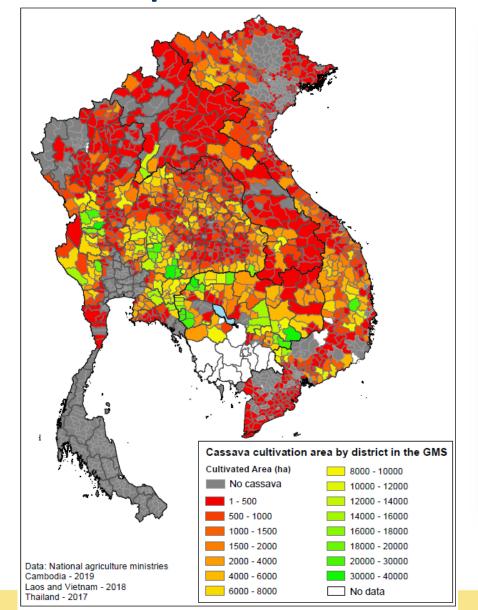


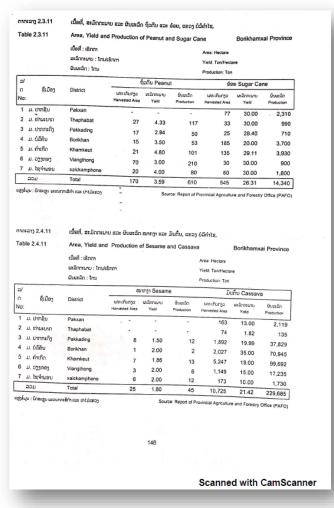


- Grown throughout the region, and still an important famine crop
- Commercial production clustered around processing hubs
- Cross border movement of :
 - products (roots, chips)
 - stem cuttings
 - capital
 - technology
 - labour.
- Millions of USD of raw products following across borders and into the global market



Facts and favours: Accessing district data via year books and phone calls and personal connections



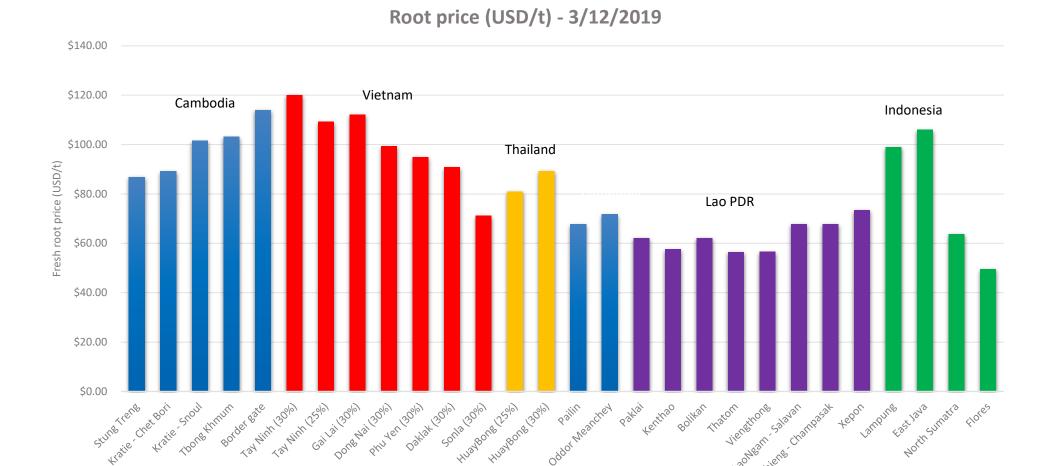


- Most comprehensive data on cassava production
- Still working off getting Province year books
- Long lag time and inconsistency between countries
- Known under reporting of significant scale
- Remote sensing area yet to deliver.





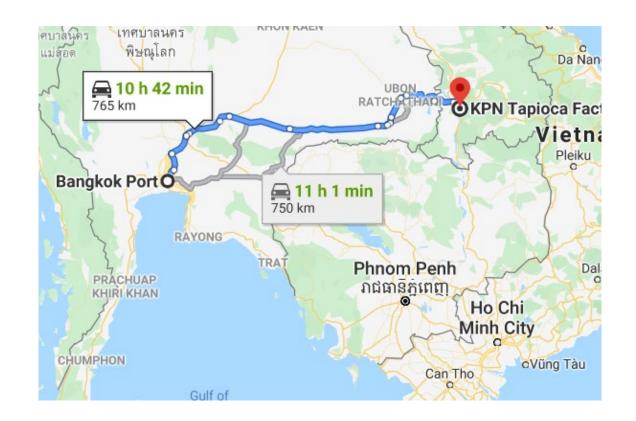
In a connect market, location and logistics matter





