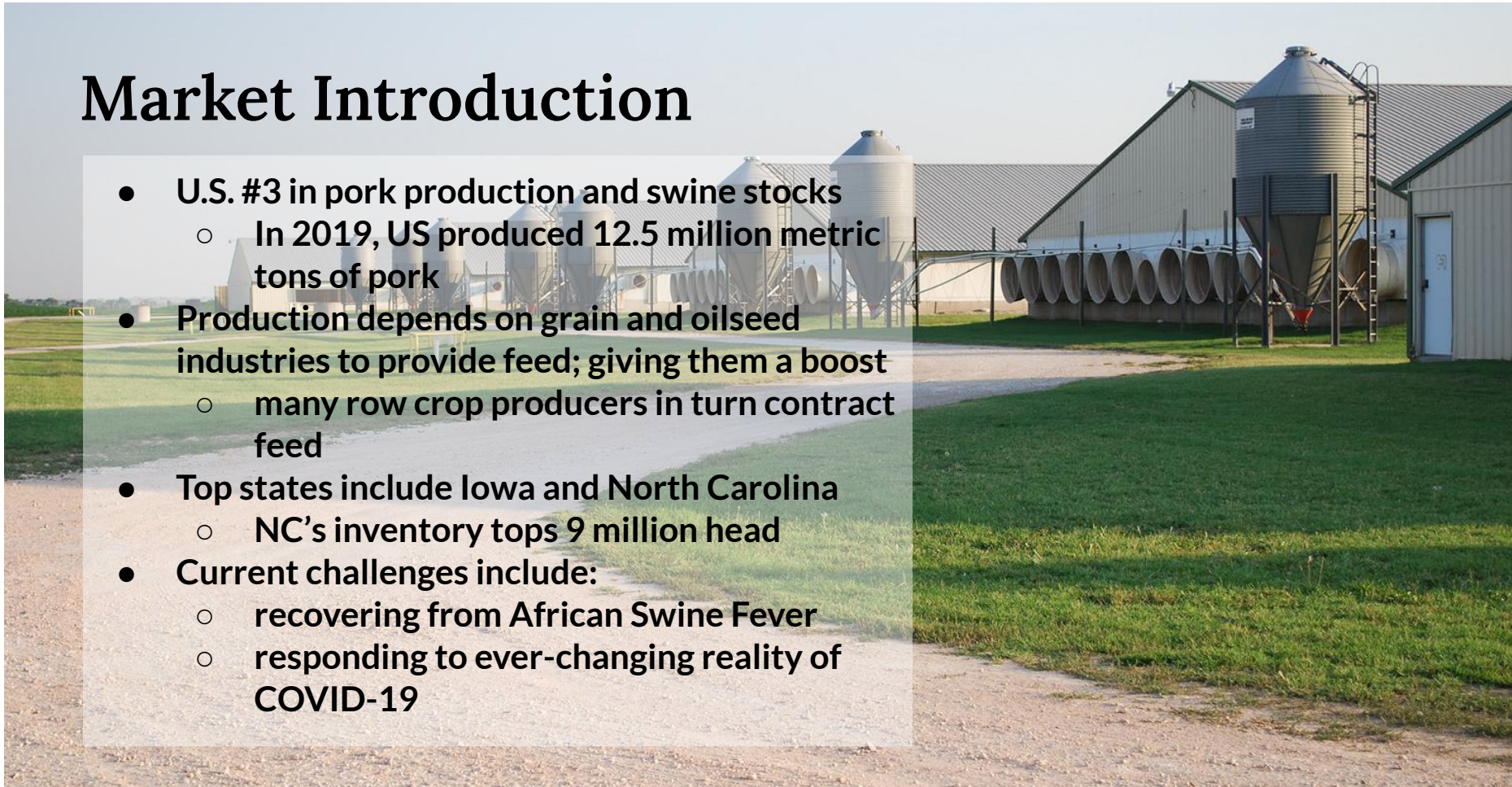
A photograph of a hog farm. The image shows a long, narrow aisle in the center, flanked by rows of metal cages. Each cage is filled with several light-colored pigs. The pigs are mostly lying down, but some are standing. The floor of the cages appears to be made of metal grates. The lighting is bright, and the overall atmosphere is industrial. The text is overlaid on a semi-transparent white box in the upper center of the image.

**Market Analysis: Hogs**  
**Cole Hedrick & Mikayla Moore**  
**ARE 311**

# Market Introduction

- **U.S. #3 in pork production and swine stocks**
  - In 2019, US produced 12.5 million metric tons of pork
- **Production depends on grain and oilseed industries to provide feed; giving them a boost**
  - many row crop producers in turn contract feed
- **Top states include Iowa and North Carolina**
  - NC's inventory tops 9 million head
- **Current challenges include:**
  - recovering from African Swine Fever
  - responding to ever-changing reality of COVID-19





