

# **Chapter 12 - South American Production**

**Price Analysis: A Fundamental  
Approach to the Study of Commodity  
Prices**



# South American Production

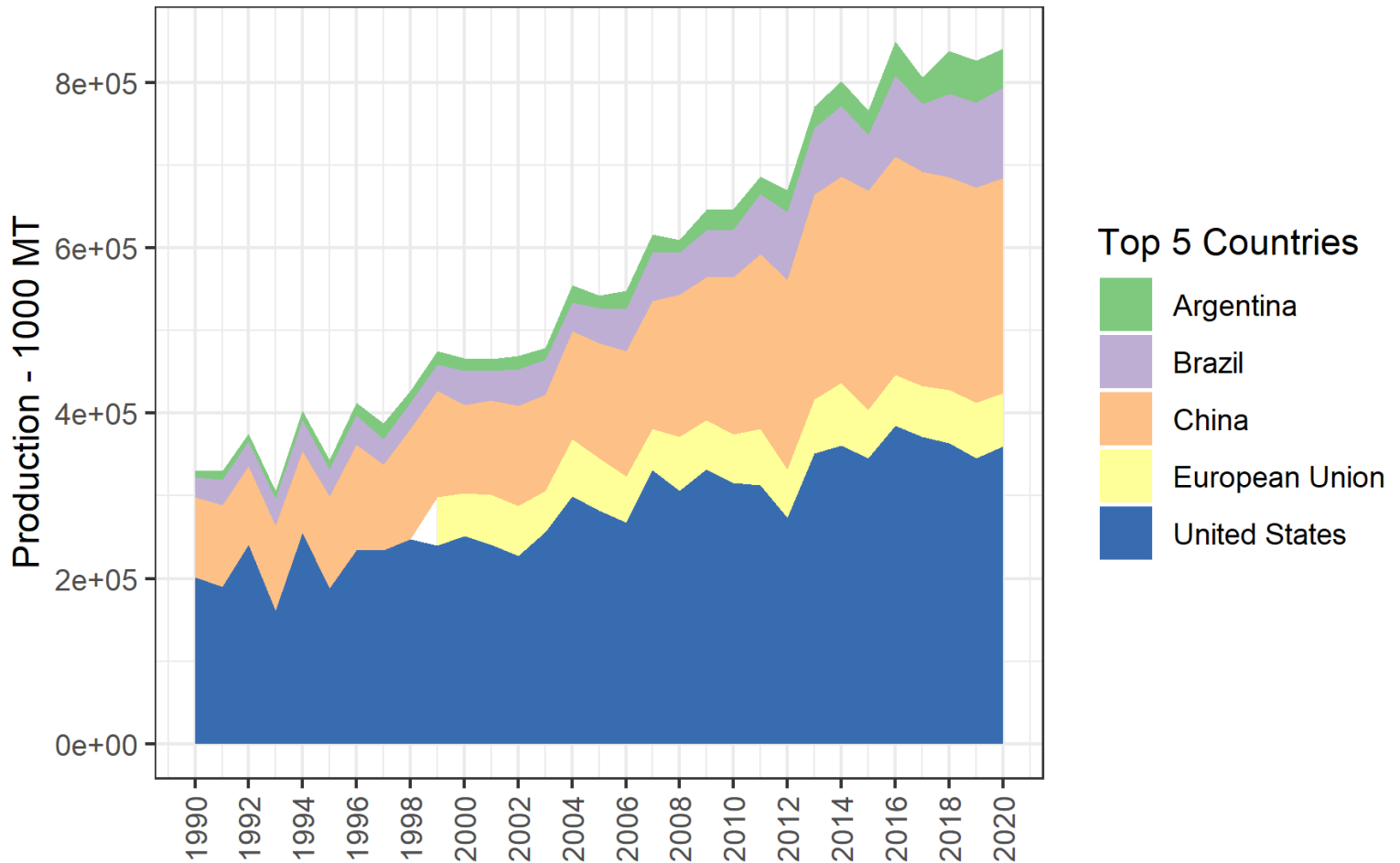
- Over the last twenty years Brazil and Argentina have grown in prominence on the world stage.
- They are currently among the most important growers of soybeans and corn, particularly so for soybeans.