Transport and logistics can determine a lot

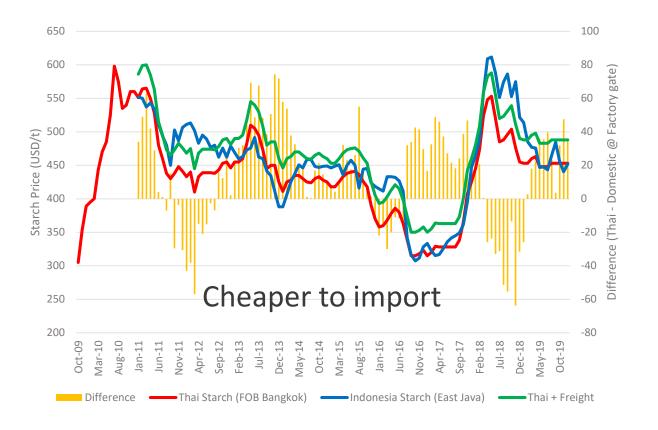
- Transport cost from KPN to Bangkok Port was around \$85 per ton
- Need to pay less for roots in order to meet the global reference price.
- Also so freight protection if processing happens domestically..... but road > sea





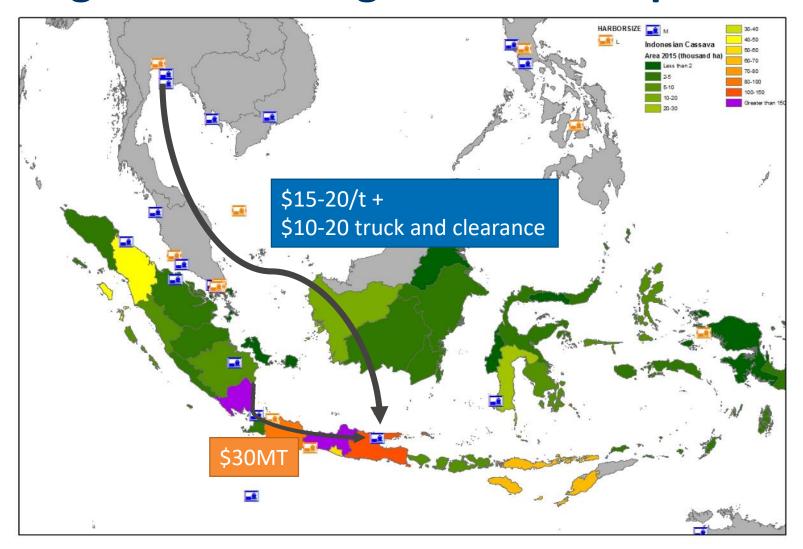
Strong linkages between countries outside mainland SEA with traders and processors seeking out a better margin on large volumes

- Indonesia is second largest importer of cassava starch despite being one of the largest global producers
- Different market segments with strong direct consumption
- Transport and logistics





Logistics and freight cost are important





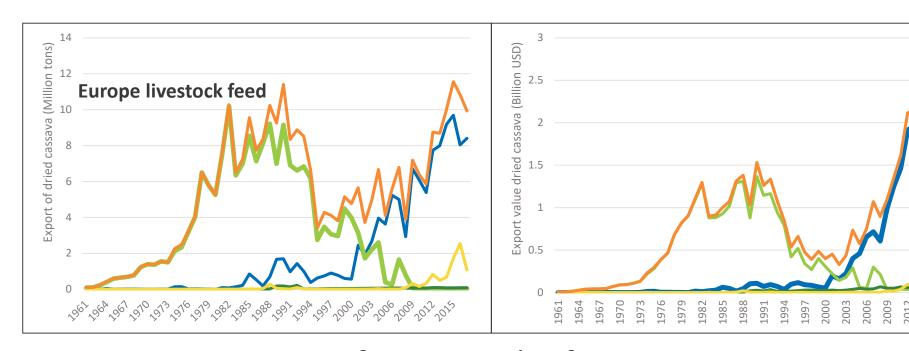


CASSAVA

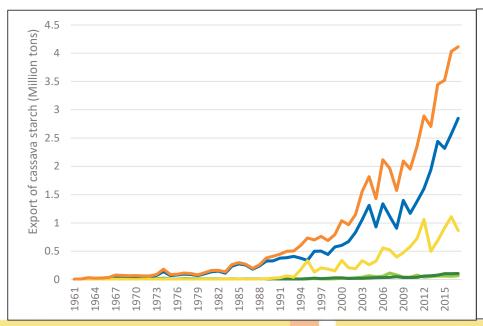
Often not a high policy priority

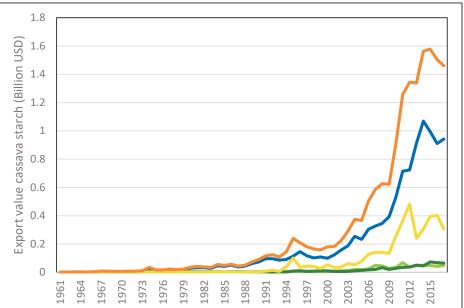
But always highly impacted by policies





Reorientation of export market from Europe to Asia





The Common Agricultural Policy (CAP) and Cassava

Protection of domestic grain market in Europe created an opportunity for Asian cassava chips

