

A visual exploration of

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# Global Food Supply



# A project in 3 steps

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Import | 5%

Preparation | 75%

Visualization | 20%

Food & Agriculture Organisation



[fao.org/data](https://fao.org/data)

.CSV →



Global production, export, import  
data for all countries X all agricultural  
items from 1960 to 2020

- Big, Big data the huge data set provided a lot of opportunity to build upon
- Reliable source, clean and well organized
- No rocket science, just macro economics

Initial data exploration,  
transformation & calculations

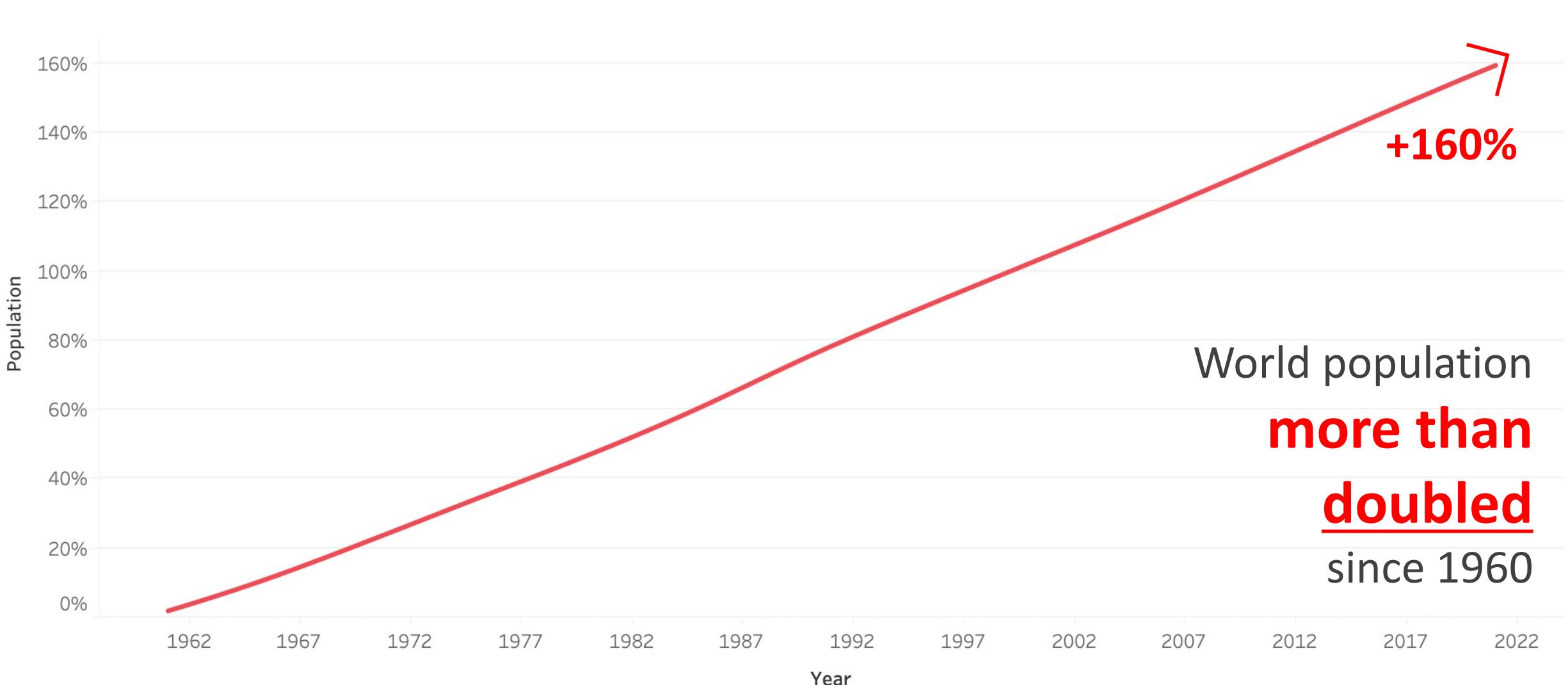
- Great to handle large data files 200mb+
- Pivots, Complex calculations - `calculate( , filter(`
- Great cleaning and transformation tools



The good stuff!

