



Food Protection and Defense Institute

A Homeland Security Center of Excellence

May 6, 2020

COVID-19 Near-Term Issues Spotting in Food Supply Chain

Pork and Cattle Supply Chain and Mass Depopulation – UPDATE #10

Action Opportunity Update – May 6, 2020

- Critical path to issue resolution
 - Reopen pork processing facilities in consideration of worker safety with federal guidance and support
 - Reopening at reduced capacity helps alleviate, but does not solve issue
 - Prioritize processing of heaviest weight pigs currently in overstock that are still within processing equipment capacity
 - Evaluate weekend processing to enhance short-term capacity
 - Identify all available alternate distribution to consumers and address logistics and regulations to supply into those distribution channels
 - Monitor and address critical shortages in cold storage and containers for shipping
 - Euthanize and dispose of hogs under federal leadership, coordination, and assistance
 - Support pork producers and processors in achieving new equilibrium with financial and liability considerations
 - Implement coordinated federal, state, local, and private sector communication plans to mitigate adverse public reaction and actions to depopulation
 - Provide direct communication to consumers regarding food availability to mitigate panic buying and hoarding
- Implement a national plan to identify all available alternate distribution to consumers and address logistics and regulations to supply into those distribution channels
 - Establish a planning team with experience with representatives from FEMA, pork industry, food assistance networks, meat processors and butchers, industry renderers, restaurants, Food Protection and Defense Institute (FPDI), USDA/APHIS, USDA/FSIS, FDA, USDA/NIFA, USDA/CES, DHS/CMO, and DoD Veterinary Services



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- The projected hog overstock through October represents about ½lb per week of pork available to every adult American. The potential positive impact on the food insecure in the US is tremendous. If only a fraction could be diverted to food assistance networks.
- Coordinate federal, state, and local processing regulations, zoning, permitting for harvest and processing of animals in alternative supply chains
- Identify and coordinate cold storage and logistics for distribution in alternative supply chains
- Implement a national plan to manage the entire process of depopulation/culling and carcass disposal of the excess hogs in multiple states
 - Establish a planning team with experience with representatives from FEMA, pork industry, industry renderers, behavioral/mental health representatives, Food Protection and Defense Institute (FPDI), USDA/APHIS, EPA, DHS/CMO, and DoD Veterinary Services
 - Coordinate federal, state, and local process regulations, zoning, permitting for mass euthanasia/depopulation and disposal ([USDA Carcass Management Dashboard](#))
 - Identify the most appropriate and humane depopulation/culling methods and locations (e.g. slaughter facilities, on farm, etc.)
 - Identify and obtain permitting for disposal sites, whether incinerators or burial sites. Federal land should be considered as an option
 - Engage military for personnel and logistics support including a plan to manage public perception of such involvement with close coordination between FEMA, states, military, and DHS Public Affairs
 - Contracting refrigerated trailers and tractors to move the carcasses to disposal sites from the depopulation/culling locations.
 - Provide security support to control access to depopulation and disposal locations
- Implement a media plan for press coverage resulting from this process
 - Plan for negative media and protests from organized groups opposing animal agriculture
 - Plan to address consumer perception and discontent around food shortages and food waste
 - Plan security support for media personnel given potential for public protest