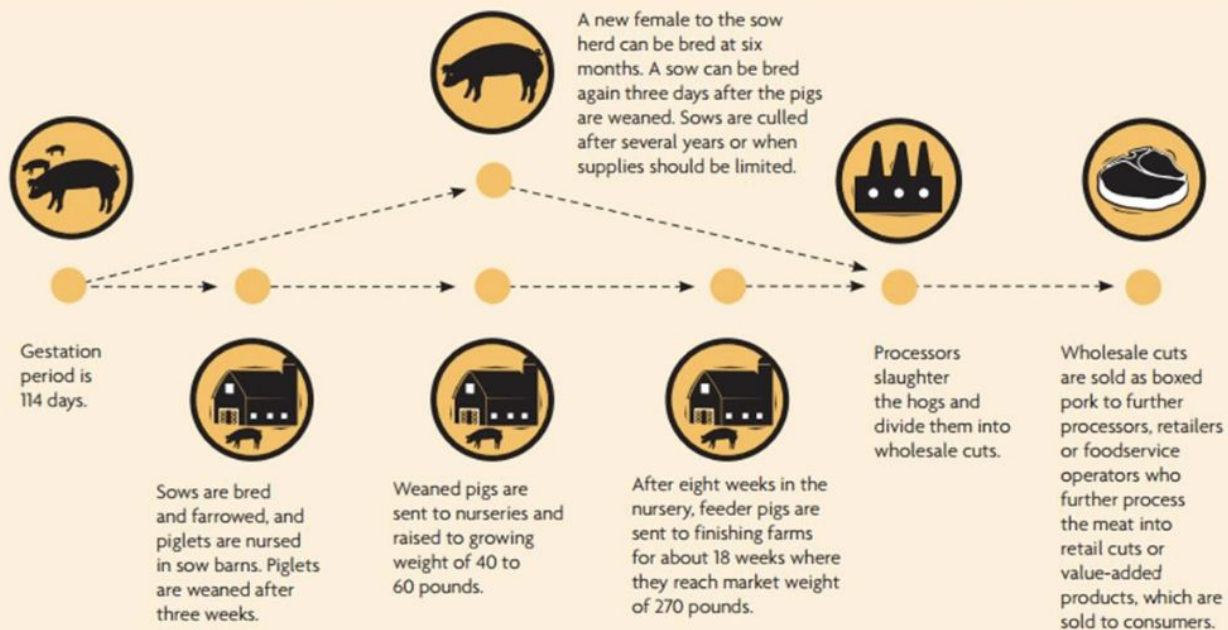
# Hog Production Cycle

- 2-3 'stages': Farrowing, Nursery, Finishing
- Life starts on a sow farm; where sows have 2-3 litters per year
  - average 12 pigs per litter
- Sows nurse their pigs for ~21 days when they are weaned
- Pigs then travel to a nursery or wean-to-finish farm
  - managed in groups of multiple litters
  - health and nutrition important
- Pigs remain in the nursery until they hit 50-60 lbs

# Hog Production Cycle (cont.)

A large indoor hog finishing barn with many pigs in pens. The pigs are packed closely together in long rows of metal pens. The barn has a high ceiling with exposed pipes and lights. The floor is made of wooden slats. The lighting is bright, coming from windows on the right side.

- Pigs are moved to the finishing barn, where they are managed in group pens
  - fed high energy diets to encourage lean muscle growth and lay down fat
  - daily health checks
- Market weight averages 280 lbs & approx. 7.5 months old
- Breeding farms develop new genetics
  - gilt farms provide replacements for culled sows
  - boars derive from maternal lines to produce gilts or terminal lines to produce market animals

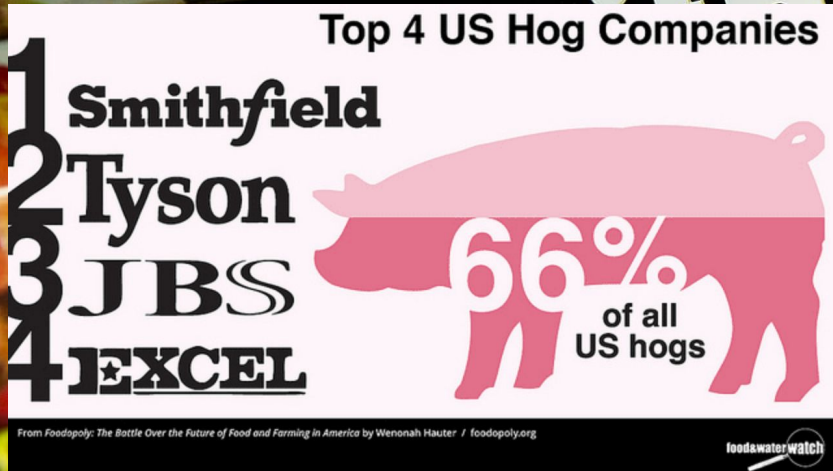


## HOGS = 20 MONTHS



*Hog producers need about 20 months to alter supply once a decision has been made to increase or decrease production.*

# Market Structure



- vertically integrated industry
  - over 60,000 pork producers, four companies own 66% of the sows in the U.S.
  - 13 companies with over 100,000 sows
- Contracted farms and co-op is the most common way to have hogs
  - Row-crop farmers beginning to build finishing barns