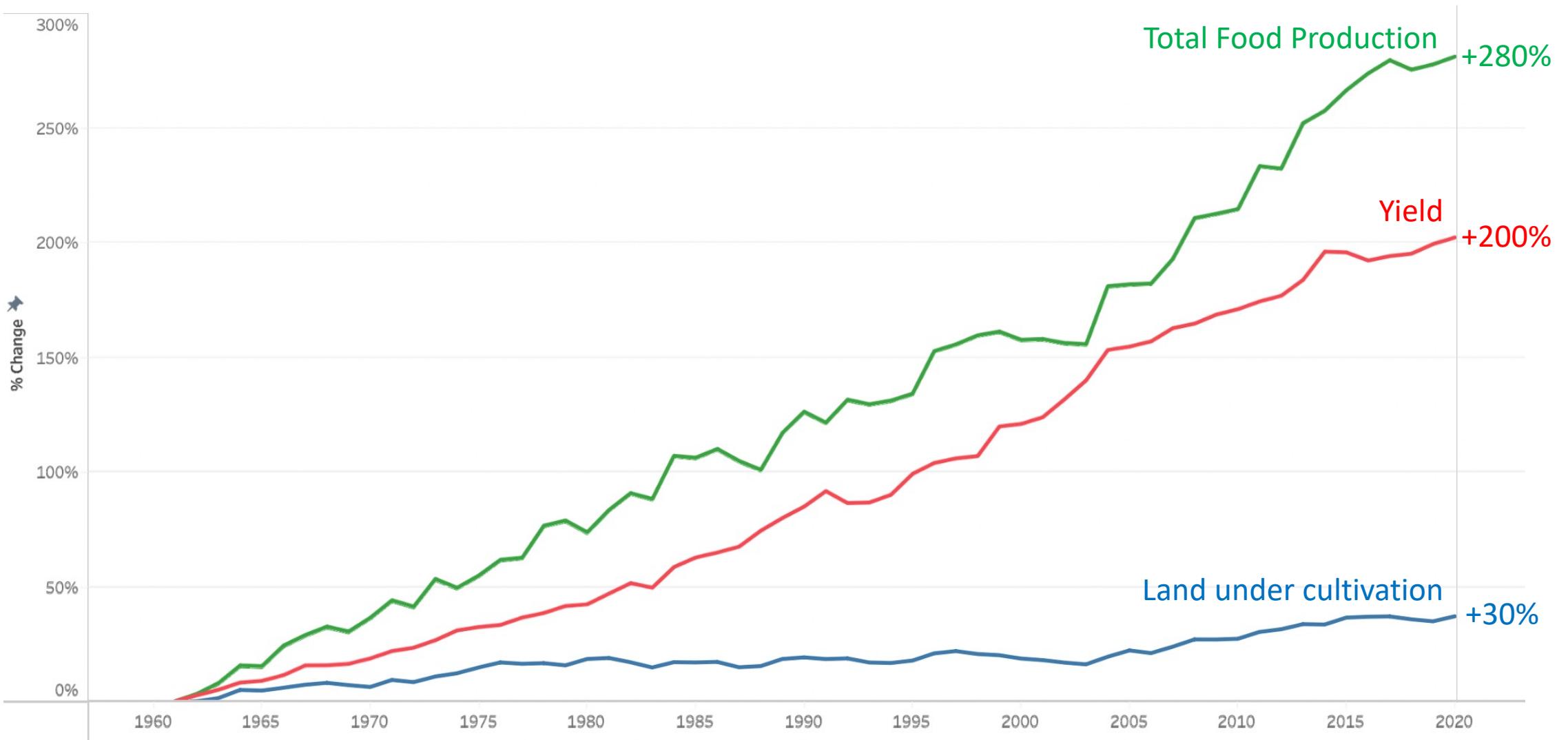
- The best maps!
- Great table calculations, groups , sets
- Works on a mac!
- Free Public templates for custom visualizations
- Better creative license