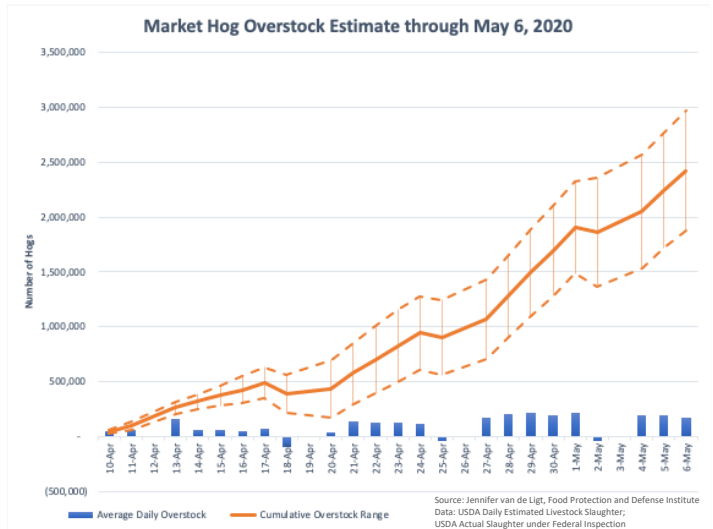
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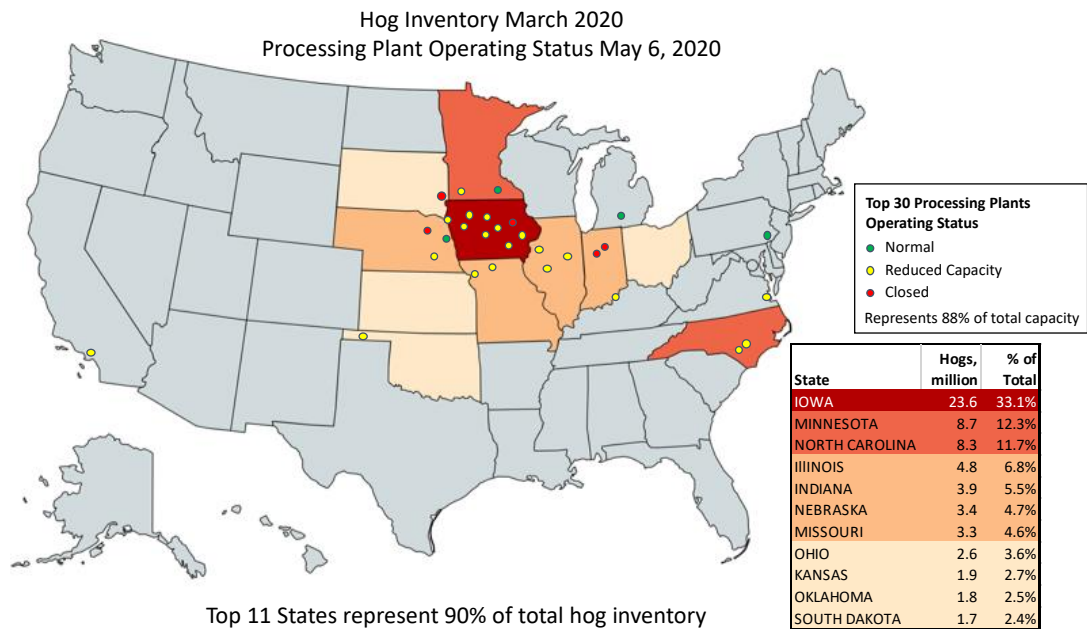
Situation Update – May 6, 2020

Since the previous update, the following developments have occurred:

- Daily Pork Slaughter and Overstock
 - Overstock estimates of above market weight hogs are about 2.4MM, to date, with uncertainty ranges from 1.9MM to 2.9MM that must be culled due to COVID-19 causing processing plant closure and reduced capacity (USDA Daily Estimated Livestock Slaughter; USDA Actual Slaughter under Federal Inspection)



- Pork processing capacity is reduced by approximately 38% which adds approximately 190,000 animals to the overstock amount each day. Capacity increased in 7 facilities, but declined in 3 plants. (Kerns & Associates courtesy of NPPC)



Source: Jennifer van de Ligt, Food Protection and Defense Institute
Data: USDA National Agricultural Statistics Service Quarterly Hogs and Pigs; Pork Checkoff US Pork Packers; Steiner Group courtesy of NPPC



