



ncge

**National Council for
Geographic Education**

Three for Three

Week 21, Unit 5

February 3, 2020

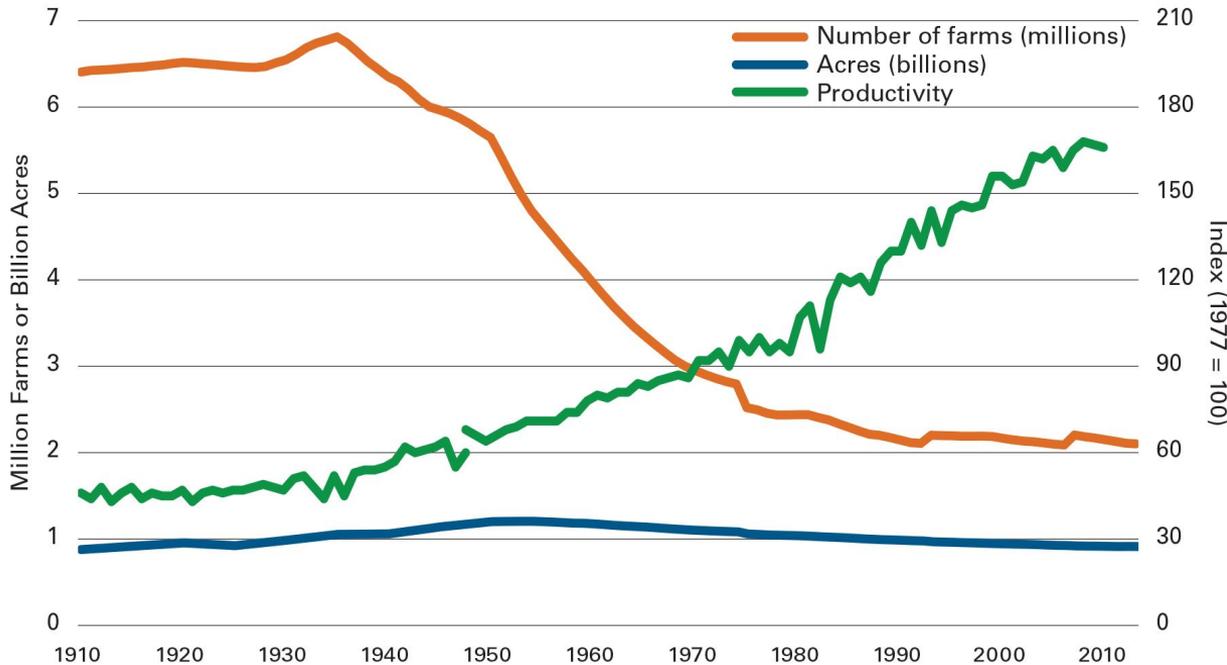
A SUPPLEMENT TO THE WEEKLY APHG BELL RINGERS SERIES

Prepared by Laura Kmetz | laura.kmetz@gmail.com

Spatial Organization of Agriculture Topic 5.7



Figure 14: Number of Farms, Farm Productivity, and Acres Operated in the U.S., 1910–2013



¹ Total factor productivity, or farm output per unit of total factor input (labor, capital, and all other inputs used in production). For more information, see Fuglie et al. (2007).

² The break in the productivity line reflects the introduction of new methodology beginning with the 1948 estimate. For more information, see Ahearn et al. (1998, pp. 15-21).