# How do you feed 7.8B people?



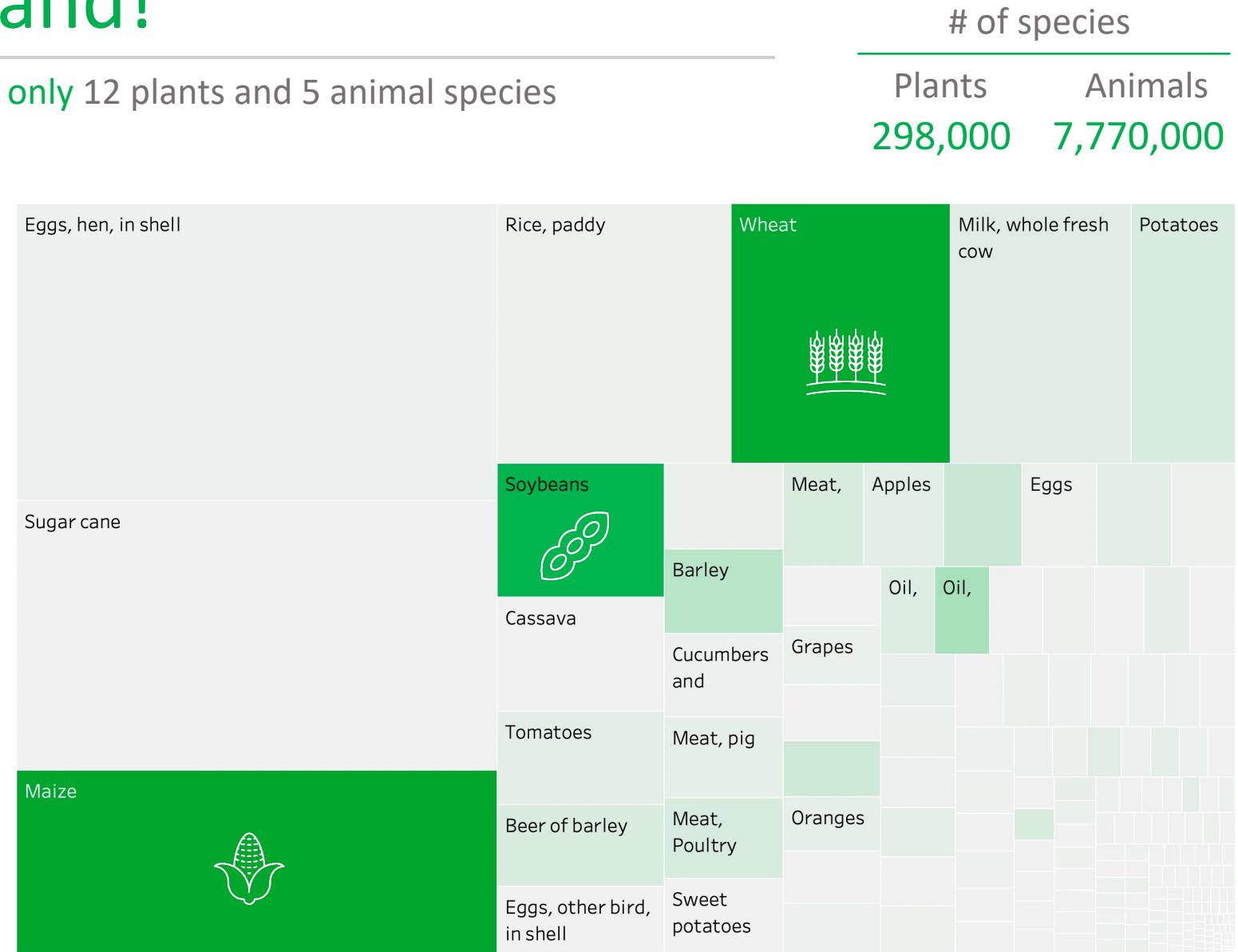
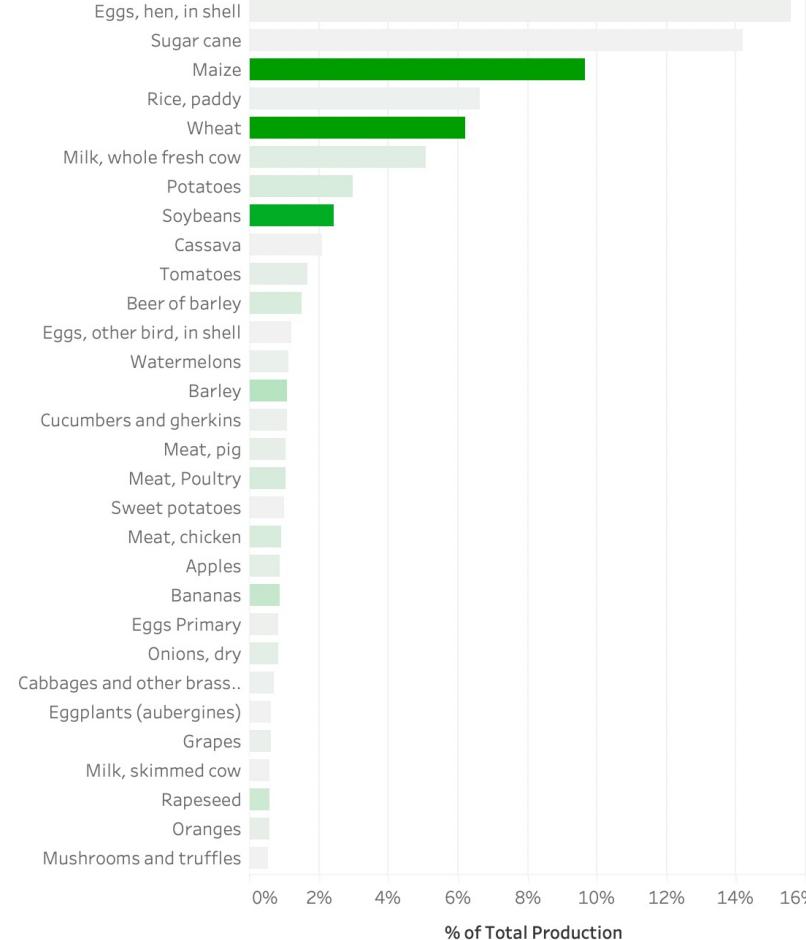
# Does it take a lot of land?