# South American Production

- Many thanks to Felipe Grimaldi Avileis, my teaching assistant for ACE 427 in 2017.

- Figure 1, world's top five producers of corn
  - Data for Figures 1-4 come from the USDA FAS World Production Supply and Demand historical data-sets for grains and oilseeds.

Figure 1: Top World Producers of Corn



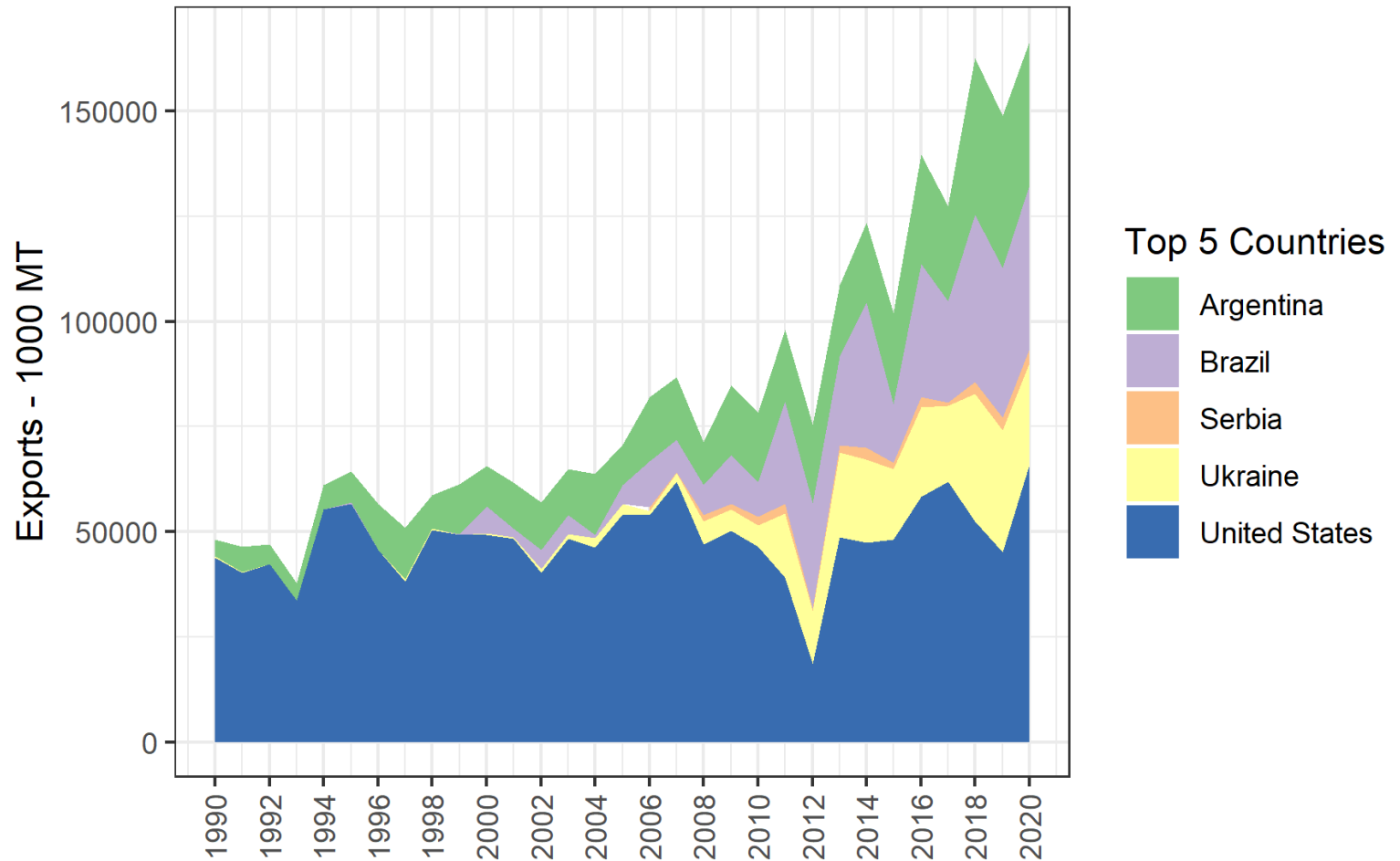
- Argentina, Brazil, China, the European Union, and the United States round out this group.
  - A clear pattern of increases over time is notable particularly for the U.S., China, and Brazil, generating an upward trend in the production from this group.