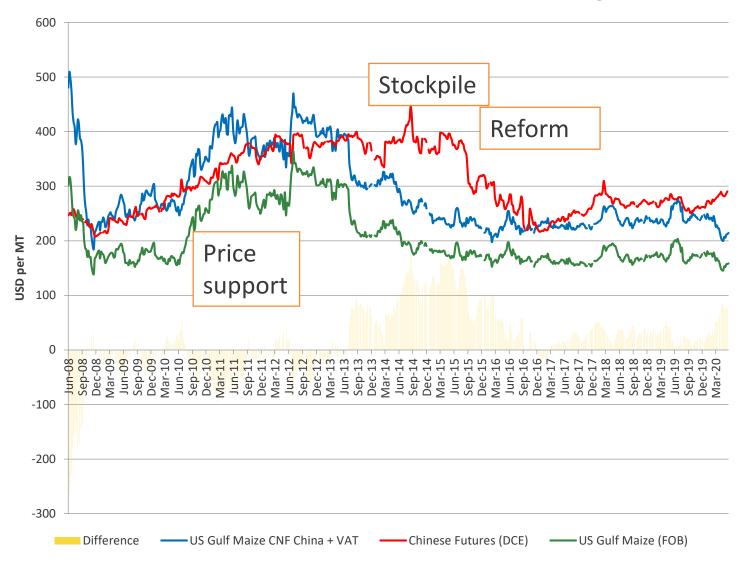
Geopolitics played its part.



Bioversity



Chinese maize self-sufficiency



28 March 2016 the Chinese government announced an end to the floor price for maize.

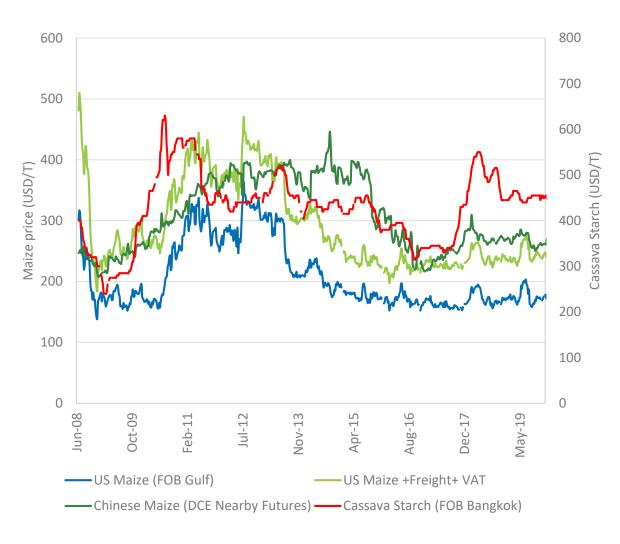
The result was a significant fall in maize prices, with the nearby futures falling by around RMB 300/kg (from RMB 2000).

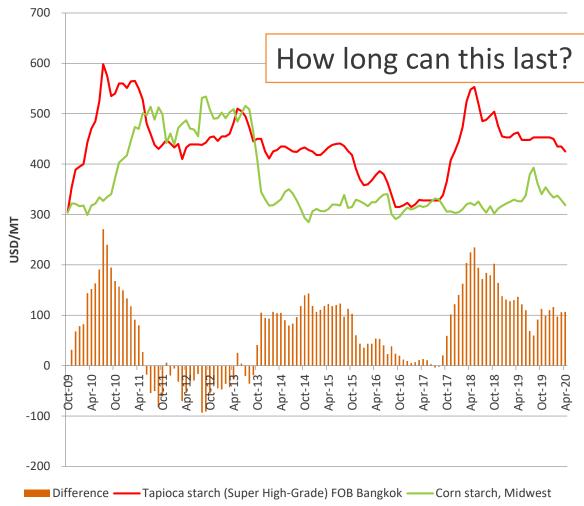
Dalian Futures for a September delivery fell below RMB 1600/kg.