No! The land area under cultivation has only increased marginally but the production has gone up significantly.  
Thanks to the higher yield!



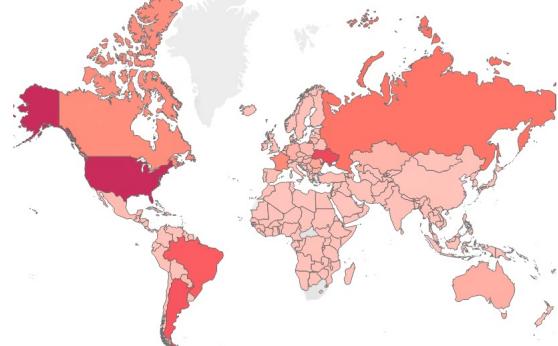
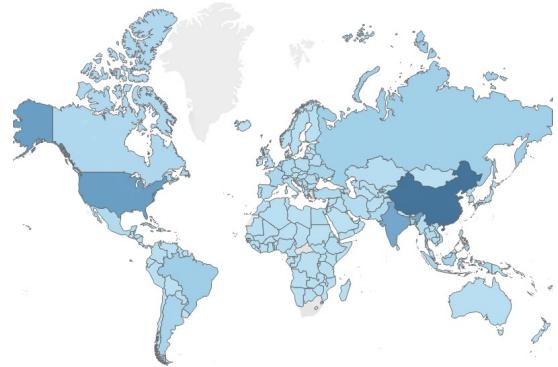
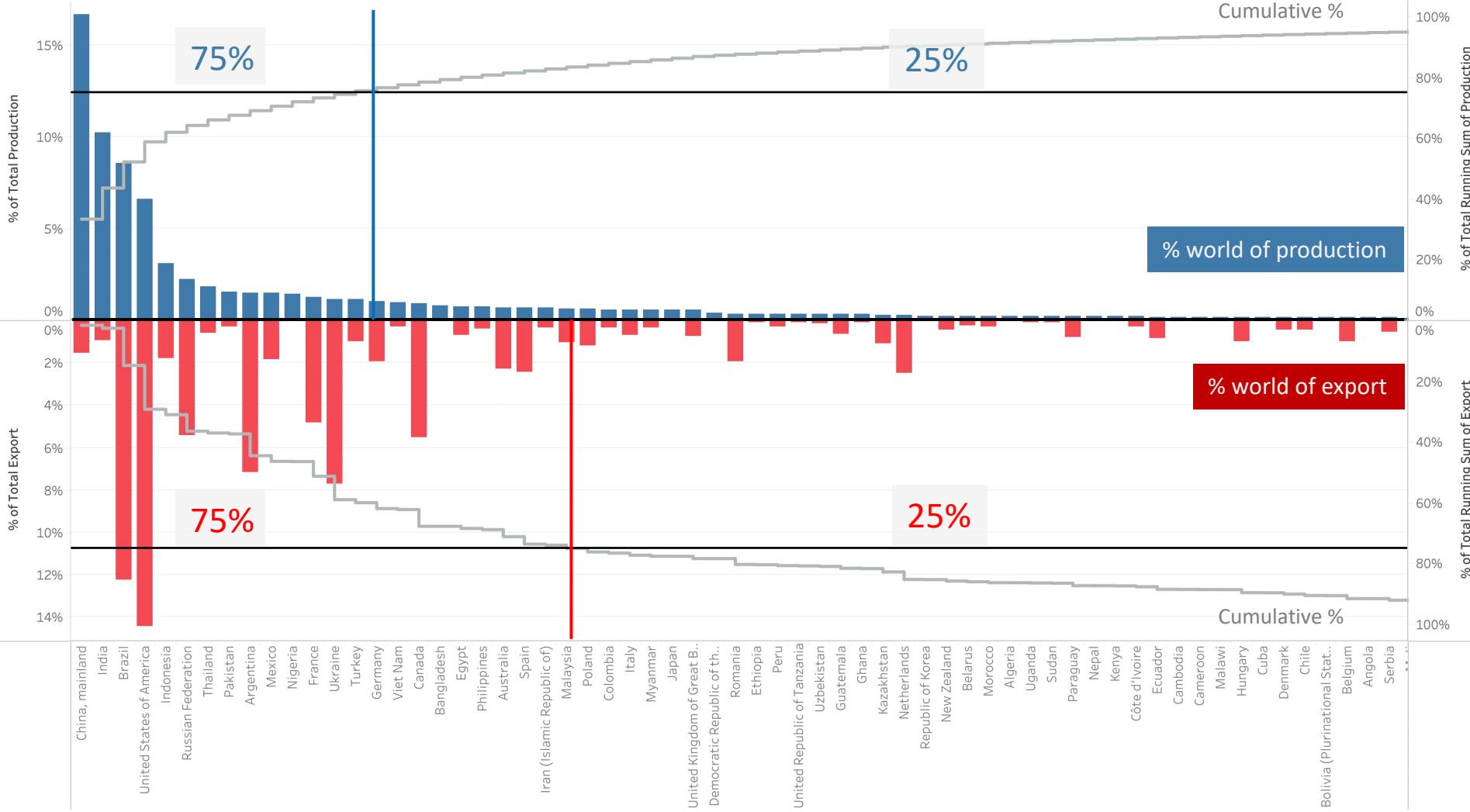
# Concentrated Demand!