# Production of Corn

- Figure 2 plots the top five countries by exports.



Figure 2: Top World Exporters of Corn



- While U.S. exports have been mostly flat over this time period, exports from Brazil have been expanding rapidly since about 2004.

- Next, in table 1, we present the top producers of corn in 2017.

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read.csv(file = "assets/corn_exporters.csv")
```

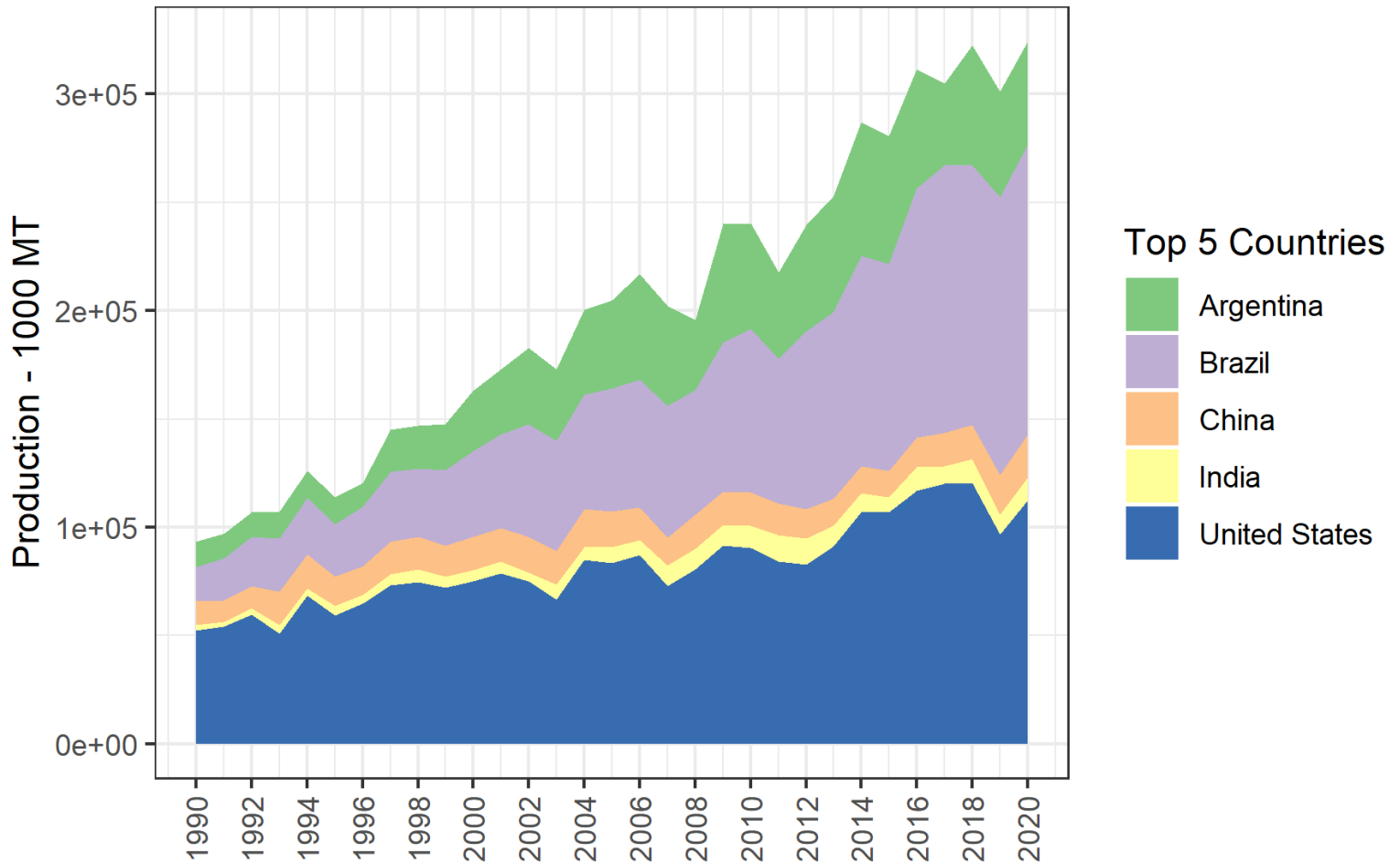
##	X	Country_Name	Production
## 1	1	United States	360252
## 2	2	China	260670
## 3	3	Brazil	109000
## 4	4	European Union	63700
## 5	5	Argentina	47500
## 6	6	India	30200
## 7	7	Ukraine	29500
## 8	8	Mexico	27800
## 9	9	South Africa	17000
## 10	10	Russia	13872

- Table 1: Top 10 World Producers of Corn, 2017