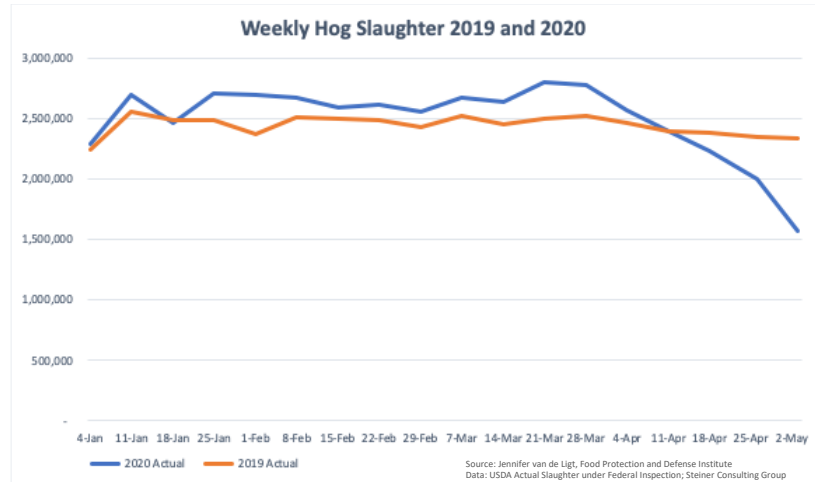
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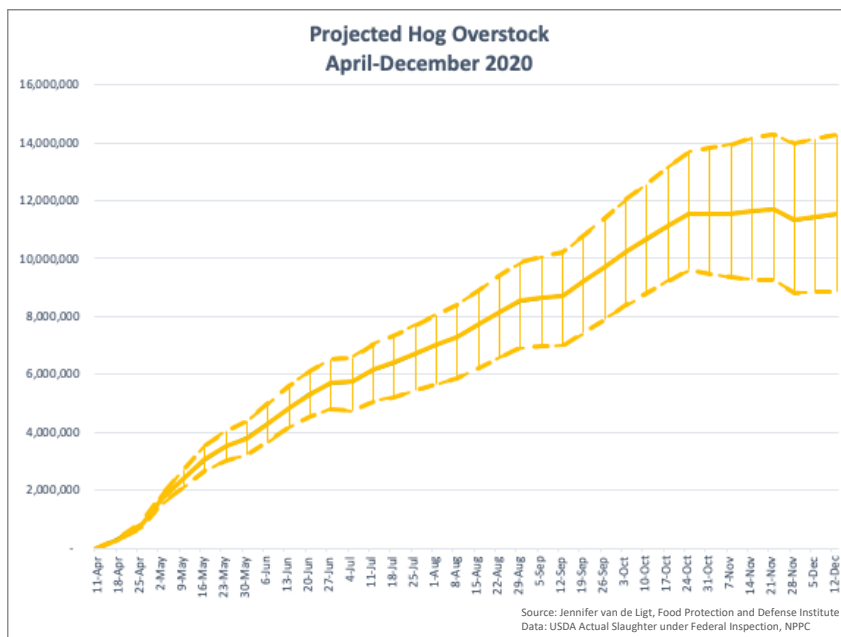
- Slaughter numbers were down by approximately 160,000 hogs for May 6 (312,000 hogs) as compared to a year ago (470,000 head) and to the same day of the week of April 3-9 (472,974 hogs). (USDA Daily Estimated Livestock Slaughter; USDA Actual Slaughter under Federal Inspection)

- Projected Year End Hog Overstock

- Year on year actual slaughter numbers are 6.4% higher in 2020 than 2019 in January-March (pre-pandemic). Overstock numbers have been adjusted to account for this industry growth. (USDA Actual Slaughter under Federal Inspection)



- Total hog overstock through December 2020 is projected to peak at about 11.5MM market weight hogs in late October with an uncertainty range of 11.5MM to 14.2MM animals



Assumptions

- 6-month growth phase
- No culling prior to April 10
- Hog inventory at 95% plant capacity through mid-October representing market conditions for pigs already born and in growth cycle prior to COVID-19
- Average plant capacity
 - 65% by week of May 10
 - 75% by week of Jun 21
 - 80% by week of Nov 1 – level expected to incorporate COVID-19 worker health and safety measures
- Young pig and sow culling (relative to Q1)
 - 5% for pigs reaching market weight in mid-September
 - 10% for pigs reaching market weight in mid-October
 - 25% for pigs reaching market weight in November
- The 25% reduction in herd size as compared to Q1 2020 and 80% plant capacity creates a pseudo-equilibrium

(Date: May 4, 2020)



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- Assuming a population of about 300MM adults, the 11.5MM hog overstock represents about ½lb of pork per week to every adult American for the next 20 weeks. The potential positive impact on the food insecure in the US is tremendous. If only a fraction could be diverted to food assistance networks.
- Hog Production Stats
 - Processing capacity is approximately 510,000 hogs/day. Pre-pandemic processing was operating at 95% of daily capacity first 3 months of 2020 (USDA Actual Slaughter under Federal Inspection; Steiner Consulting Group courtesy of NPPC)
 - An average slaughter weight hog at 288 lbs. that missed slaughter on April 10 would weigh between 325-338 lbs. on May 5. Hogs of this size cannot be processed because maximum weight in slaughter facilities is 340 lbs. due to equipment limitations. Each day approximately 200,000 hogs exceed the weight limitations for processing.
- Webinar
 - Above Ground Burial (AGB) Disposal - May 7, 2020 (Thursday) at 8 am CDT
 - South Dakota State University will be hosting a ZOOM meeting on their Above Ground Burial (AGB) project. Mr. Gary Flory, Virginia Department of Environmental Quality, will discuss the development of the process and his research at large swine units in the southern parts of the US. Dr. John McMaine, SDSU Ag & Biosystems Engineering, and Dr. Bob Thaler, Animal Science & Extension, will share the results of their trials started in June and December of 2019 in Brookings, SD. <https://sdstate.zoom.us/j/92838340343>
 - "Processing Plants and COVID-19: What we are learning about preventing employee illness" – May 8, 2020 (Friday) at 3:00 pm CDT (GMT -5)
 - University of Minnesota will be hosting Dr. Joni Scheftel DVM, MPH, DACVPM - Supervisor, Zoonotic Diseases Unit, Minnesota Department of Health. Please connect via: [Swine Seminar – Zoom](#)
- Recommendations from authoritative bodies
 - Updated [Recommendations for Swine Depopulation](#) – American Association of Swine Veterinarians, April 30, 2020
 - [Emergency Animal Mortality Management – Swine](#) – USDA