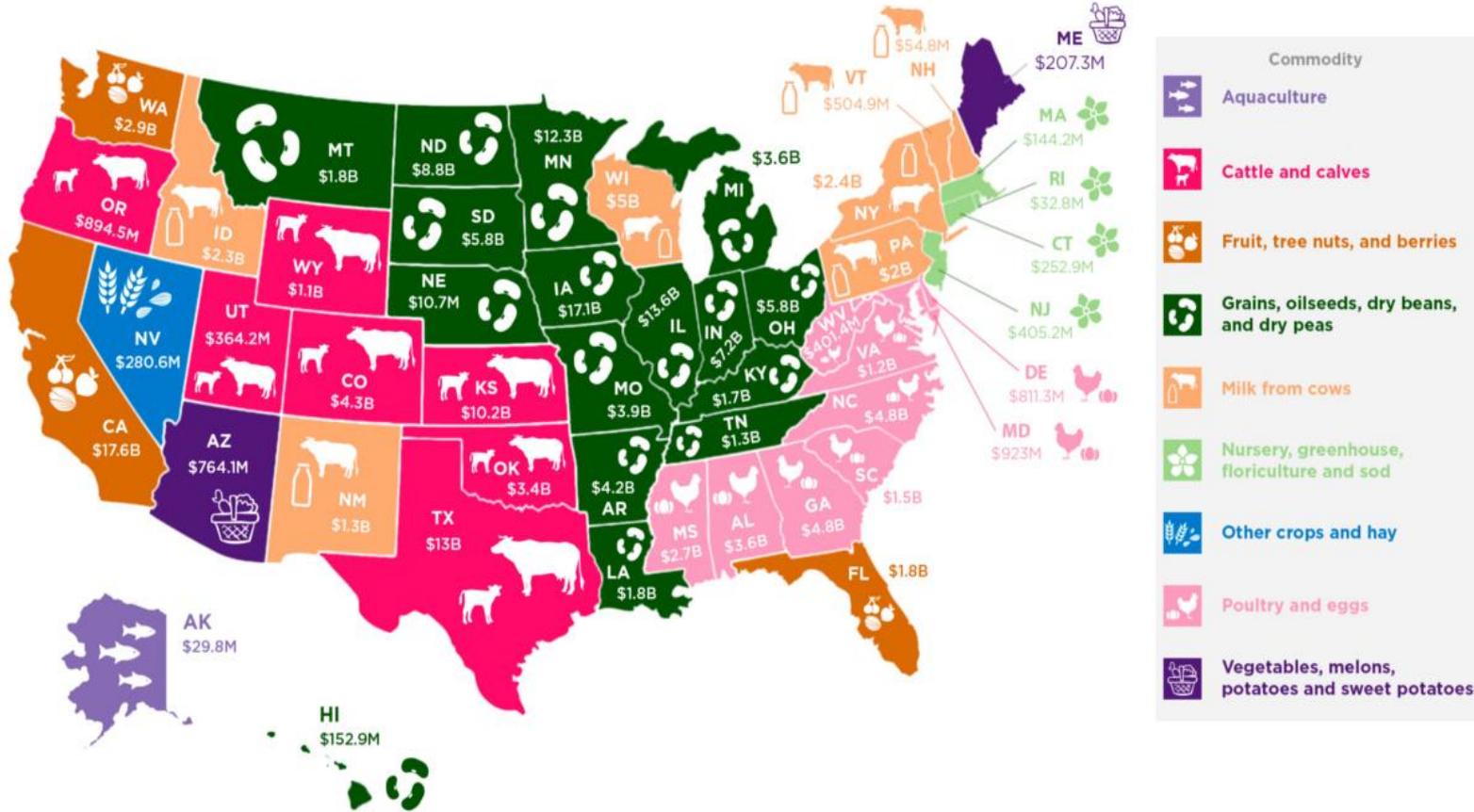
Source: USDA, Economic Research Service, compiled from National Agricultural Statistics Service annual estimates of the number of farms and acres operated (<http://quickstats.nass.usda.gov/>) and from ERS estimates of farm productivity (<http://www.ers.usda.gov/data-products/agricultural-productivity-in-the-us.aspx#28247>). Acres operated prior to 1950 are from censuses of agriculture for various years, with interpolations between census years. ERS productivity indices prior to 1948 came from Johnson (1990).

1. Discuss the trend in the number of farms in the US since 1935.

2. Given the trend in number of farms in the US since 1935 & the relative stability in the number of acres used for farms, predict the trend in the size of farms over that time period.

3. Explain why agricultural productivity has increased over the past 70 years.

Von Thunen Model Topic 5.8



1. What regional trends do you see?
2. To what extent can you see von Thunen's model reflected in this map?
3. How do you think the map might be similar and different in 50 years?

Article & Sources:

<https://www.howmuch.net/articles/the-most-valuable-agricultural-commodity-per-each-state>
USDA - United States Department of Agriculture - <https://www.nass.usda.gov/>

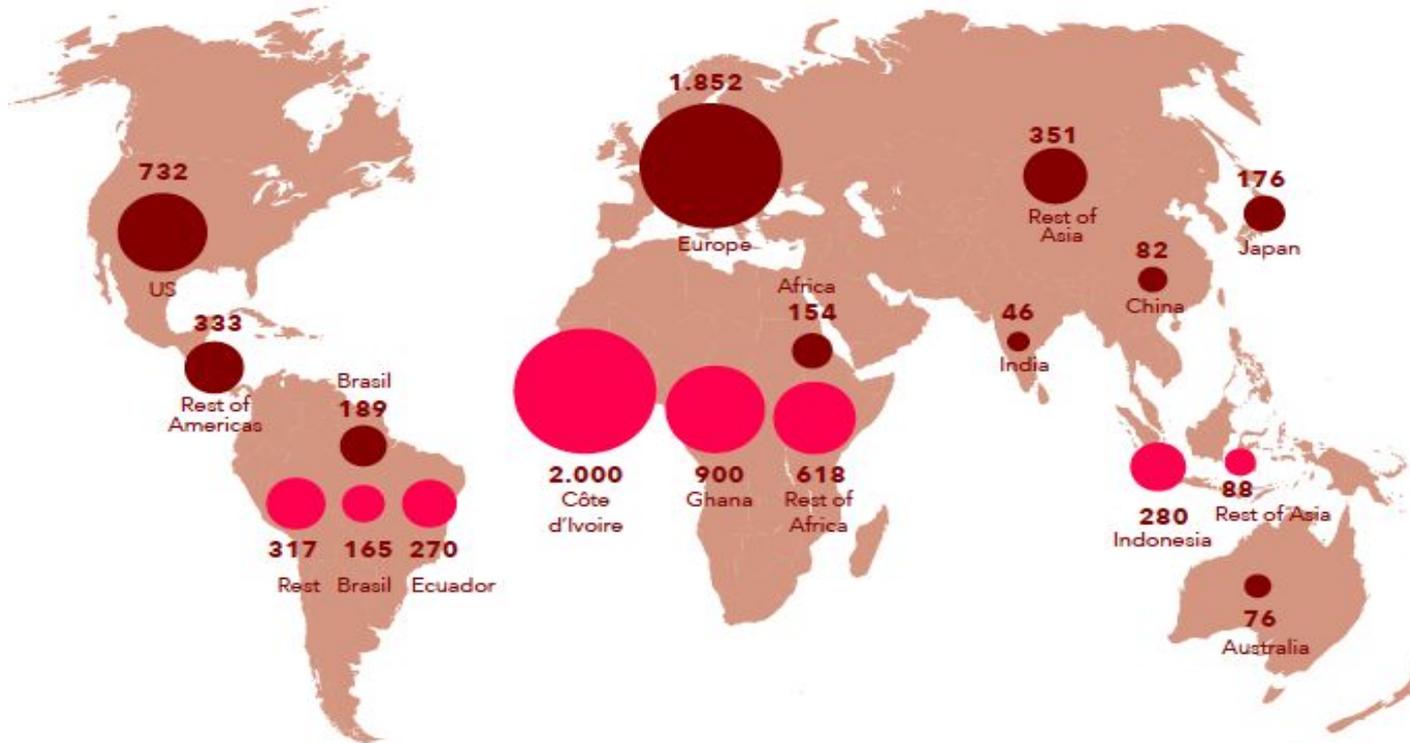
The Global System of Agriculture Topic 5.9