# Contract Feeding

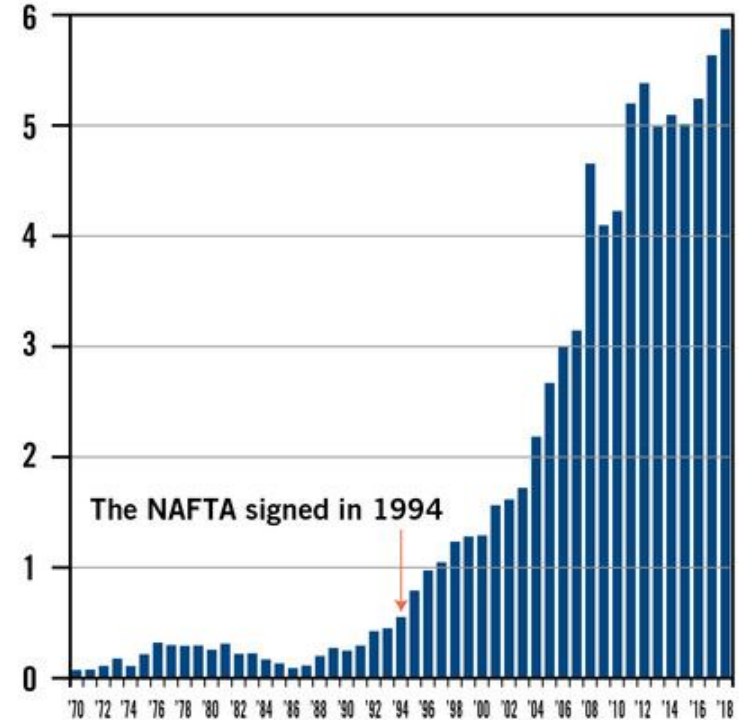
- Relatively new tactic that has changed the industry
- Companies like Smithfield and Tyson own the hogs, producers own the land and facilities
  - must meet company requirements on environment, technology, waste management, etc.
  - fed prescribed diet to finisher hogs
- Benefits:
  - increases cash flow - many have locked in pricing
  - decrease chemical fertilizer cost/use - hog lagoon affluent
- Risks:
  - Contract termination
  - High investment to build barns
  - Tight regulations

# Exports

- **Pork exports have been on a steady climb since 1994**
  - The US exports about 6 billion pounds of pork per year
- **Due to African Swine Fever, global exports are expected to increase by 10.5 million tons in 2020.**
  - COVID-19 is expected to dampen demand slightly
  - Pork exports are expected to be only slightly decreased compared to other livestock.

## U.S. Pork Exports

Billion pounds carcass



Source: USDA, Economic Research Service

Updated: 6.12.19



# Imports

A photograph of a pig in a pen, overlaid with a semi-transparent grey box containing text. The pig is lying on a bed of wood shavings. In the foreground, there is a black bowl filled with a yellowish feed. The pen is enclosed by a red metal frame and wire mesh.

- **The US imports less than 1 billion pounds of pork per year**
  - **Of the pork that does get imported, almost none of it is for consumption**
  - **The US imports breeding hogs from the EU**
- **The US has closed imports to many countries due to the African Swine Fever outbreak**

# Current Events

- African Swine Fever decimated China's pork populations, but China chose to look outside of the U.S. for pork due to trade war -  
<https://www.wsj.com/articles/u-s-pork-producers-didnt-bring-home-the-bacon-in-2019-11578479401?mod=searchresults&page=1&pos=16>
- Demand and supply for pork remains steady despite restaurant and institution closes in response to COVID-19 -  
<https://www.agriculture.com/livestock/hogs/how-the-pork-industry-is-shifting-to-a-new-normal-in-the-covid-19-pandemic>
- **BREAKING 04/15: Smithfield to close two more processing plants following Sioux Falls plant closer due to COVID-19 cases -**  
<https://www.wsj.com/articles/smithfield-to-close-more-pork-plants-deepening-coronavirus-farm-crisis-11586990622?mod=searchresults&page=1&pos=1>
- **Sioux Fall plant closing, reducing U.S. pork processing by 5% -**  
<https://www.wsj.com/articles/smithfield-ceo-warns-of-risks-to-pork-supply-11586730489?mod=searchresults&page=1&pos=7>

## Lean Hog Futures Continuous Contract Seasonality

# Futures

- **Pork futures have remained unchanged even with the announcement of the phase one trade deal with China**
  - The Phase 1 trade deal was supposed to increase US agricultural exports
  - This included US pork
- **In the past month pork futures have taken a drastic drop**
  - This is because of the uncertainty with COVID-19

EquityClock.com

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

# Sources

- <https://www.agriculture.com/livestock/hogs/want-to-contract-feed-pigs-heres-what-you-need-to-know>
- <https://www.agriculture.com/livestock/hogs/an-overview-of-pork-production-in-the-us>
- <https://www.agriculture.com/livestock/pork-powerhouses/pork-powerhouses-2019-expansion-continues>
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- <https://www.pork.org/facts/stats/structure-and-productivity/state-rankings-by-hogs-and-pigs-inventory/>
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- <https://www.pork.org/facts/stats/u-s-pork-exports/>

Questions?

