



Agribusiness Assemblages and the Global Countryside

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Outline

- ▶ The Global Countryside
- ▶ How do we analyse the impacts of agribusiness in the global countryside?
- ▶ The Assemblage Approach
- ▶ Case Studies

Beyond the global city



The Global Countryside

“a rural realm constituted by multiple, shifting, tangled and dynamic networks, connecting rural to rural and rural to urban, but with greater intensities of globalization processes and of global interconnections in some rural localities than in others, and thus with a differentiated distribution of power, opportunity and wealth across rural space.”

Woods (2007), p 491

Woods, M (2007) Engaging the Global Countryside,
Progress in Human Geography, 31: 485-507



The Global Countryside

1. Primary sector and secondary sector economic activity in the global countryside feeds, and is dependent on, ***elongated yet contingent commodity networks***, with consumption distanced from production.
2. The global countryside is the site of increasing ***corporate concentration and integration***, with corporate networks organized on a transnational scale.
3. The global countryside is both the ***supplier and the employer of migrant labour***.
4. The globalization of mobility is also marked by the ***flow of tourists*** through the global countryside, attracted to sites of global rural amenity.

Woods, M (2007) Engaging the Global Countryside, *Progress in Human Geography*, 31: 485-507

The Global Countryside

5. The global countryside attracts *high levels of non-national property investment*, for both commercial and residential purposes.
6. It is not only social and economic relations that are transformed in the global countryside, but also the *discursive construction of nature and its management*.
7. The landscape of the global countryside is *inscribed with the marks of globalization*.
8. The global countryside is characterized by *increasing social polarization*.
9. The global countryside is associated with *new sites of political authority*.
10. The global countryside is always a *contested space*.

Woods, M (2007) Engaging the Global Countryside, *Progress in Human Geography*, 31: 485-507

The Global Countryside

The global countryside is the site of increasing *corporate concentration and integration*, with corporate networks organized on a transnational scale.

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The Global Countryside

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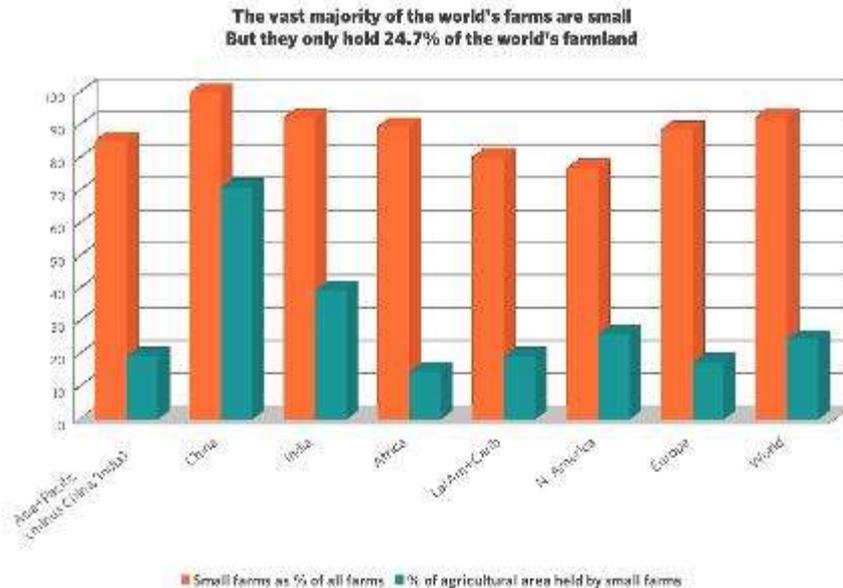


Nestlé



Corporate Concentration

- ▶ There is an ongoing concentration of farm holdings globally - fewer farms of larger average size
- ▶ Only around 24% of farm land globally is managed by 'small farmers' (GRAIN 2014)
- ▶ Increase in corporate farming and corporate landownership
- ▶ Growth of transnational corporate farmers



GRAIN (2014) *Hungry for Land.*

Portuguese version:

<https://www.grain.org/article/entries/5120-famintos-de-terras-os-povos-indigenas-e-camponeses-alimentam-o-mundo-com-menos-de-um-quarto-da-terra-agricola-mundial>

El Tejar

An aerial photograph of a vast agricultural estate. A long, straight dirt road runs vertically along the left side, lined with a dense row of parked cars. To the right of the road, the land is divided into large, rectangular plots. Some plots are lush green, while others are brown, indicating different stages of cultivation or crop types. In the background, there are several large white storage tanks and other farm buildings. The horizon is flat and extends to the top of the frame under a blue sky with light clouds.

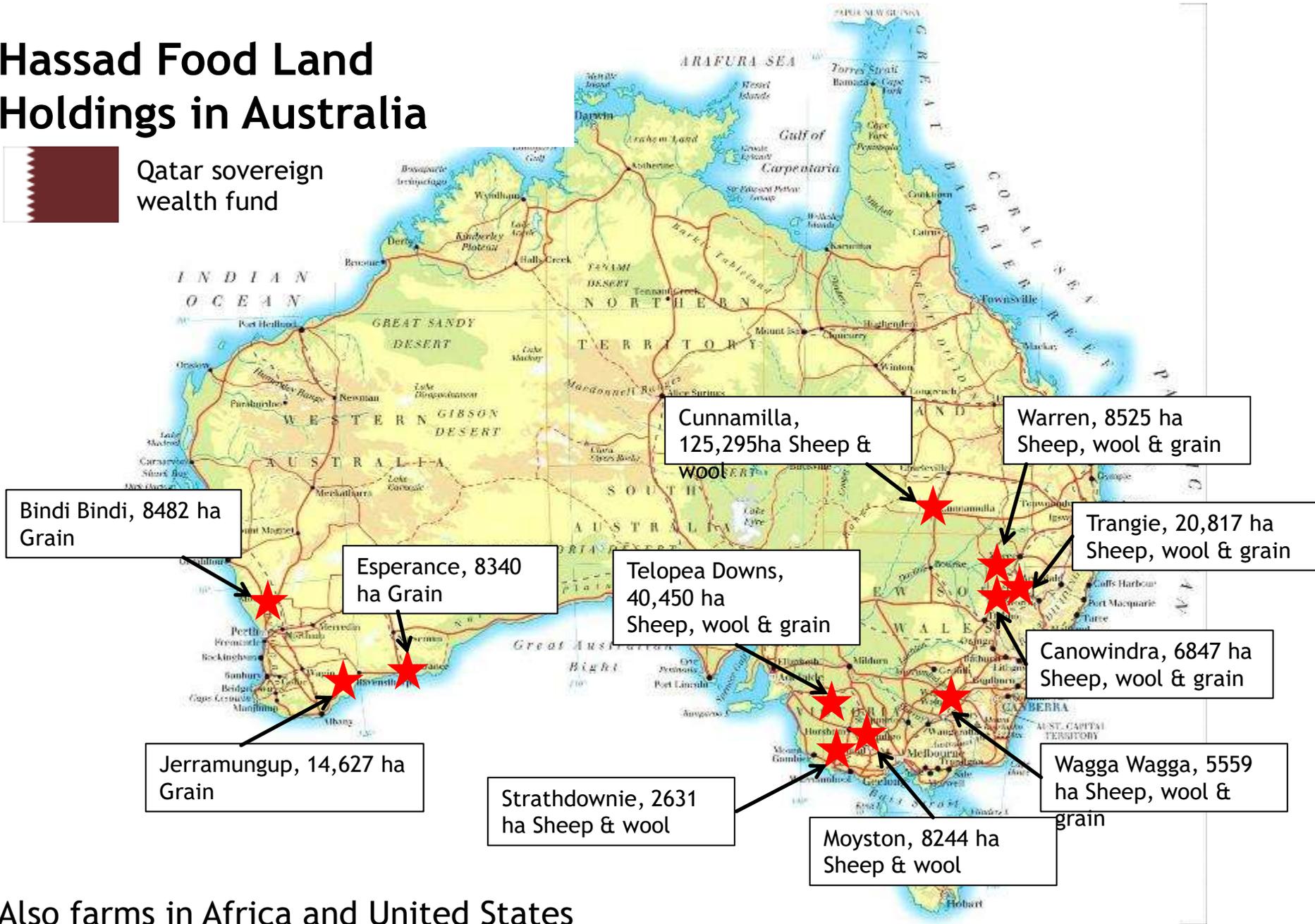
- In 2011, farmed over 1.1 million hectares in Brazil, Argentina, Uruguay and Bolivia
- Described as world's largest arable farmer
- Reduced operations since 2012 especially in Argentina