75% of the world's food is generated from **only 12 plants** and **5 animal species**



# Concentrated Supply!

The world's **production** and **export** of food is **concentrated** to a handful of countries.



# Trade Dynamics

## Basics – Wheat, Maize (corn), Rice, Potato, Tomato

Old powers supplying their regions of influence

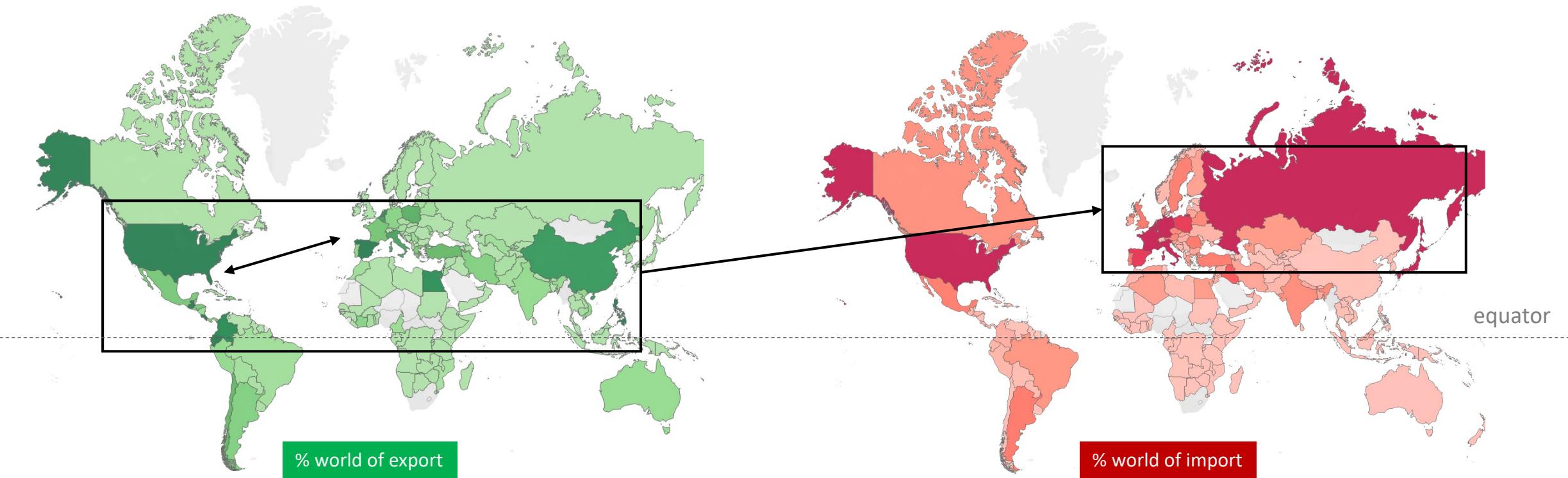


Country	Maize	Potatoes	Rice, paddy	Tomatoes	Wheat
United States of America	21.9%	3.8%	60.1%	2.6%	14.6%
Brazil	22.5%	0.0%	10.2%	0.0%	0.3%
France	1.9%	16.0%	0.4%	3.1%	10.7%
Netherlands	0.6%	15.7%	0.1%	14.3%	0.2%
Ukraine	17.0%	0.0%		0.1%	10.8%
Argentina	19.0%	0.4%	2.3%	0.1%	5.7%
Mexico	0.3%	0.0%		24.4%	0.4%
Russian Federation	1.6%	2.3%	2.4%	0.2%	17.1%
Canada	0.6%	3.0%		2.3%	12.3%
Germany	0.2%	12.9%	0.0%	0.2%	3.0%