Chinese maize, US corn starch and Thai cassava starch

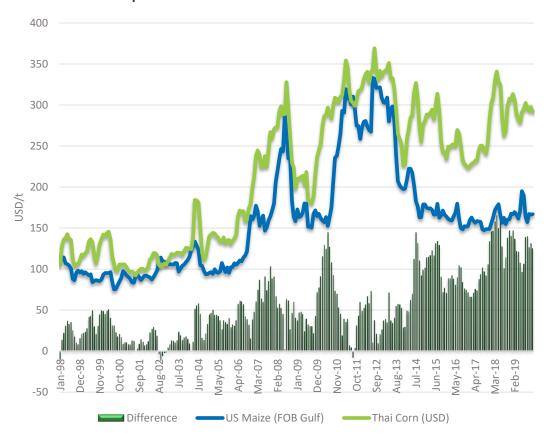




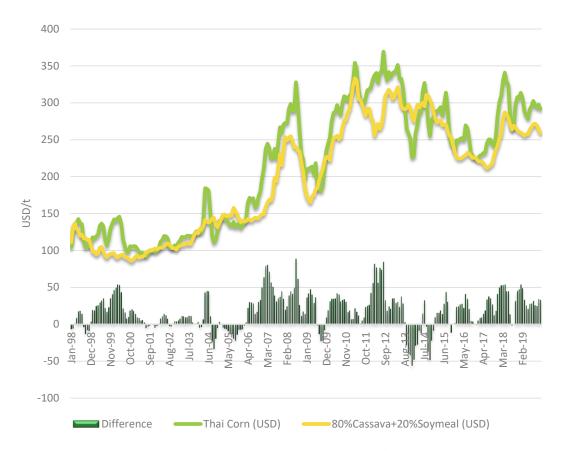


Maize price in Thailand impact on cassava price

Maize price support 8.5THB/kg for 2019-2020 crop Tariffs and quotas

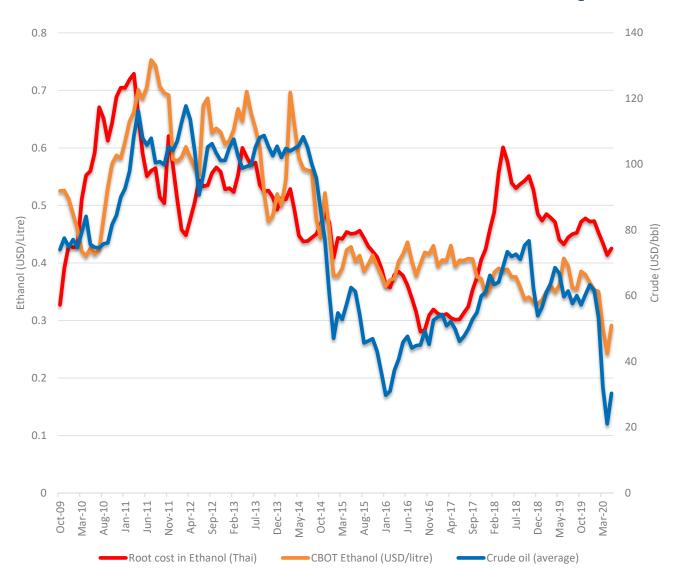


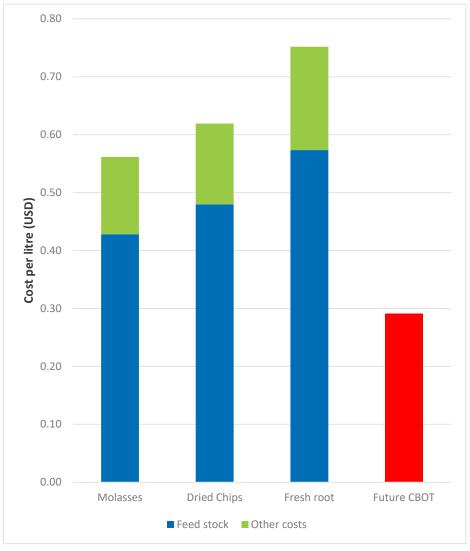
Cassava price guarantee is set at 2.50 baht per kg, limited to 100 ton per family.





Biofuel mandates, Ethanol prices and cassava







BUSINESS

Energy Ministry keen to maintain subsidies for biofuels

PUBLISHED: 30 JAN 2020 AT 04:01













A pickup gets refuelled with biodiesel B20 at a Bangchak petrol station. (Photo by Varuth Hirunyatheb)

- Impact on demand for cassava
- Impact the price of cassava roots
- Impact on competitiveness of other cassava sectors
 - starch, livestock feed
- Those secondary processors look for alternative cheaper feedstock if possible
 - Eg. Sweetener manufacturers





Non-price trade barriers

- Quarantine concerns on raw material and inputs (stems)
- Quality standards
- Restricting the export of raw products to encourage domestic value adding
- Other geopolitical concerns between trading partners

Việt Nam's agricultural products facing barriers to enter Chinese market

Update: June, 07/2019 - 10:42











Two officials from the Ministry of Agriculture and Rural Development check the quality of cassava in the southern province of Tây Ninh. — VNA/VNS Photo Thanh Tân

HÀ NỘI — Many of Việt Nam's agricultural products — especially rice, vegetables and cassava — have faced barriers preventing their export to China, according to the Ministry of Agriculture and Rural Development.