Source: Farmers Weekly (UK), 2016

Hassad Food Land Holdings in Australia



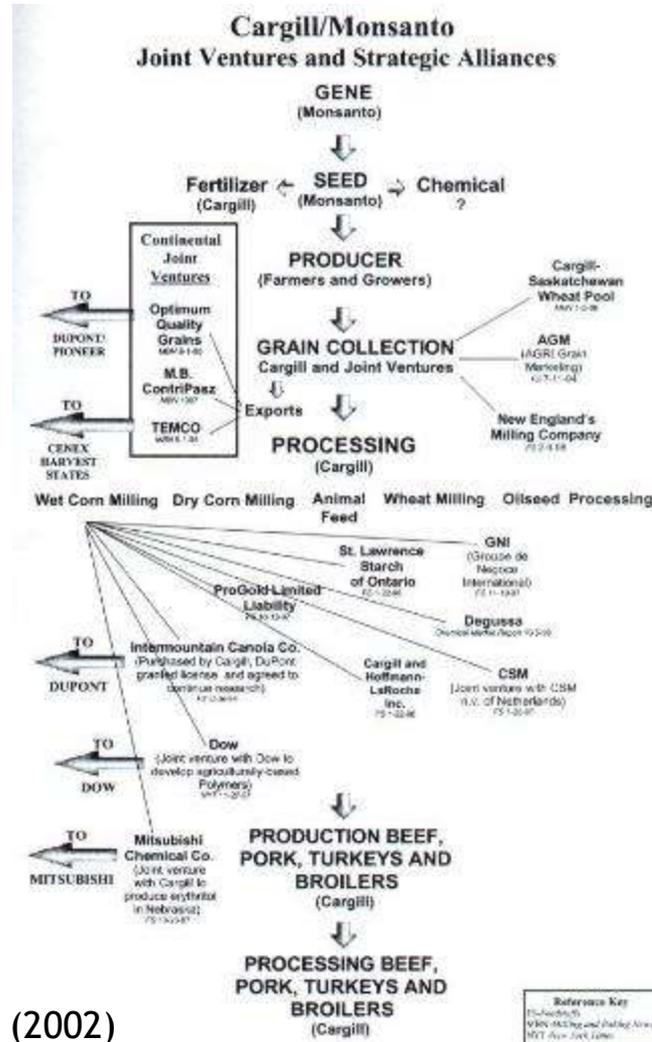
Qatar sovereign wealth fund



Also farms in Africa and United States

Corporate Concentration

- ▶ Complexity of agribusiness corporate structures and networks
- ▶ Separation of land ownership and agricultural operations
- ▶ Alliances and partnerships of autonomous companies



Hendrickson, M & Heffernan, W (2002)
 Opening spaces through relocalisation,
Sociologia Ruralis, 42: 347-369

PepsiCo's international farming activities

Directly owned farms

10 potato farms in China
1 dairy farm in Jordan
1 dairy farm in Egypt



PEPSICO

Contract farmers

12,000 farmers for potatoes in India
1,200 farmers for barley in India
6,000 hectares under contract farming for rice, tomato and chili in India



Source: GRAIN (2012) *The Great Food Robbery: How corporations control food, grab land and destroy the climate*

Corporate Concentration

- ▶ Corporate concentration is a feature of the ‘global countryside’ not only in the concentration of land ownership and farming operations
- ▶ But also through concentration in the commodity chain, both upstream (suppliers) and downstream (customers)
- ▶ Dominant suppliers (e.g. seed companies) and customers (e.g. supermarkets) exercise influence over notionally autonomous farmers

Corporate Concentration

	Agrochemicals	Seeds	Biotechnology
Monsanto	10%	12%	14%
Dupont/Pioneer	7%	10%	13%
Syngenta	18%	5%	7%
Bayer Crop Sciences	19%	2%	4%
BASF	13%	-	-
Dow Agrosiences	10%	-	3%
Limagrain	-	5%	-
Other	23%	66%	58%

% of global sales of agricultural inputs controlled by major TNCs, 2004

Source: World Bank, *World Development Report 2008*

Corporate Concentration

TABLE 5.1 Share of Sales of Selected Food Suppliers to Walmart

	Company Sales (\$ millions)	Share of Sales to Walmart	Sales to Walmart (\$ millions)
Kraft	\$40,386	16.0%	\$6,462
Tyson	\$26,704	13.8%	\$3,685
General Mills	\$14,691	21.0%	\$3,085
ConAgra	\$12,731	16.0%	\$2,037
Kellogg Co.	\$12,587	21.0%	\$2,643
Dean Foods	\$11,158	21.0%	\$2,343
Hormel	\$6,534	13.0%	\$849
Smucker	\$3,758	24.0%	\$902
Del Monte Foods Co.	\$3,740	34.0%	\$1,272
Flowers Foods	\$2,601	20.5%	\$533
Cott Corp.	\$1,597	*	*
Cal Maine Foods	\$929	32.9%	\$306
Lance, Inc.	\$918	22.0%	\$202
Diamond Foods, Inc.	\$571	21.0%	\$120

*Cott Corp. has greater than 10% of its sales going to Walmart, but Cott does not disclose the exact share.

Source: "Ending Walmart's Rural Stranglehold" (UFCW, 2010). (Reprinted by permission of the UFCW.) Data gathered from companies' 10-K reports to the Securities and Exchange Commission.

Source: Olson, R (2014) in W. D. Schanbacher (ed) *The Global Food System*, Praeger.

Corporate Concentration

- ▶ The dominance of transnational agribusiness sets the model for all agricultural production
- ▶ Industrialization and corporatization of all farming

“globalization occurs not through the internationalized flows of commodities, ideas and people, but through the subordination and consequent reorganization of local and regional farming systems to just one grammar, that is, the one entailed in, and imposed by, the increasingly interlocking socio-technical regimes.”

Jan Douwe van der Ploeg (2006) in P. Cloke, T. Marsden & P. Mooney (eds) *Handbook of Rural Studies*, Sage, p 261.



The landscape of the global countryside is *inscribed with the marks of globalization.*

Poland

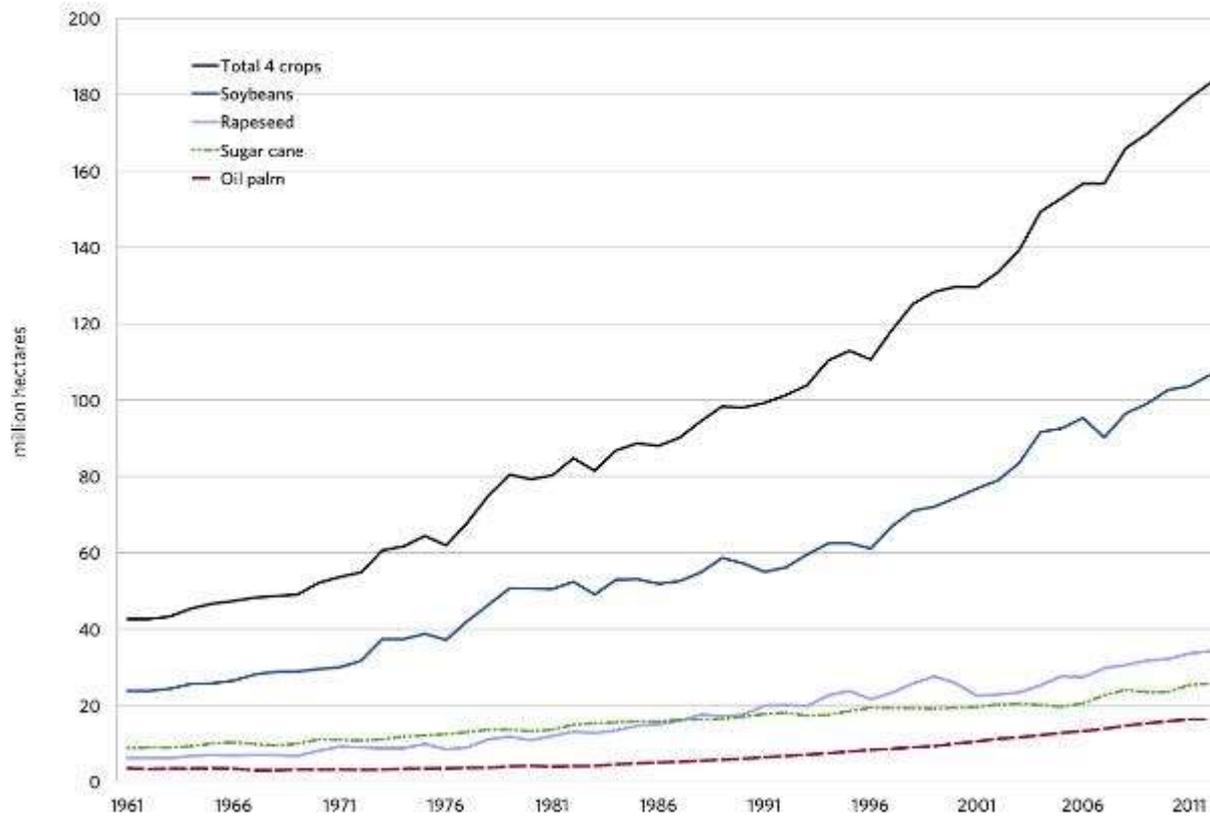
Maize from DuPont hybrid seed, New Zealand