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- Letters from Elected Officials
 - [Avoiding Prolonged Death for Animals in Meat Industry](#) – Rep. Lloyd Doggett, May 4, 2020
 - [Miller, 10 AGs urge federal investigation of meatpacking practices – COVID-19 pandemic increases concern over market manipulation](#) – Iowa Dept of Justice, May 5, 2020

- Reopening facilities (This section contains exemplary material from multiple perspectives around the issue. Most focus on the issues of potential capacity and timing while assuring worker health during reopening.)
 - [Tracking Covid-19's impact on meatpacking workers and industry](#) – Investigate Midwest, May 6, 2020
 - “As of May 6, there have been at least 10,800 reported positive cases tied to meatpacking facilities in at least 170 plants in 29 states, and at least 45 reported worker deaths at 24 plants in 15 states.
 - [Map: COVID-19 meat plant closures](#) – Meat+Poultry, May 6, 2020
 - [Tracking Public Health and Social Measures](#) – WHO, May 5, 2020
 - Global dataset of public health and social measures applied during the COVID-19 pandemic
 - [How Are Companies Impacted by Labor Shortages?](#) – FoodSafetyTech, April 30, 2020
 - [Smithfield Nixes Meat Plant Workers' Suit Over Virus Safety](#) – Law360, May 5, 2020
 - [Tyson will reopen its biggest pork plant after a Covid-19 outbreak](#) – CNN, May 6, 2020
 - [Coronavirus In MN: JBS Pork Plant Worker Cautiously Optimistic About Reopening After Outbreak](#) – WCCO, May 5, 2020
 - Includes quote from Minnesota Department of Health
 - [Pork processing resumes at JBS plant shut down by pandemic](#) – May 6, 2020
 - [JBS Worthington, Min – COVID-19 Action Plans](#) - United Food and Commercial Workers, May 6, 2020
 - [To understand the danger of COVID-19 outbreaks in meatpacking plants, look at the industry's history](#) – The Conversation, May 6, 2020

- Alternate supply chains
 - ['Passion for Pork' connects Wisconsin producers, local meat processors](#) – National Hog Farmer, May 6, 2020



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- Pork producer media coverage (This section contains exemplary food shortage media coverage from multiple perspectives around the issue.)
 - [Carthage Veterinary Service COVID-19 Pork Industry Update May 5, 2020](#) -
– Carthage Veterinary Services, May 5, 2020
 - [Supply Chain Management Recommendations during Plant Closures](#)
 - [Nutritional Strategies to Managing Pork Market Disruptions](#) – Iowa Pork Industry Center, May 6, 2020
 - [Nutritional Strategies to Managing Pork Market Disruptions FAQ](#)
 - [Managing market hogs destined for meat lockers](#) – University of Minnesota Extension, May 4, 2020

- Depopulation media coverage (This section contains exemplary media coverage from multiple perspectives around the issue.)
 - [Lawmakers Urge Humane Killing of Pigs Backed Up Due to Slaughterhouses Closed by Covid-19](#) – Newsweek, May 6, 2020

- Food shortage media coverage (This section contains exemplary food shortage media coverage from multiple perspectives around the issue. At present, there are no indications of wide-scale food shortages although supply chain disruptions continue to create spot limited supply or out of stock situations.)
 - [Coronavirus In MN: As Meat Shortage Grows, Some Retailers Begin Rationing](#) – WCCO, May 6, 2020
 - [Kroger CEO: Customers will have meat during the coronavirus pandemic, so long as they are 'flexible'](#) – CNBC, May 6, 2020
 - [Toll of coronavirus being felt throughout food supply chain](#) – Ottumwa Courier, May 6, 2020
 - [Shoppers Could See Less Meat at Higher Prices Due to Coronavirus](#) – Successful Farming, May 6, 2020
 - [As Covid-19 hobbles the industrial meat industry, small producers are having a moment](#) – Food & Environment Reporting Network