# Production of Soybeans

- Now, we turn our attention to the soybean market.
- In Figure 3, we present production since 1990 from the top five countries.

Figure 3: Top World Producers of Soybeans



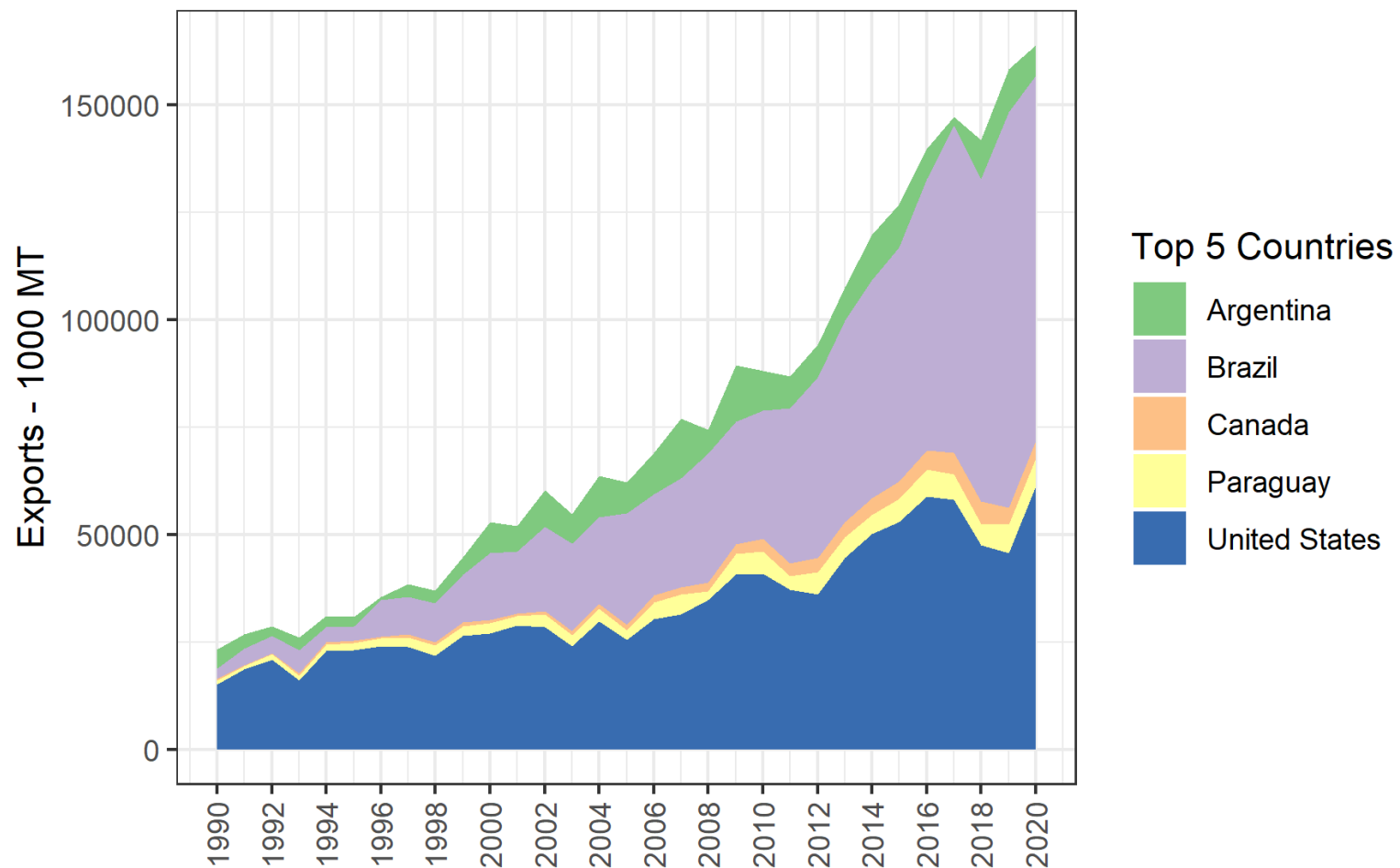
- The importance of Brazil and Argentina is much more obvious.
  - While production in the U.S. has a visible upward trend, Brazil and Argentina are really increasing at a rapid rate.

# Production of Soybeans (CONT...)

- In Figure 4, we plot the exports from the top five countries.



Figure 4: Top World Exporters of Soybeans



- The growth in soybean exports from Brazil is quite remarkable in this chart.