The outlook is impacted by a wide range of policies aimed at supporting domestic farmers, self-sufficiency, promote development, achieve other policy objectives

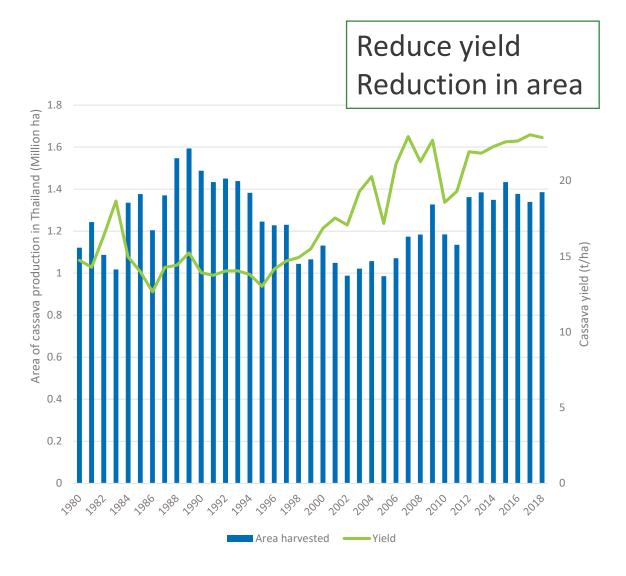
Not only for the commodity of concern (cassava)

Not only in the region of production or consumption (Asia)





Historical: Cassava Mealybug



Price spike



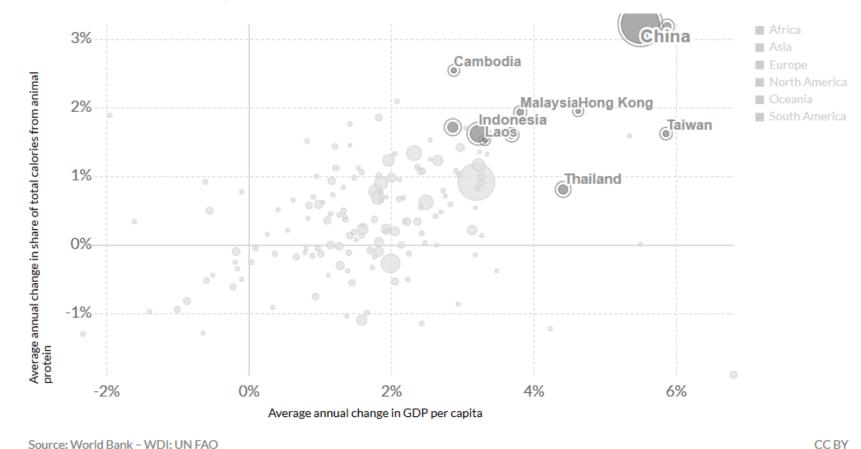


Thinking of the livestock feed sector.....

Share of calories from animal protein vs. GDP per capita, 1961 to 2013



Share of calories in the average diet sourced from animal protein (which includes meat, seafood, eggs and dairy products), measured as the percentage of daily caloric intake, versus gross domestic product (GDP) per capita, measured in 2011 international-\$.



In our Asian story

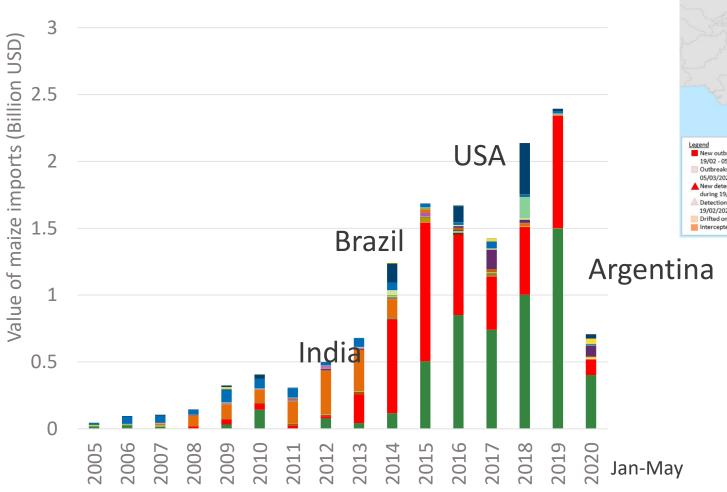
- Incomes rising
- Consuming more animal protein
- Increase in feed demand

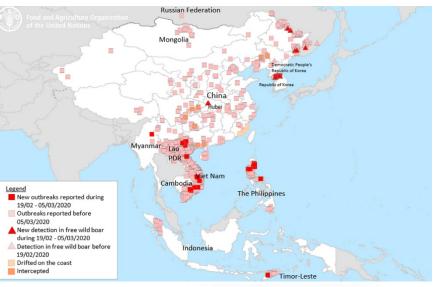
Source: World Bank - WDI; UN FAO





Vietnam: maize and swine fever









Fall Army Worm (FAW)

- Impact supply of maize in the region and rising prices?
- Farmers looking for alternatives to maize? Cassava is a likely substitute in many areas.