Country	Maize	Potatoes	Rice, paddy	Tomatoes	Wheat
Mexico	9.6%	1.1%	28.1%	0.0%	3.3%
United States of America	1.1%	3.2%	0.0%	26.6%	1.1%
Belgium	1.1%	22.1%	0.0%	1.1%	3.3%
Netherlands	4.3%	13.7%	0.0%	3.2%	4.3%
Venezuela (Bolivarian Rep.)	1.1%		16.7%	0.0%	0.0%
Spain	6.4%	6.3%	0.0%	3.2%	4.3%
Germany	3.2%	5.3%	0.0%	9.6%	2.2%
Italy	4.3%	4.2%	2.1%	2.1%	5.4%
Japan	9.6%	0.0%		0.0%	4.3%
Turkey	3.2%	1.1%	4.2%	0.0%	7.6%

# Trade Dynamics Fruits – Apples, Apricots, Bananas, Oranges, Peaches, Pears

Warm countries selling goods to colder places

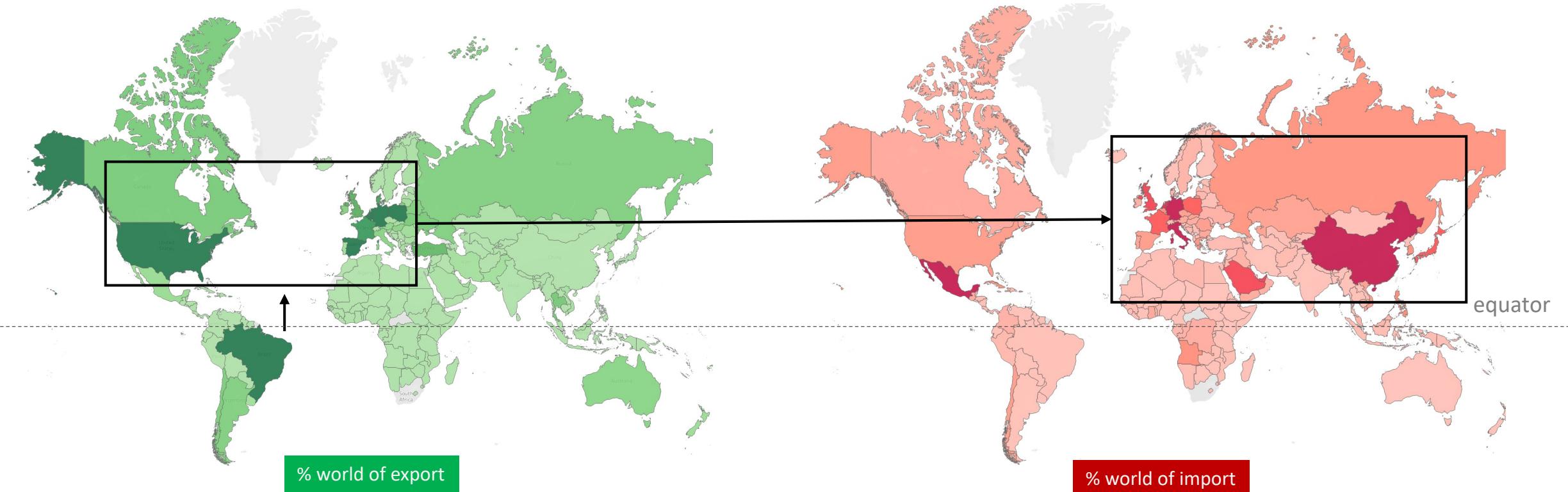


Country	F	Apples	Apricots	Bananas	Oranges	Peaches and..	Pears
Spain		1.6%	22.5%	0.4%	28.1%	42.3%	5.7%
China		11.9%	0.2%	0.1%	0.9%	6.2%	19.2%
Italy		11.4%	11.6%	0.3%	1.6%	8.0%	4.4%
Turkey		3.2%	16.3%	1.0%	3.8%	5.3%	1.7%
United States of America		10.2%	1.2%	2.5%	7.6%	3.7%	6.0%
Egypt		0.0%	0.0%	0.0%	28.7%	0.9%	0.0%
Netherlands		2.4%	0.9%	3.8%	5.3%	1.7%	14.9%
Ecuador				27.6%	0.0%		
Chile		8.2%	0.2%		1.6%	4.9%	5.4%
Belgium		2.4%	0.3%	3.8%	0.2%	0.4%	12.9%