```
read.csv(file = "assets/corn_exporters.csv")
```

##	X	Country_Name	Production
## 1	1	United States	360252
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- Table 2 shows the top ten producers of soybeans in the World. Here we see that Paraguay and Bolivia are present in the top ten as well.

# South American Production Seasons and Trade Flows

- South America experiences summer when we in the North America experience winter and vice versa.
- North American and South American production is nicely complementary in providing corn and soybeans for the export market.

- U.S. corn and soybean exports are at their highest levels during the 2nd quarter of the marketing year - right after harvest.
  - The planting and growing seasons are underway in South America.
  - The heavy export season from harvesting the previous crop is winding down.

# South American Production Seasons and Trade Flows (CONT...)

- South American farmers are harvesting during our planting and growing seasons (March through June).
- The seasonality is a boon for importers because they have the opportunity to buy for seasonally low harvest-time prices.
- The price would increase twice per year rather than just once per year.

# Brazil

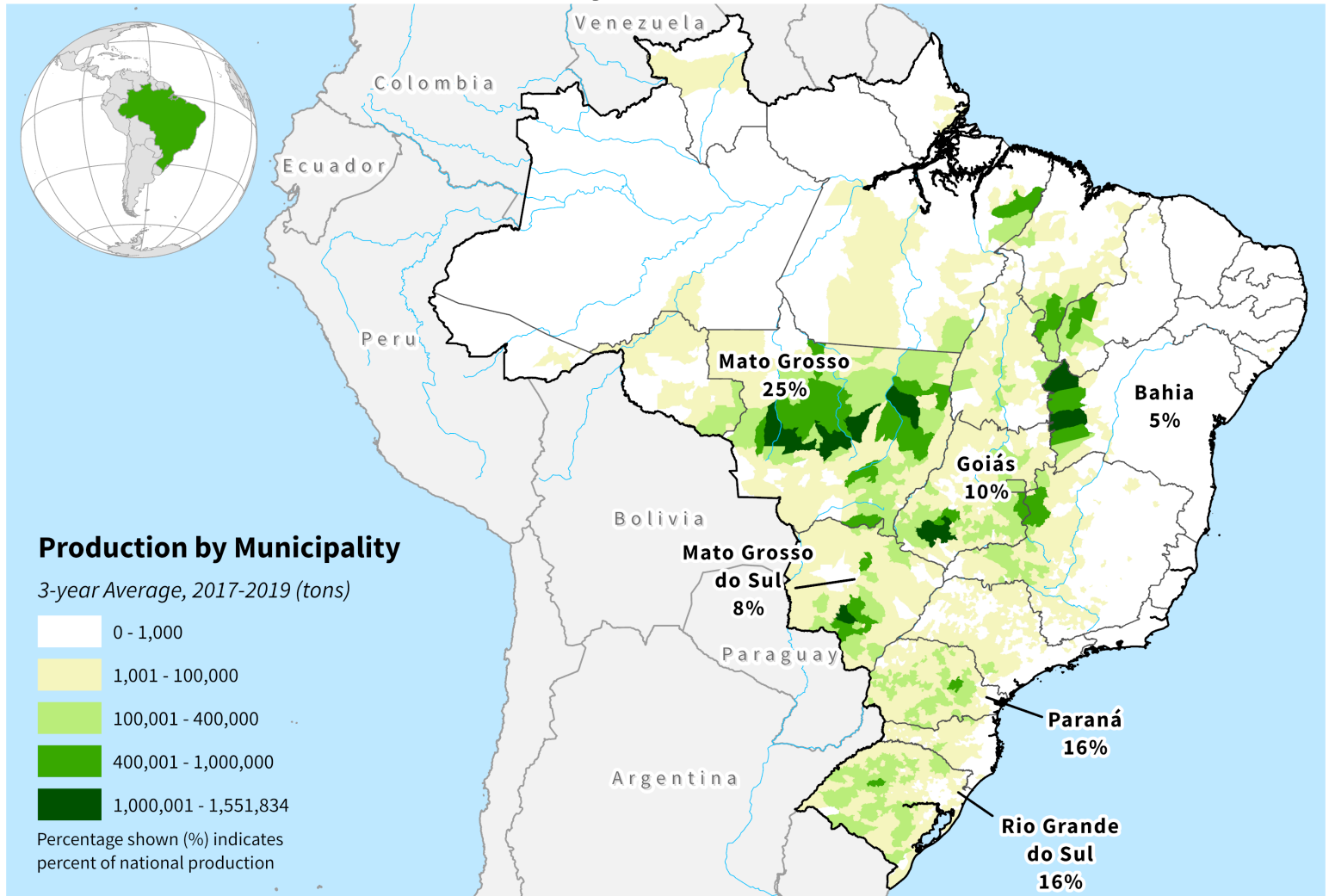
- Brazil, being quite close to the equator, enjoys the ability to double crop most every year.
- The farmers plant soybeans as the first crop because if they plant soybeans first they get a second crop of corn.
- If they plant corn first, there is not enough time to get a second crop of soybeans.

- Yields of first crop corn are higher than yields of second crop corn due to when the rainy season comes.
  - In some places, farmers choose to plant one crop of corn and forego double cropping.



Figure 6 show production intensity of soybeans by state, and also provides a calendar of when planting and harvest activity of first crop soybeans are taking place.