Fall armyworm attacks Việt Nam's agriculture

Source: VNS • Posted: 23 Jul 2019 • Originally published: 23 Jul 2019 • Origin: View original

HÀ NỘI — The fall armyworm has hit Việt Nam and caused serious damage to maize crops in recent months, after leading to the loss of billions of dollars in sub-Saharan countries and Asian countries.

Đồng Nai Province's Đình Quán District reported the first case of fall armyworm in early March on a small maize field of 1.5ha.

Within three weeks, the affected area increased to 276ha, spanning over several other districts of Xuân Lộc, Cẩm Mỹ, Trảng Bom, Thống Nhất and Tuân Phú.

The insect has also invaded northern and central localities like Nghệ An, Thanh Hoá, Phú Thọ and Thái Nguyên.

Like an army, each mature worm can eat a corn bud in a few days then keep munching the whole plant. It can pretend to be dead when touched and change body colour based on living environment.

Last week, the Ministry of Agriculture and Rural Development held a meeting with representatives from southern coastal and Central Highlands provinces on fighting the armyworm outbreak.

According to the ministry's Department of Plant Protection, by mid-July, 15,000ha of 415,000ha of maize nationwide had been affected.

The southern coastal region and Central Highlands have suffered the most severe damage with more than 7.000ha of maize attacked by the pest