Production / Consumption

Cocoa Production in 1,000 tonnes 2017/18

Source: ICCO 2018, Table 2, 40



1. What type of agricultural production is associated with cocoa production?
2. Discuss the spatial & economic distribution of both cocoa-producing countries and cocoa-consuming countries.
3. Explain how the production of chocolate is an example of the globalization of agriculture.

IDEAS FOR SLIDES

SLIDE 1 source <https://www.globalharvestinitiative.org/2015/11/connecting-farmers-and-consumers-the-power-of-radio/>

Use this slide to discuss how economic forces have influenced agricultural practices. Suggested answers:

1. The number of farms in the US has decreased since 1935.
2. Farms in the US have grown larger in size over the past 85 years.
3. Agricultural productivity has increased because of technological advances including higher yield seeds and widespread use of pesticides and fertilizer.

SLIDE 2 source <https://howmuch.net/articles/the-most-valuable-agricultural-commodity-per-each-state>

Use this slide to have students consider the relevance of von Thunen's model to today. See AP Classroom for a question about von Thunen's model applied to the US today.

Students should note regional patterns, including dairy & horticulture production in the NE and MW near densely populated areas and livestock grazing farther out. Consult the source for a detailed analysis of the map, including speculation about how legalization of cannabis in some states could affect the map in the future--as always, use your best judgment regarding sharing that with students. You could also discuss how cash crops, including ones used to make drugs, affect how land is used. In some LDCs, land is used to grow more lucrative cash crops, affecting food supply of the local population.

SLIDE 3 source <https://newfoodeconomy.org/chocolate-farmers-ivory-coast-ghana/> Although New Food Economy has a slightly left bias according to some media watchdog groups, the graphic comes from an excellent article that is related to several topics in the CED. Use this slide to help students understand the interdependence among regions of agricultural production & consumption. Suggested answers:

1. plantation
2. Major cocoa producing countries, including Brazil, Ecuador, Ghana, & Cote d'Ivoire, are located in the tropics. Major cocoa consuming countries, including the US and European countries, are located in the north. In general, people who produce cocoa live in LDCs and major cocoa consumers live in MDCs. Brazil is the only country that is both a major producer and consumer of cocoa.
3. Chocolate production begins with cocoa grown on plantations in LDCs in tropical regions. It is shipped to other countries, mostly MDCs having well-developed infrastructure, to be processed and turned into eating and drinking chocolate as well as products such as cocoa butter. It is consumed by people living in MDCs in Europe and North America.

If you have time to show it, the Netflix episode of *Rotten* called "Bitter Chocolate" links several topics in the agriculture and industry units. I have my students guess what percent of the price of a chocolate bar goes to various components of the cocoa commodity chain and give fair trade chocolate to the ones who are the most accurate. You can find that graphic from Oxfam here:

<https://parrechocolat.com/blogs/journal/price-paid-for-cacao>



About the National Council for Geographic Education: The National Council for Geographic Education is a nonprofit membership organization that works to strengthen the quality and effectiveness of geography teaching and learning. We provide a global forum for educators of all levels to exchange ideas and engage in professional learning opportunities to improve their geography teaching practice. We provide the organizational structure needed to advance research in geography education. We publish journals, the National Geography Standards, and a variety of materials for diffusing research and best practices on geography education. We recognize exceptional educators and supporters in geography education. We lead and support a variety of educational and creative programs to support our members and advance global literacy. Got questions? Email us at ncge@ncge.org