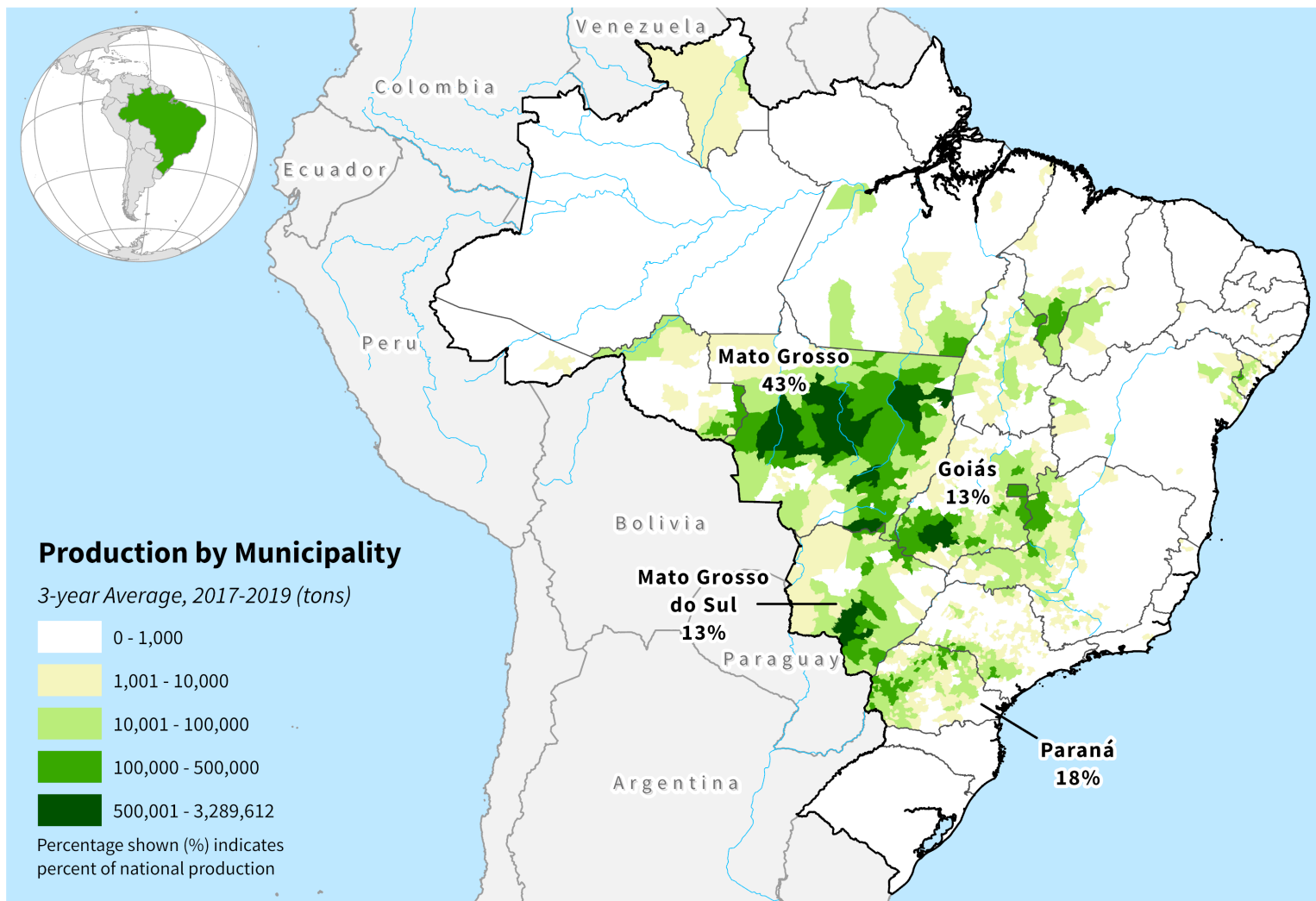
# Brazil: Soybean Production



## Brazil (CONT...)

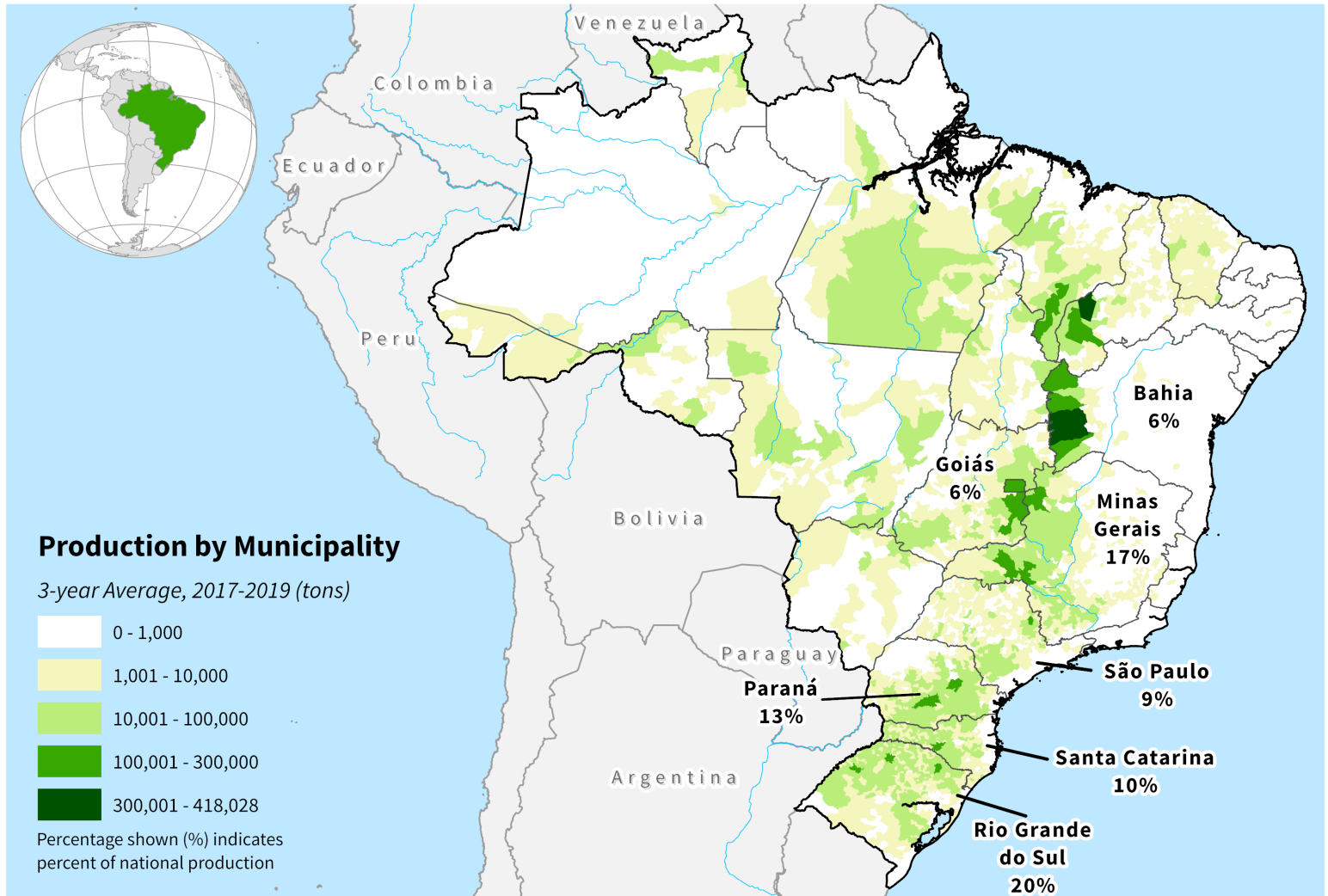
- Figure 7 shows the same for second crop corn.

# Brazil: Second Season Corn Production



- While Figure 8 shows the regional production intensity of first crop corn.

# Brazil: First Season Corn Production



- The highest production of first crop corn is located in regions that have no second crop in Figure 7.
  - In the east, where managing a second crop is more difficult, farmers are more apt to plant a single crop of corn.

# Where to find information on Brazilian Crops

- Information about Brazilian production the National Supply Company (Conab) is the main resource.
- They publish crop reports monthly, just like the USDA's WASDE report.
- Typically, the Brazilian report is released a couple of days before the WASDE report.
- If there is information from Brazil that will affect world stocks or production, these reports will move prices in the U.S.



# Argentina

- Argentina is more similar to the U.S. in latitude, so they are only able to plant a single crop.
- Planting of corn begins in September and harvest runs from March until May.
- Planting of soybeans begins in November and harvest runs from April to May.

# Where to find information on Argentinian Crops

- The Bolsa de Cereales is the grain exchange in Argentina.
- They undertake the responsibility of producing crop reports.

- The reports most closely followed are the Weekly Agricultural Report, which tells the planting or harvest progress, and gives a general update about market conditions.
  - The other report is the Estado Y Condition de Cultivos (ECC), which is released once per month.
  - This has more detailed estimates about planting and growing conditions.

THE END