ASF + FAW = What change in maize balance

Change in cassava demand

Impact on maize price

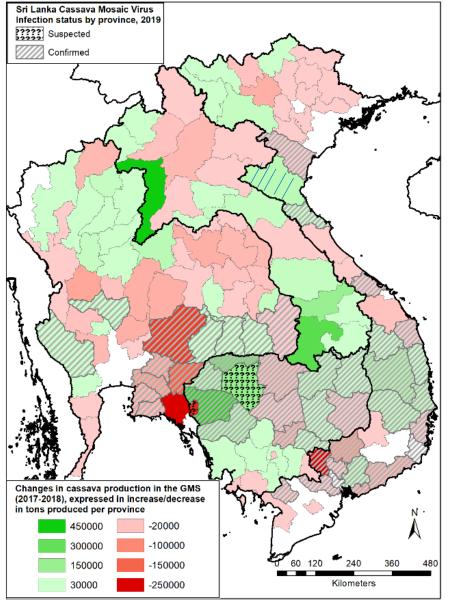
Change in cassava supply





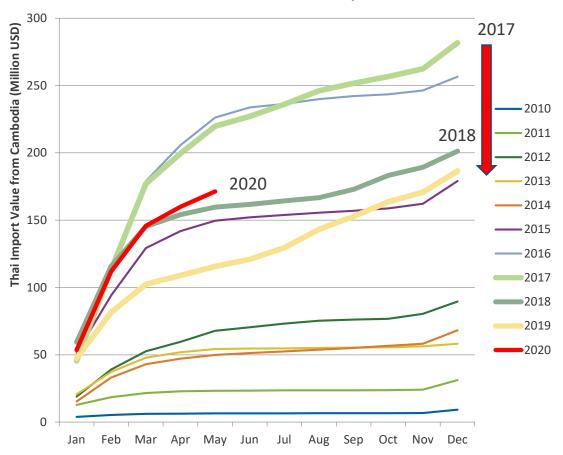
Cassava Mosaic Disease



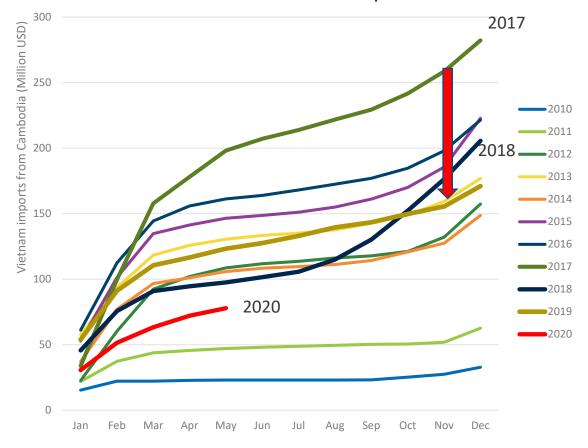


Value of Thailand and Vietnam imports from Cambodia



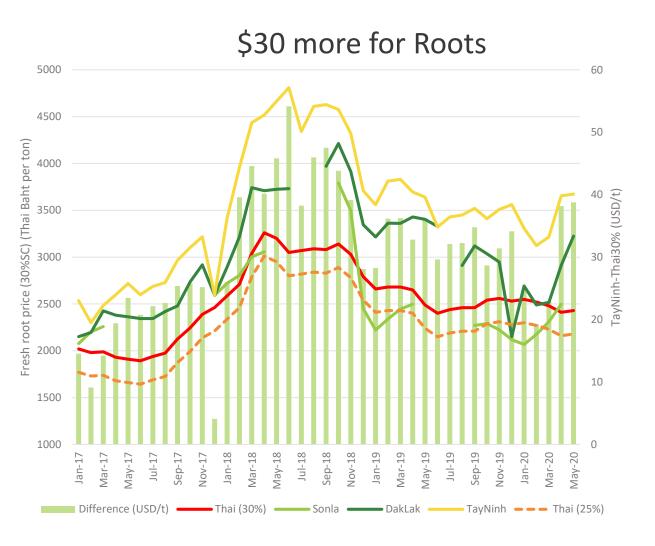


2017 to 2019 loss \$111.2m





Vietnam relative to Thailand – Excess capacity

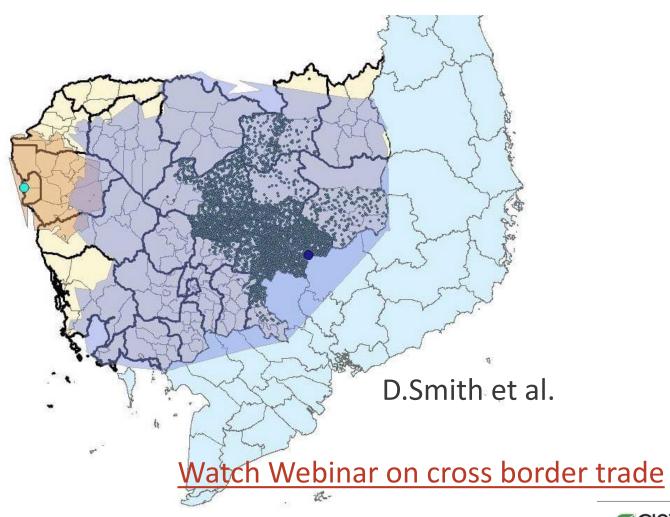






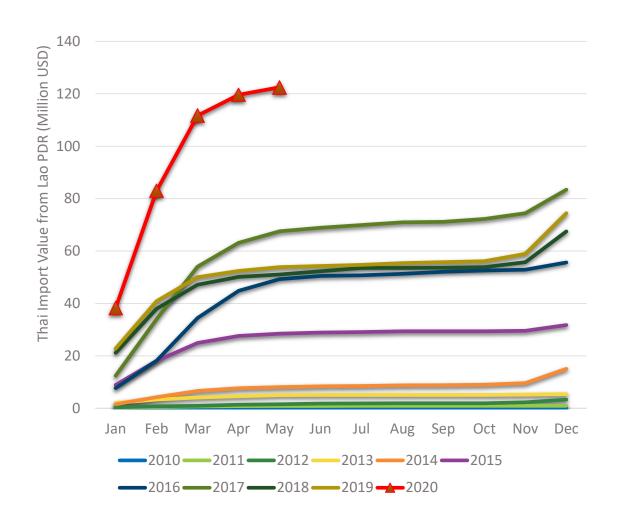
Pushing the extensive margin to the Thai border

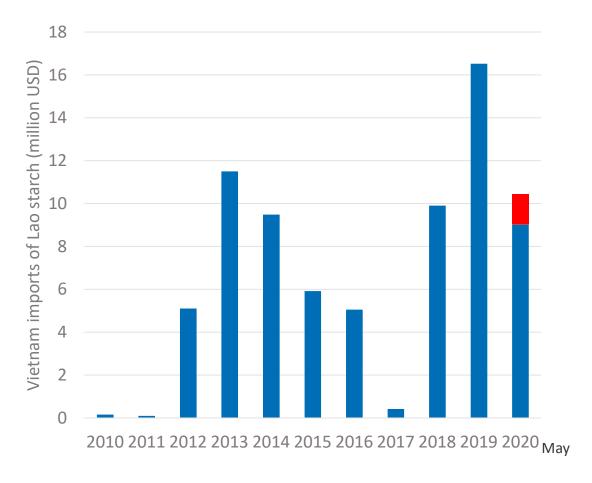
- The Tay Ninh hinterland has extended to the Thai border
- How long can operate in this situation???
 - Not long for small factories with low efficiency
 - New factories in Cambodia
- Importance of co-product livestock feed from residue
 - \$25/t on top of starch