Country	F	Apples	Apricots	Bananas	Oranges	Peaches and..	Pears
Germany		11.6%	18.9%	8.3%	9.5%	17.7%	9.8%
Russian Federation		12.8%	14.4%		9.5%	11.5%	13.4%
United States of America		2.3%	0.0%	28.1%	4.2%	2.1%	4.9%
France		3.5%	5.6%	4.2%	10.5%	9.4%	7.3%
Netherlands		4.7%	1.1%	7.3%	11.6%	4.2%	7.3%
Iraq		4.7%	11.1%		4.2%	3.1%	1.2%
China		2.3%	0.0%	11.5%	8.4%	2.1%	1.2%
Italy		1.2%	4.4%	4.2%	4.2%	6.2%	4.9%
Poland		0.0%	3.3%	3.1%	3.2%	7.3%	2.4%
Belgium		2.3%	2.2%	7.3%	2.1%	2.1%	2.4%

# Trade Dynamics Meats – Cattle, Chicken, Pork

Meat Market is dominated by medium-high income countries. Increasing incomes in China have led to a huge demand for meat in the country, making it the largest importer of meat.

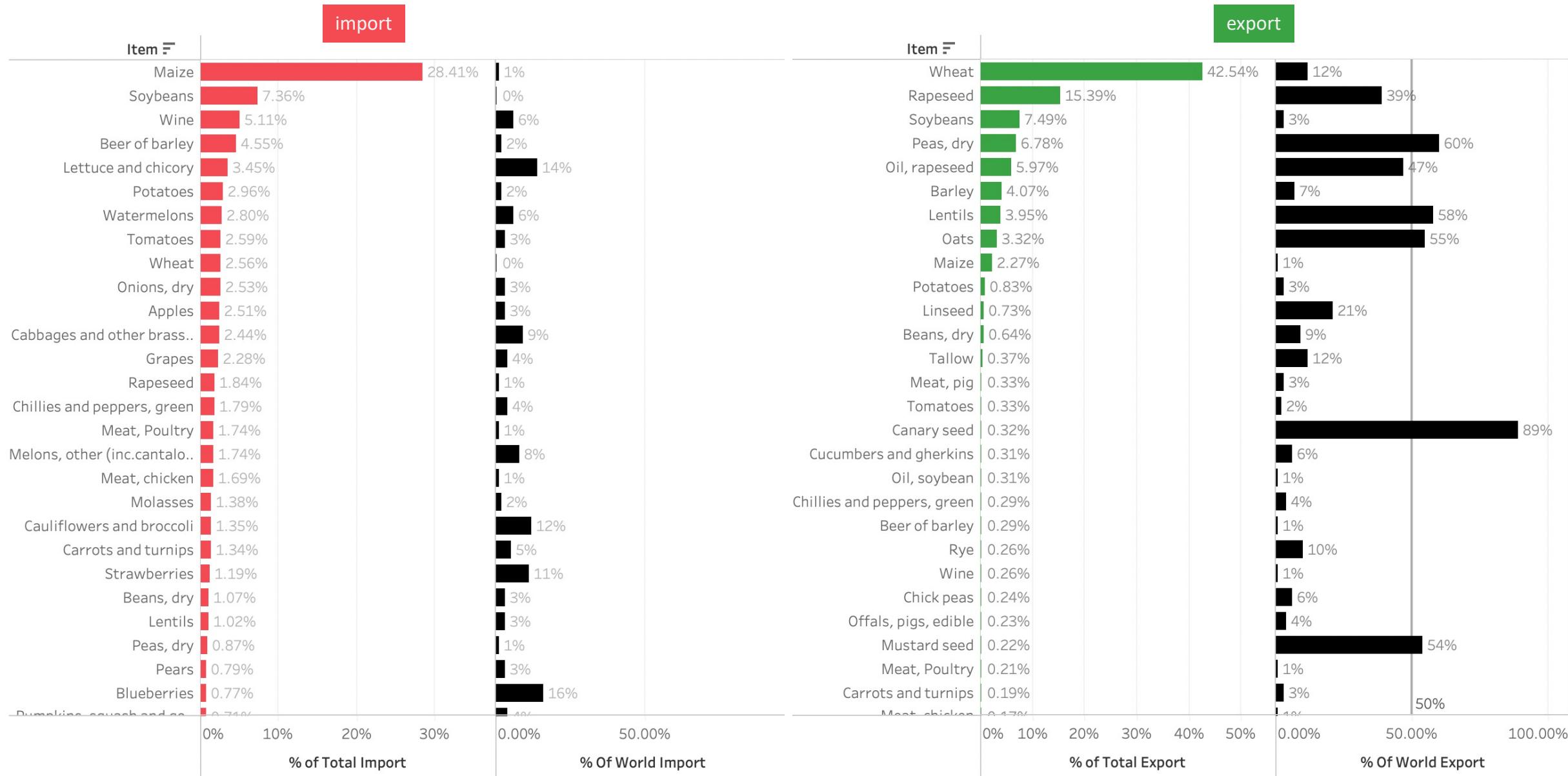


Country	F	Meat, cattle	Meat, chicken	Meat, pig