Mudanjiang City Mega Farm, China



The global encroachment of the industrial crops

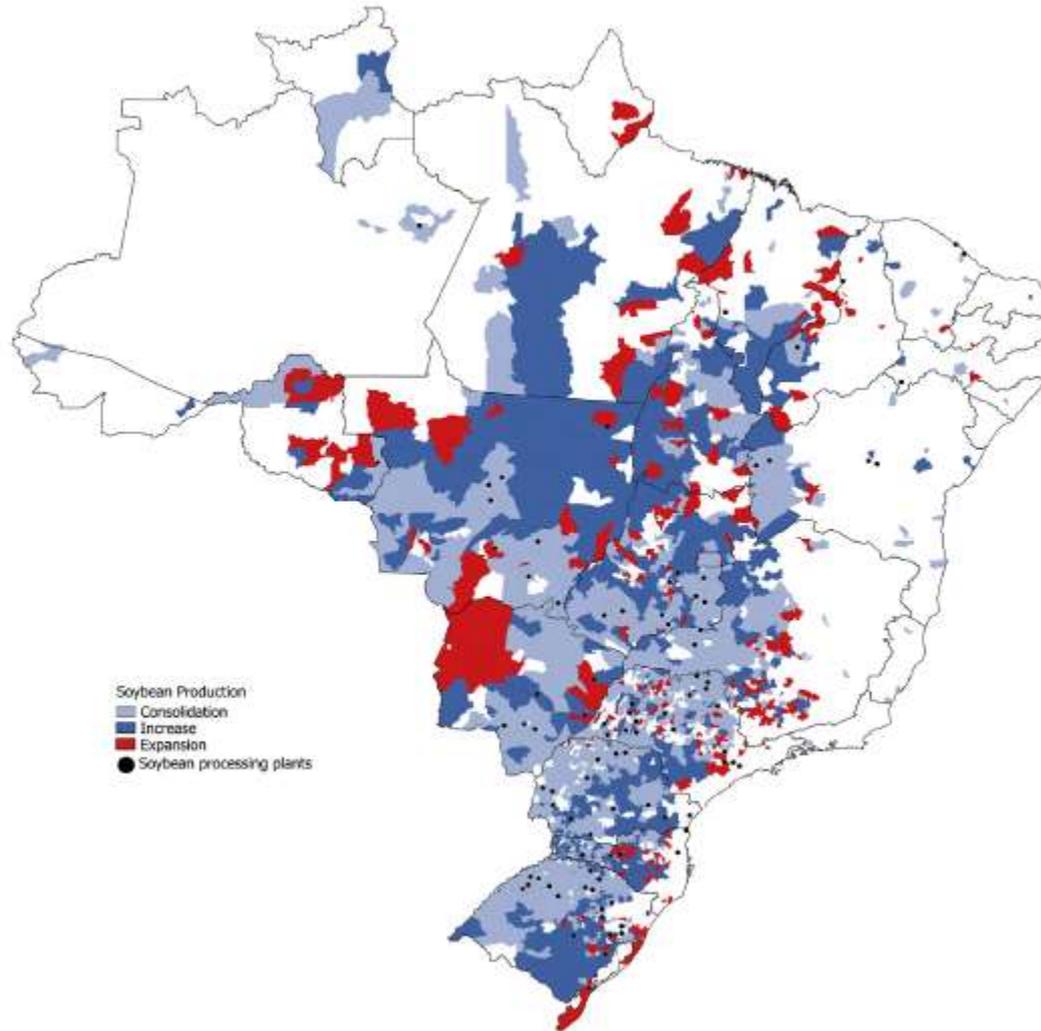


Source: GRAIN (2014) *Hungry for Land*.

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Consolidation and expansion of soy plantations, 2006-2014



Medina, G., and Pereira dos Santos, A (2017) Curbing enthusiasm for Brazilian agribusiness, *Applied Geography*, 85: 101-112

Global Countryside

- ▶ These manifestations in the landscape are a visible expression of the impact of agribusiness in the global countryside
- ▶ Behind them are wider social, economic, cultural and ecological transformations
- ▶ In- and out-migration, proletarianization of small farmers, enclosure of common land, changing gender roles, economic polarization, loss of local traditions etc

Global Countryside

“Although the advocates of agribusiness make optimistic claims about the ‘brave new places’ - as in the case of the pervasive expression used by agribusiness that “this is the Brazil that is doing well” [este é o Brasil que dá certo] - they systematically pursue strategies that are inherently partial and leave most of the population and socio-nature behind. The places dominated by agribusiness in the area are undeniably based on a totalizing spatial plan, systematically defended and reinforced by senior public authorities and sector representatives, which has unfortunately excluded many social groups and undermined alternative forms of production and livelihoods.”

Ioris (2017), p 471

Ioris, A. (2017) Places of Agribusiness: Displacement, replacement and misplacement in Mato Grosso, Brazil, *Geographical Review*, 107: 452-475.

Global Countryside

- ▶ Agribusiness is a key agent in the transformation of place in the global countryside
- ▶ Relatively little research on precisely *how* agribusiness transforms places, and on resulting geographical variations

“Whereas the juncture between globalized forces and localized spatial outcomes has been acknowledged by social scientists, we often come across only narrow, fragmented assessments of the multi-layered and complex intersections between agri-food systems and place-based interactions.”

Ioris (2017), p 455

How do we analyse agribusiness
and its role in the transformation
of rural communities?

Approaches

Global Value Chains (*Cadeias Globais de Valor*)

- ▶ Sets of interorganizational networks clustered around one commodity or product, linking households, enterprises, and states to one another
- ▶ Show how the production of value involves the interaction of various actors, shaped by social relations
- ▶ The focus on the single commodity under-plays the multi-commodity activity of agribusiness and the interconnectedness of these activities

Global Production Networks (*Redes de Produção Global*)

- ▶ Emphasis on firms or corporations rather than individual commodities
- ▶ Potentially misses aspects of locality that have no direct transactional linkages to the network, e.g. landscape, environment, households

Assemblage Theory

Teoria do agenciamentos

- ▶ Understands social units and formations as ‘assemblages’ of diverse components
- ▶ Emphasizes emergence (*surgimento*), multiplicity (*multiplicidade*) and indeterminacy (*indeterminação*)
- ▶ Different strands of ‘assemblage thinking’ drawing on different theorists: Gilles Deleuze and Felix Guattari, Michel Foucault, Bruno Latour
- ▶ In this lecture I draw particularly on Manuel DeLanda’s development of Deleuze and Guattari’s theory in his books *A New Philosophy of Society* (2005) and *Assemblage Theory* (2016)

Assemblage Theory

Teoria do agenciamentos

A Note about Language

- ▶ Original writing in French by Deleuze and Guattari used the term ‘agencement’
- ▶ Translated into English as ‘assemblage’
- ▶ At least two translations into Portuguese:
 - ▶ agenciamento (e.g. Acelrad & Bezerra 2011)
 - ▶ montagem (e.g. Boff 2013)

Acelrad, H & Bezerra, G (2011) A New Philosophy of Society
[Book review], *Estudos Urbanos e Regionais*, 13: 174-177

Boff, E. O. (2013) Um Realismo Desterritorializado: De Landa e a
Construção de uma Filosofia Social para o Século XXI, 37°
Encontro da ANPOCS

Assemblage Theory

Teoria do agenciamentos

1. Assemblages are comprised by heterogeneous components, both human and non-human
2. The components of assemblages may have material roles (*materialidade*) and/or expressive roles (*expressividade*)
3. The components of assemblages are defined by their relations of exteriority (*relações de exterioridade*) - that is, their identity is not dependent on their place in the assemblage, and they may be detached, moved and plugged into another assemblage

De Landa, M (2016) *Assemblage Theory*. Edinburgh University Press.