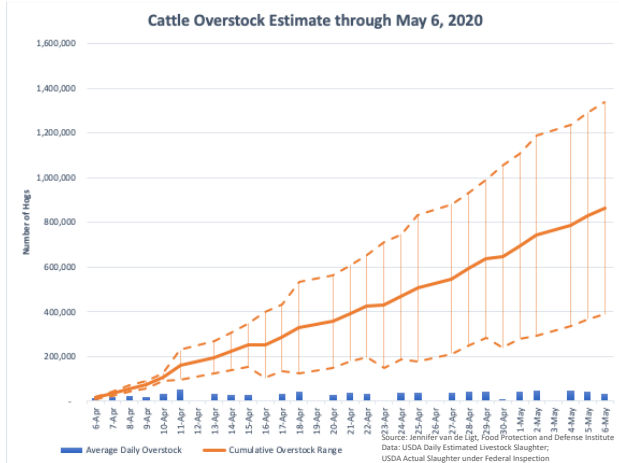
- Activist media coverage (This section contains exemplary activist media coverage related to the emergency response and should not be interpreted as the views of the author or the Institute.)
 - [Rather than Cull Millions of Livestock, Let's End Animal Agriculture](#) – Harvard Political Review, May 4, 2020
 - [COVID-19 exposes U.S. meat supply's dependence on a few large plants](#) – Marketplace, May 6, 2020



Cattle Update

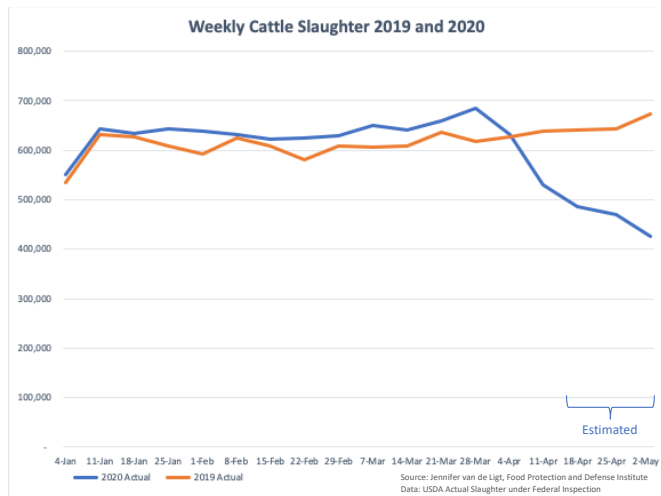
- Daily Cattle Slaughter and Overstock

- Overstock estimates of target market weight cattle is about 800,000, to date, with uncertainty ranges from 400,000 to 1.2MM that were not processed due to COVID-19 causing processing plant closure and reduced capacity (USDA Daily Estimated Livestock Slaughter; USDA Actual Slaughter under Federal Inspection)



- Slaughter numbers were down by approximately 40,000 cattle for May 6 (82,000 head) as compared to a year ago (119,000 head) and to the same day of the week ending April 4 (119,400 head). (USDA Daily Estimated Livestock Slaughter; USDA Actual Slaughter under Federal Inspection)

- Year on year actual slaughter numbers are 4.6% higher in 2020 than 2019 in January-March (pre-pandemic). Overstock numbers have been adjusted to account for this industry growth. (USDA Actual Slaughter under Federal Inspection)



- Slaughter numbers for the week ending May 3 were down approximately 38%. (USDA Daily Estimated Livestock Slaughter; USDA Actual Slaughter under Federal Inspection)

- Cattle Production Stats

- Cattle processing capacity is approximately 128,000 head/day. Pre-pandemic processing was operating at 91% of daily capacity for the first 3



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- months of 2020 (USDA Actual Slaughter under Federal Inspection; Steiner Consulting Group courtesy of NPPC)
- Average slaughter weight of cattle is 1350-1400 lbs. Cattle processing weights are slightly more flexible on weight requirements than hog processing. (USDA Actual Slaughter under Federal Inspection)
 - Cattle husbandry practices provide greater options to throttle throughput during processing plant disruptions than hog production. This is due to both the ability to modify feeding practices and the distributed nature of cow-calf operations placing cattle into finishing operations. The economic impact of this throttling is significant, but throttling may be able to mitigate the need for mass depopulation.
- Cattle media update (This section contains exemplary media coverage from multiple perspectives around the issue.)
 - [Cattle ranchers adapt to growing demand in beef products during COVID-19](#) – KATV, May 5, 2020
 - [Coronavirus Update: California Ranchers Say Pandemic Straining Processing, Distribution Of Beef](#) – KPIX, May 6, 2020
 - [As beef shortages take place due to COVID-19 outbreak, local rancher sees sales surge](#) – KMOV, May 5, 2020

Previous updates available upon request