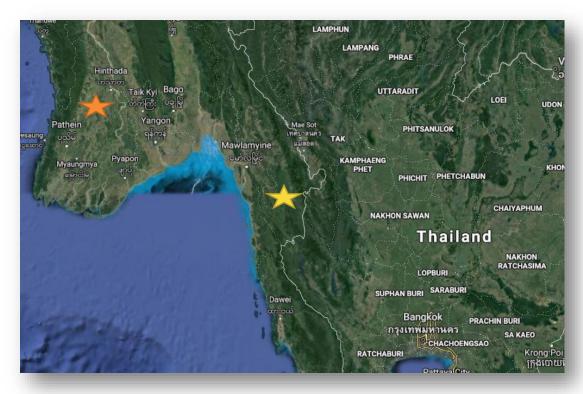
The market looks for new supply – Lao PDR

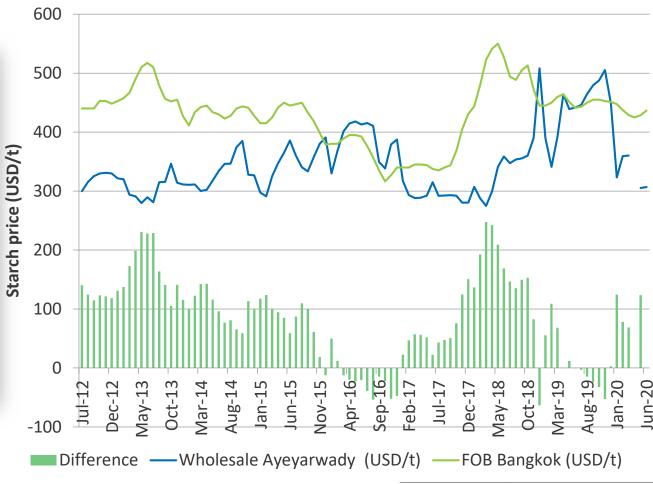






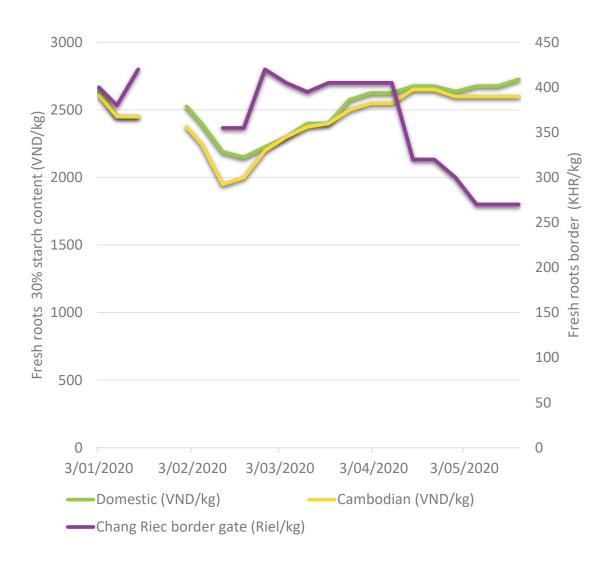
Myanmar is the next frontier of expansion







Market implications of COVID-19



- Stockpiling required reduce processing capacity until border with China opened
- Roots stuck at the border lose quality (starch content) so lower price given to farmers
- Uncertainty gives opportunity for traders
- Lower global demand
- Labour restriction impact planting and harvest
- Market closure (Myanmar)
- Remittances and non-farm labour





Connectivity between countries, agricultural markets and sectors means that the prices that farmers receive in a remote upland community could be impacted by a policy or production shock thousands of kilometres away

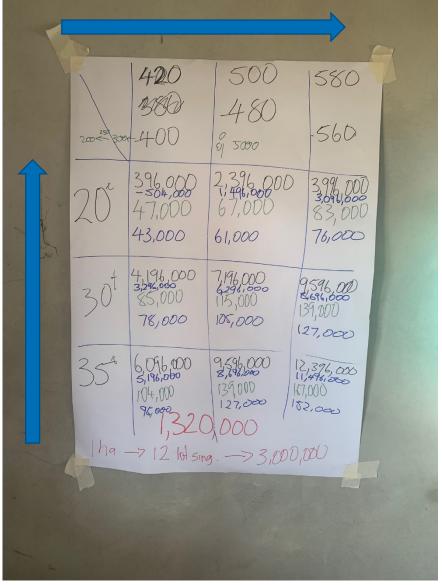
Mapping the domestic value chain at the start of a project doesn't capture dynamics of the market and risk faced by farmers

There is genuine interest in this information from stakeholders











Close to real time data on:

production prices policies

is sorely needed by all actors in the cassava sector to facilitate investment decisions













Thank you!

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