Assemblage Theory

Teoria do agenciamentos

4. Assemblages are held together by territorialization (*territorialização*) - both literal territorialization as a geographical footprint, and metaphorical territorialization as an organizational structure
5. The territorialization of an assemblage tends towards homogeneity
6. Deterritorialization (*desterritorialização*) and reterritorialization (*reterritorialização*) occur as an assemblage changes shapes, loses or gains components, or becomes less homogeneous

De Landa, M (2016) *Assemblage Theory*. Edinburgh University Press.

Assemblage Theory

Teoria do agenciamentos

7. Assemblages are given meaning by coding (*codificação*) - names, maps, statistics, accounting - decoding, and recoding.
8. Assemblages are dynamic and constantly changing, with each change there are multiple forms that they could take. A multiplicity (*multiplicidade*) is all the potential forms or 'possibility spaces' (*espaço do possibilidade*) of an assemblage.
9. Assemblages may be components in other larger assemblages within 'nested hierarchies' (*hierarquias aninhadas*)

De Landa, M (2016) *Assemblage Theory*. Edinburgh University Press.

Assemblage Theory

Teoria do agenciamentos

10. Assemblages interact with other assemblages - they exchange components, share components and expand through coalescence and amalgamation.

De Landa, M (2016) *Assemblage Theory*. Edinburgh University Press.

Agribusiness Assemblages

- ▶ Agribusinesses are comprised by heterogenous components, human (managers, farmers, workers, customers) and non-human (seed, crops, livestock, land, soil, agrichemicals, fertilizer, equipment, transport, warehouses, offices, computers)
- ▶ Agribusiness assemblages include material components (e.g. seed, crops, land, transport) and expressive components (e.g. product brands, marketing campaigns)
- ▶ The components of an agribusiness assemblage are defined by relations of exteriority - they can be detached without losing identity (e.g. livestock, food products, farms, land, subsidiary companies)

Agribusiness Assemblages

- ▶ Agribusinesses are held together by a territorialization that includes an organizational structure and a geographical footprint
- ▶ The territorialization of an agribusiness assemblage promotes homogeneity through the standardization of practices, supplies and products
- ▶ Deterritorialization and reterritorialization occurs through the purchase or sale of land, expansion into new markets (or withdrawal from markets) and the unanticipated affects of disease or weather

Agribusiness Assemblages

- ▶ Agribusinesses are coded in multiple ways, including financial accounting, the pricing of products, internal statistics, mapping etc
- ▶ Agribusiness assemblages are constantly changing and strategic planning involves anticipating multiple trajectories
- ▶ Components of agribusiness assemblages are assemblages in their own right (e.g. farms), and agribusiness companies may be components in larger assemblages (e.g. the Brazilian soy industry)
- ▶ Agribusiness assemblages are constantly interacting with other assemblages - exchanging commodities in trading relationships; expanding by acquiring land and subsidiaries; sharing components with place-assemblages

Place-Assemblages

- ▶ Places are also assemblages of heterogenous human and non-human components
- ▶ Places include material components (buildings, roads, infrastructure, labour) and expressive components (landscape, dialect, customs, social interactions)
- ▶ Places are territorialized with a geographical territory and a social structure
- ▶ Places are coded with local laws, maps, statistics, land use regulations etc
- ▶ Places are dynamic and constantly changing, with many possible trajectories

Interactions

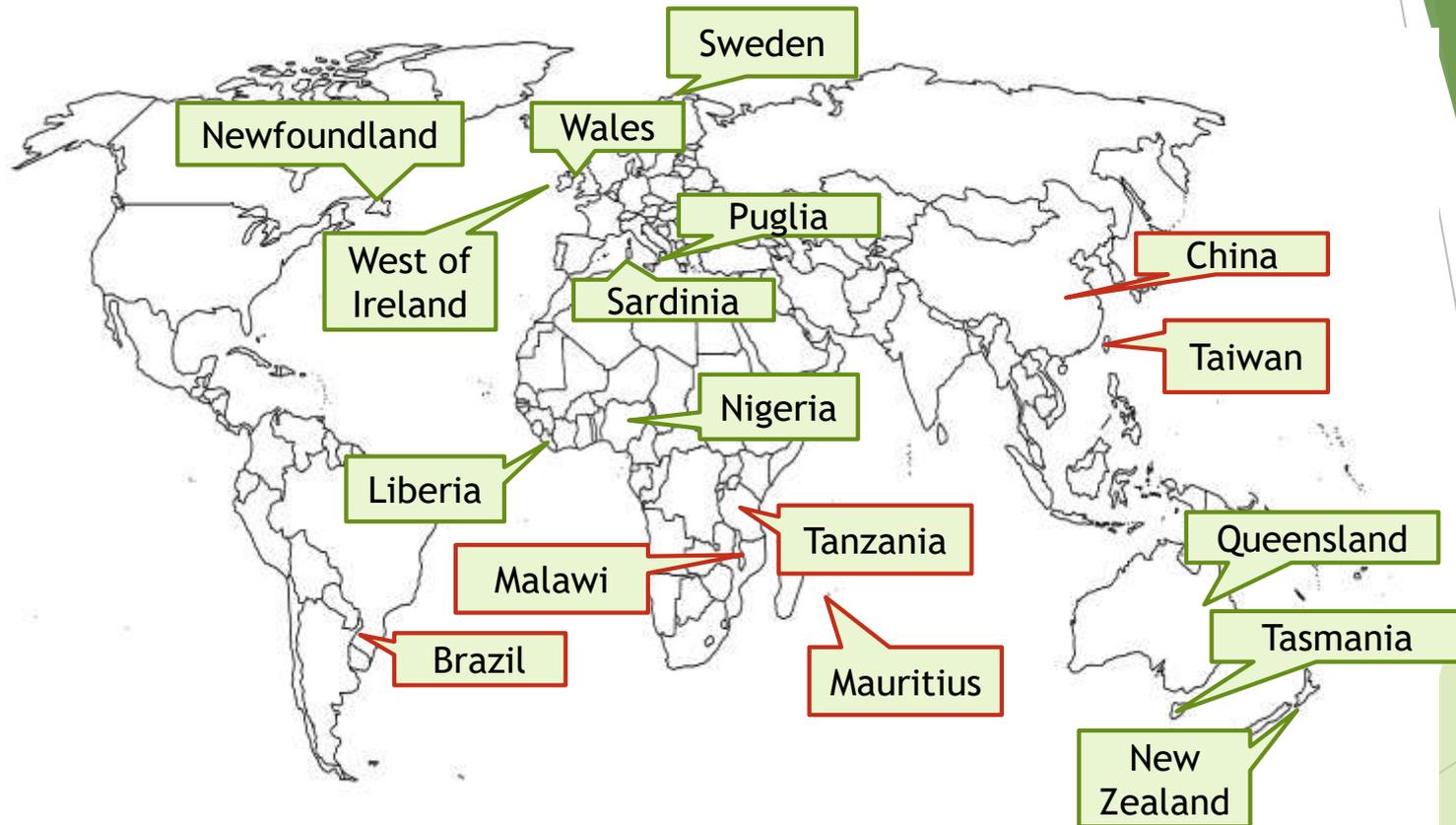
Agribusinesses interact with place-assemblages in a number of ways

- ▶ By purchasing farms, land, processing plants etc., agribusinesses attach themselves as components in place-assemblages
- ▶ Agribusinesses deterritorialize from place-assemblages by selling land, farms, closing plants etc
- ▶ Agribusinesses introduce new components into place-assemblages (e.g. new crops, new buildings, new migrant workers)