United States of America		6.5%	23.5%	11.2%
Netherlands		8.1%	9.1%	11.9%
Brazil		0.5%	27.8%	0.5%
Germany		7.4%	2.1%	14.6%
Spain		7.2%	1.2%	15.3%
Poland		10.9%	6.5%	4.4%
Belgium		4.3%	3.2%	9.5%
France		8.0%	1.7%	6.2%
Denmark		1.8%	0.5%	9.6%
Australia		7.2%	0.3%	0.2%

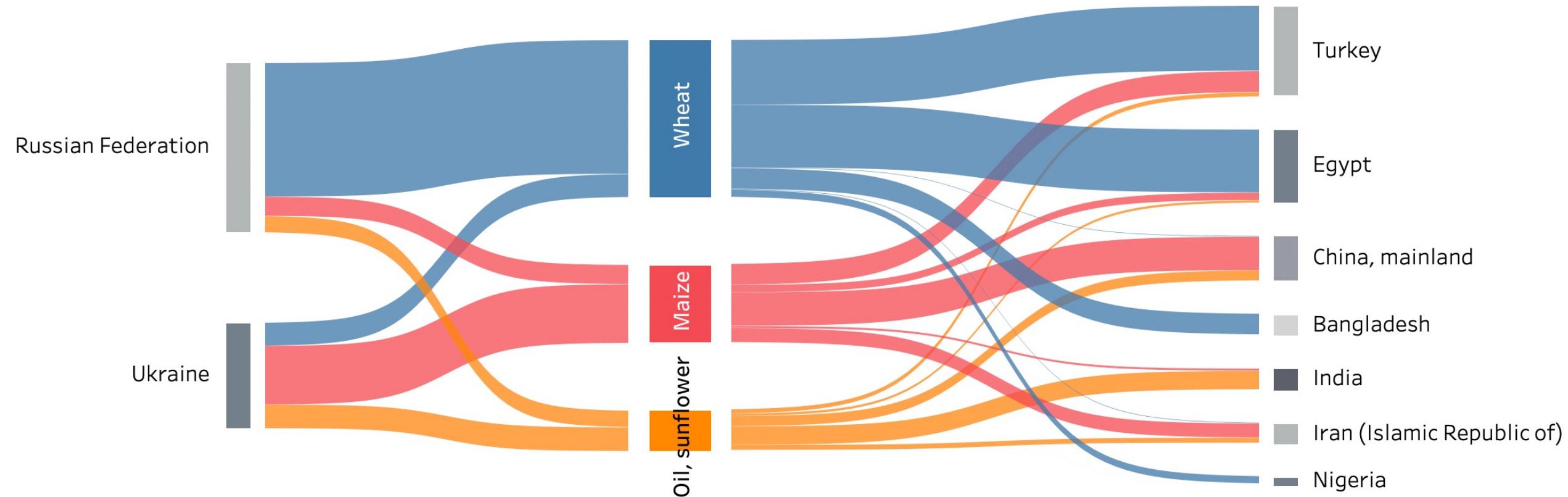
Country	F	Meat, cattle	Meat, chicken	Meat, pig
China, mainland		13.8%	7.7%	25.8%
Germany		7.4%	5.5%	12.9%
Italy		11.7%	0.0%	12.9%
Netherlands		13.8%	4.4%	3.2%
Mexico		0.0%	8.8%	11.8%
United Arab Emirates		2.1%	6.6%	
Saudi Arabia		1.1%	6.6%	
France		4.3%	4.4%	2.2%
Poland		0.0%	1.1%	8.6%
Republic of Korea		8.5%	1.1%	0.0%

# Canada, Eh?

Low on import, Big on export



## Putin's War Has Started a Global Food Crisis



bon appétit

# Thank you!

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