Interactions

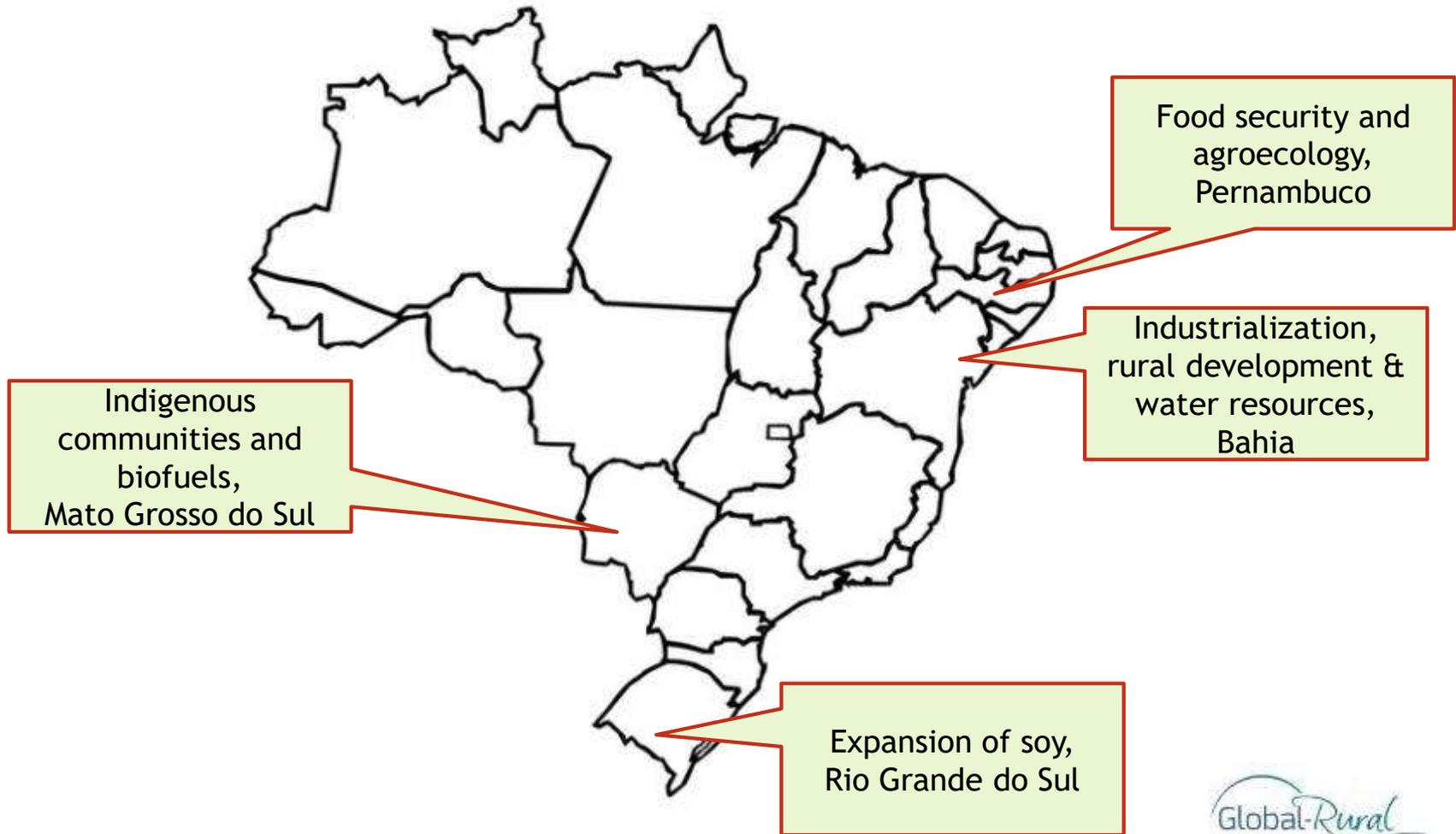
- ▶ Changes in the function of components in agribusiness assemblages may also change their material and/or expressive roles in place-assemblages (e.g. land switched to new crops)
- ▶ The rigid territorialization of place-assemblages may frustrate agribusinesses (e.g. land use regulations, environmental regulations)
- ▶ Mutations or dissidence in place-assemblages may provoke the deterritorialization or reterritorialization of agribusiness assemblages (e.g. environmental events such as floods or drought, diseases, or labour disputes)
- ▶ Focusing on these interactions can help us to understand how agribusiness impacts on rural communities in the global countryside

GLOBAL-RURAL



European Research Council Advanced Grant
Exploring globalization in rural regions
Applying an assemblage approach

GLOBAL-RURAL Brazil case studies

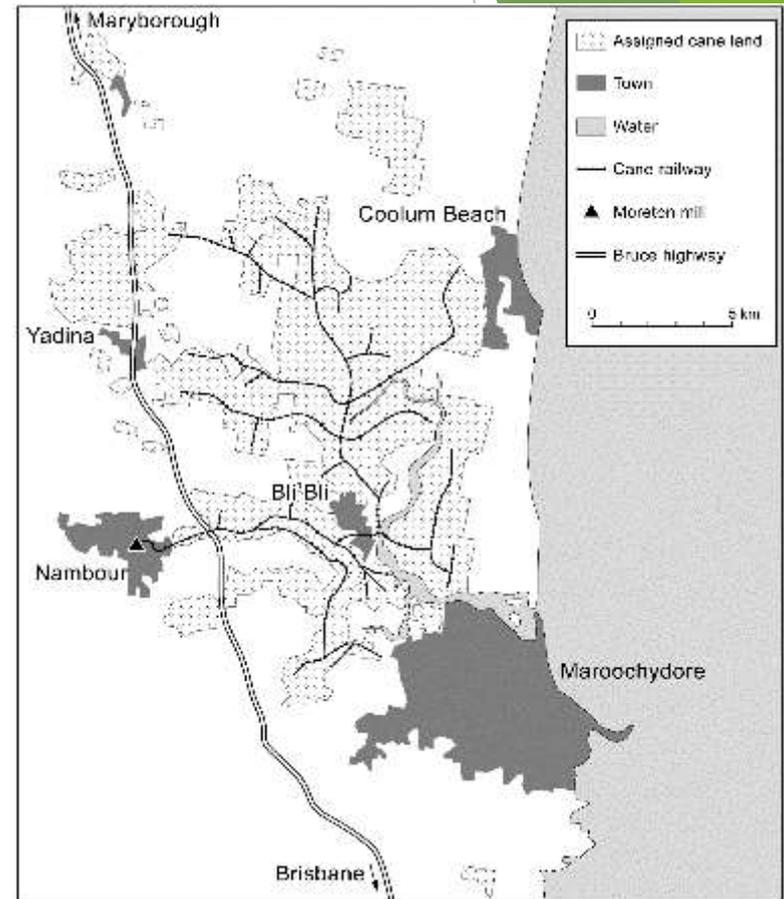


Moreton Sugar Mill, Nambour, Australia



Moreton Mill Assemblage

- ▶ Cane-land
- ▶ Cane plants
- ▶ Cutters and cutting equipment
- ▶ Cane trains
- ▶ Mill
- ▶ Milling equipment
- ▶ Mill labour
- ▶ Raw crushed sugar
- ▶ Waste and by-products



Nambour Place Assemblage

- ▶ Sugar mill located in the heart of the town
- ▶ Material function as a provider of employment for local workers, of income for local cane-farmers, and as contributor to the local economy
- ▶ Expressive function as symbol of the town's heritage and identity as a 'sugar town'





COCLUM

Nambour - 2002

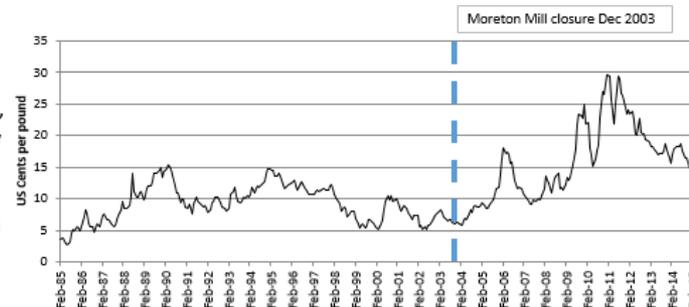
Brad Peardon

alcogoodwin@yahoo.com.au

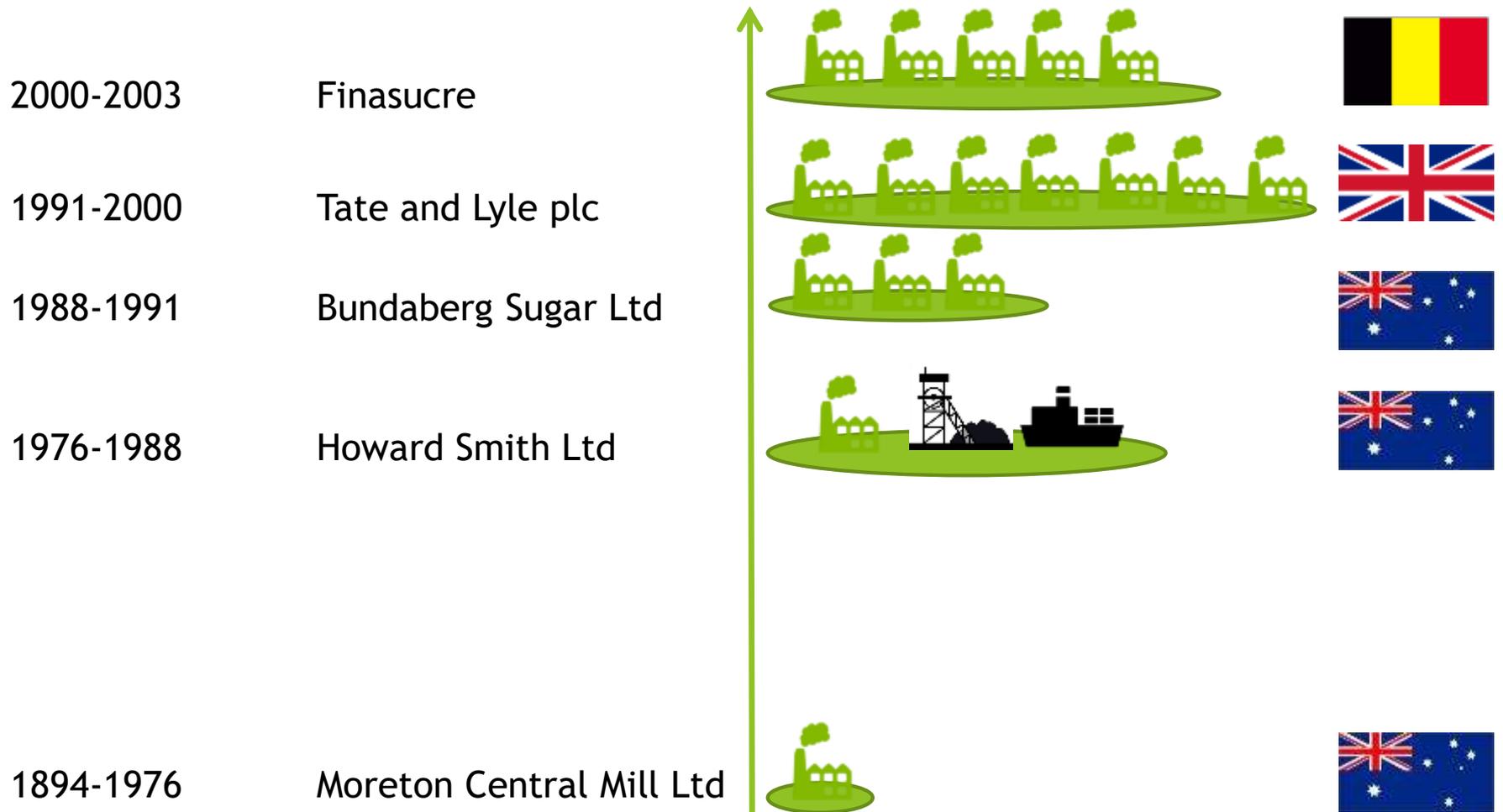
Global Sugar Assemblage

- ▶ International trade largely through bilateral agreements
- ▶ Volatile world market in 1980s and 1990s produced reterritorialization
- ▶ Decline of western markets and rise of Asian markets
- ▶ Increased exports from Brazil (with deregulation and end of Proalocool Program) and emergence of new producers, e.g. Thailand
- ▶ Increased competition depressing world market price of sugar
- ▶ Trickle-down impact on economic viability of Moreton Mill

Monthly average price of New York Daily Price, Contract No 11, for raw sugar, 1985-2015 (Data from www.indexmundi.com)



Owners of Moreton Mill



Moreton Mill Assemblage

- ▶ The sale of Bundaberg Sugar by Tate & Lyle to Finasucre detached Moreton Mill from one corporate assemblage and attached it to another
- ▶ In the new corporate assemblage, the financial position of Moreton Mill was re-coded
- ▶ The rigid territorialization of the Australian sugar assemblage, which prevented mills competing with each other for cane, restricted Finasucre's options for increasing production and profitability at Moreton Mill
- ▶ The geographical context of the Moreton Mill assemblage also restricted options, as it competed for land with tourism and house-building assemblages

Moreton Mill Assemblage

- ▶ The only option open to Finasucro was to renegotiate its contracts with cane-farmers, i.e. to change the internal coding of the Moreton Mill assemblage
- ▶ Proposed that farmers should pay the mill to have their cane crushed
- ▶ When the proposal was rejected by farmers, Finasucro announced the closure of the mill at the end of the season in 2003.

Moreton Mill Assemblage

- ▶ Finasucre deterritorialized from Nambour with the closure of the Moreton Mill
- ▶ The Nambour place-assemblage was deterritorialized as it was detached from the sugar industry
- ▶ The mill site, railway and caneland remained, but without their material function
- ▶ The mill and cane railway continued to perform an expressive role in the place-assemblage, which was enrolled in new heritage tourism assemblages
- ▶ As the mill assemblage was dismantled, the mill site and cane land were attached to new assemblages with new material roles





FOR SALE

LEVEL

LOTS

Dom Pedrito, Rio Grande do Sol

Soy on the Pampa?

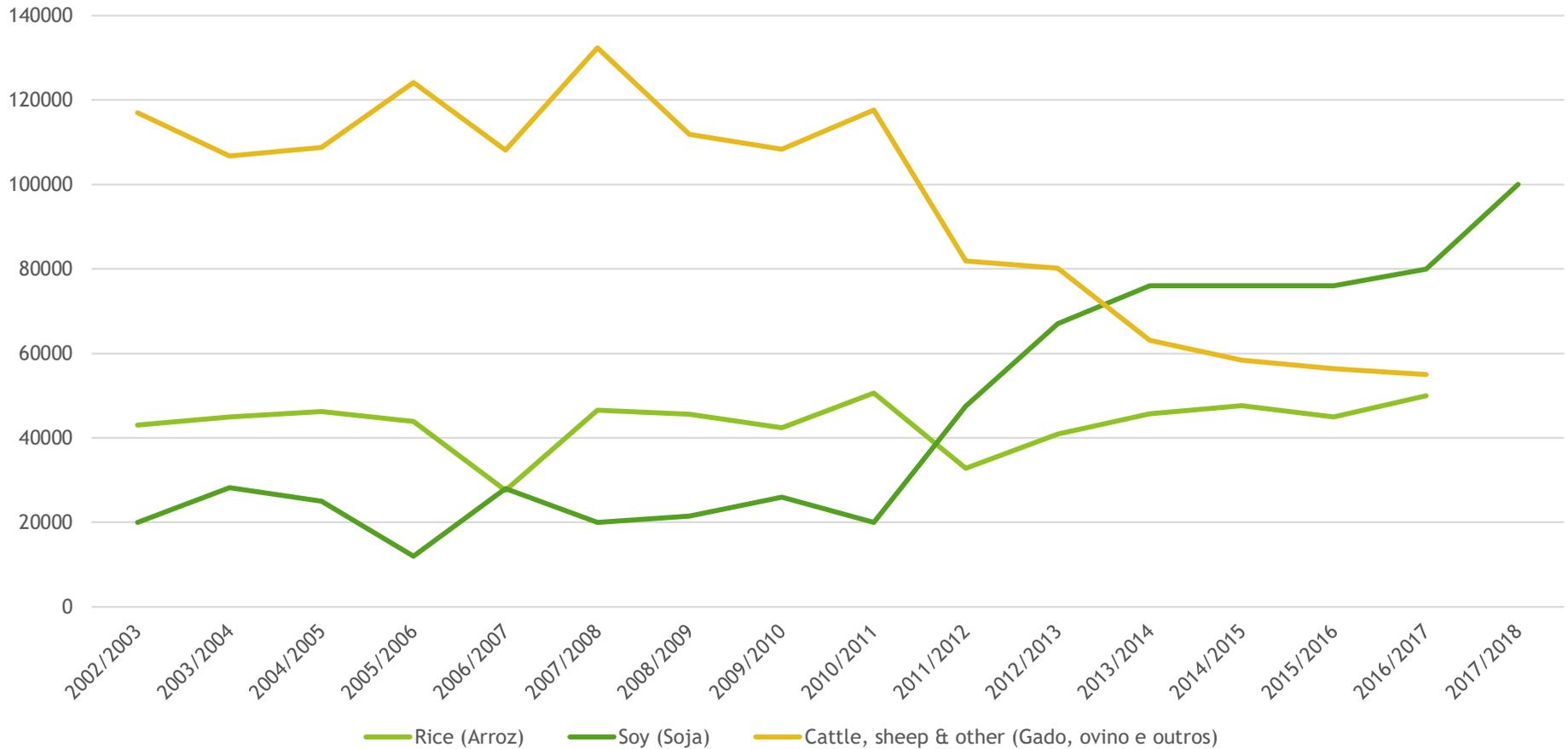


Dom Pedrito: A Dynamic History

- ▶ Colonial settlement from Portugal in C19 as a defensive frontier with large properties
- ▶ Brazil's first soy harvest by a German settler, 1903
- ▶ Livestock farming (cattle and sheep) dominant through mid C20
- ▶ 1960s-70: Falling wool prices & new social mobility prompt some large landowners to leave and rent land to Italian and German farmers from C&N Rio Grande do Sul, who introduce rice and soy
- ▶ 1990s: Soy abandoned as world market price falls
- ▶ 1990s-2000s: Sheep numbers fall sharply reflecting world prices and competition
- ▶ 2000s-2010s: Soy re-introduced in response to demand from China, farmed alongside rice and cattle

The growth of soy

Farm land use in Dom Pedrito (Hectares)

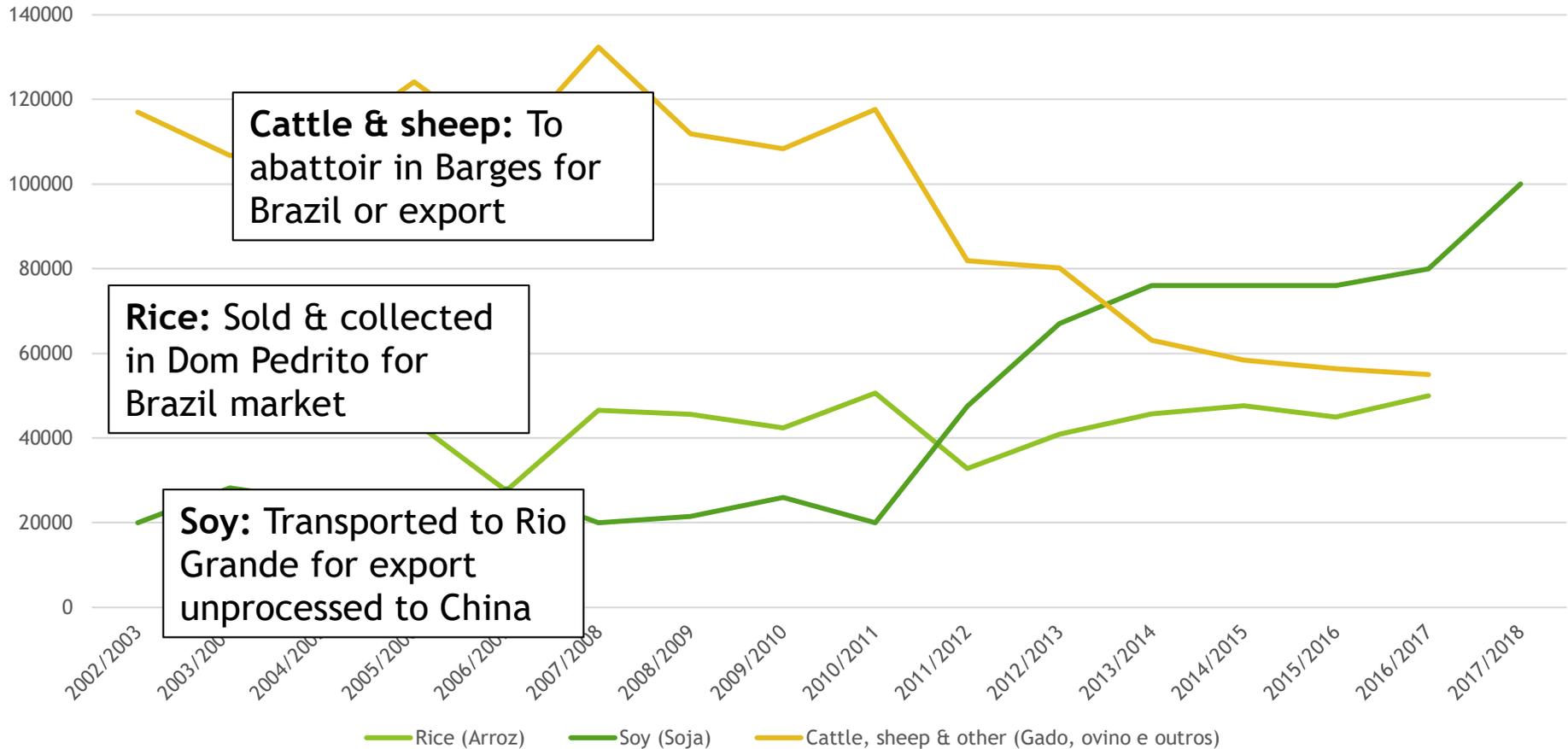


Source: EMATER



The growth of soy

Farm land use in Dom Pedrito (Hectares)

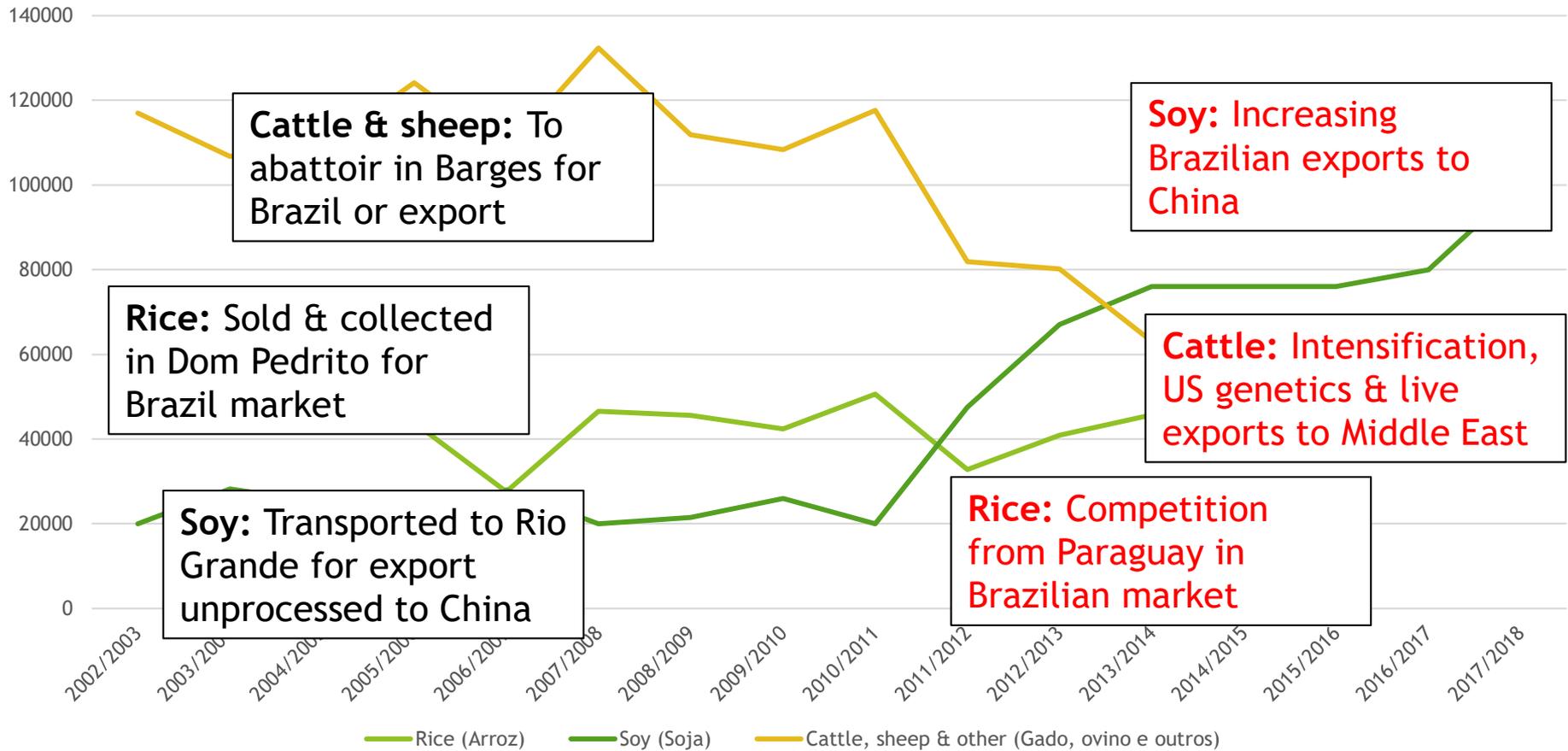


Source: EMATER



The growth of soy

Farm land use in Dom Pedrito (Hectares)



Source: EMATER



Agribusiness in Dom Pedrito

- ▶ Increased significance of agribusiness in Dom Pedrito with expansion of soy (and rice)
- ▶ Agribusiness involved at every stage of soy chain
 - ▶ Seeds bought from agribusiness
 - ▶ Fertiliser and agrichemicals from agribusiness
 - ▶ Credit provided by agribusiness
 - ▶ Soy beans bought by agribusiness
- ▶ No processing of soy in Dom Pedrito
- ▶ All transported to Rio Grande for export



Agribusiness in Dom Pedrito

- ▶ Dom Pedrito as an ‘agribusiness city’ (*cidade do agronegócio*)?
- ▶ 64% of GDP (*PIB*) from agriculture
- ▶ 85% of tax revenue from agribusiness
- ▶ Expansion of support industries for agriculture and agribusiness (agents, equipment dealers, transport companies, air services, genetics firms, consultants, finance companies etc)



Elias, D. & Penqueno, R. (2007) Desigualdades socioespaciais: nas cidades do agronegócio, *R. B. Estudos Urbanos e Regionais*, 9: 25-39

Applying Assemblage

Can an assemblage approach help to analyse the changes in Dom Pedrito?

Using 5 key principles:

- ▶ A component may be detached from one assemblage and attached to another assemblage
- ▶ Components play both material and expressive roles within assemblages
- ▶ Territorialization of an assemblage is associated with homogeneity, and deterritorialization with a weakening of homogeneity
- ▶ Assemblages are given meaning and regulated through coding
- ▶ Assemblages are dynamic - the potential forms of an assemblage are known as spaces of possibility and are collectively referred to as a multiplicity.

Switching Assemblages



- ▶ When a piece of land is converted from livestock pasture or rice to soy, it is detached from the livestock or rice assemblage and attached to the global soy assemblage.
- ▶ The global soy assemblage is deterritorialized geographically, but territorialized or concentrated organizationally around a few transnational agribusinesses
- ▶ Agribusiness assemblages impose territorialisation through standardisation of value chain, products and procedures
 - ▶ Farmers buy a 'package' from an agribusiness, including seeds, fertilizers etc..
 - ▶ Agribusiness provides credit to farms to buy its products
 - ▶ Farms locked into contracts with specified partners

The Dom Pedrito Assemblage

- ▶ Historically the place-assemblage of Dom Pedrito was strongly territorialized around livestock farming (*agripecuria*)
- ▶ Components of livestock farming (cattle, sheep, pasture, meat, wool etc) played key material roles in the local economy
- ▶ Practices and cultures of livestock farming performed an expressive role in shaping local identity that continues today
- ▶ “I don’t know of any music written about rice or soy” (Interview)



The Dom Pedrito Assemblage

- ▶ The place-assemblage of Dom Pedrito was deterritorialized with the diversification of agriculture
 - ▶ Mixed farming with rice and soy alongside cattle
 - ▶ Fragmented patterns of land ownership, rental and management
 - ▶ More diverse population with arrival of Italian- and German-origin farmers
- ▶ More recent re-territorialisation around soy?
- ▶ Concerns about ‘monoculture’ (*monocultura*)



The Dom Pedrito Assemblage

Why is the expansion of soy associated with homogenization?

- ▶ Land is finite. If landed is planted with soy it cannot be used for anything else. The more soy is planted, the more the landscape becomes homogeneous
- ▶ Components in the soy assemblage can have detrimental impacts when attached to other assemblages
- ▶ E.g. Chemicals (*agritóxicos*) sprayed from air
 - ▶ End of tomato industry
 - ▶ Decline in bee numbers
- ▶ Invasive grass and weed species introduced to fields



The Dom Pedrito Assemblage

The expansion of soy also linked to reterritorialization of social components in the Dom Pedrito place-assemblage

- ▶ Money attached to assemblage - increased affluence
- ▶ New shops and consumer goods, interacting with global consumption networks
- ▶ Deterritorialization with increased inequalities
- ▶ Fewer farm workers required for soy than for rice
- ▶ Money going to landowners and hauliers
- ▶ Inequalities between farmers, including increasing farm debt.



Possibility Spaces

ROUTINE VARIATIONS

Variable	Possibility Spaces	Effects
Annual farming routine	Rice planting season	+/- farm employment +/- traffic +/- air pollution Landscape appearance
	Soy planting season	
	Rice harvest	
	Soy harvest	
	Extensive winter pasture	
	Intensive summer grazing	
Weather	Dry weather	
	Wet weather	Roads impassable + on-farm storage

Possibility Spaces

KNOWN GLOBAL VARIATIONS

Variable	Possibility Spaces	Effects
Global market prices	Rice good / soy good	Shifts in balance of soy and rice cultivation
	Rice good / soy poor	
	Rice poor / soy good	
	Rice poor / soy poor	
Exchange rates	Strong US\$ / weak BrR\$	Prices & costs +
	Weak US\$ / strong BrR\$	Prices & costs -
Long term weather patterns	Persistent dry weather	Less water Less rice
	Wetter than average	More rice
	Balance of dry & wet	

Possibility Spaces

EXTENDED CURRENT TRENDS

Variable	Possibility Spaces	Effects
Growth of soy cultivation	Soy increases	+ homogenization + income - employment + environmental impacts
	Balance consistent	
	Soy decreases	+ diversity + damaged land
Agribusiness activity	More agribusiness activity	+ employment + global integration - value left in locality
	Level remains same	
	Less agribusiness activity	- employment

Possibility Spaces

RADICAL POSSIBILITIES

Variable	Possibility Spaces	Effects
China cuts soy imports	Reduction of soy	+ diversity - income
China switches to African soy	Reduction of soy	+ diversity - Income
Rice exports	Increase in rice	Rice/soy balance + income
Protectionism	Stability/increase in rice	Rice/soy balance + income
Processing	Local processing added to Dom Pedrito assemblage	+ value in locality + employment
Local Branding	Recoding Pampas meat as premium brand	+ value in locality + livestock farming
Environmental regulations	Recoding with stricter environmental regulations	- <i>agritóxicos</i> - income

Conclusions

- ▶ Assemblage approach provides an additional tool with which we can seek to investigate how agribusiness affects rural communities
- ▶ Strengths of the assemblage approach:
 - ▶ No pre-determined starting point, allows multiple entry-points and perspectives
 - ▶ Encompasses material and expressive
 - ▶ Emphasizes interactions between assemblages
 - ▶ Allows exploration of spatial dimensions
 - ▶ Emphasizes indeterminacy, fluidity and multiple possible trajectories



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