



# Food Protection and Defense Institute

A Homeland Security Center of Excellence

April 29, 2020

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

### Pork Supply Chain and Mass Depopulation – UPDATE #4

#### Action Opportunity Update – April 29, 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
  - 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 with federal support including consideration of Defense Production Act ([Executive Order on Delegating Authority Under the DPA with Respect to Food Supply Chain Resources During the National Emergency Caused by the Outbreak of COVID-19](#))
  - Manage public perception to mitigate adverse public reaction and actions to depopulation through coordinated federal, state, local, and private sector communication plans
  - Provide direct communication to consumers regarding food availability to mitigate panic buying and hoarding
  
- 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, Food Protection and Defense Institute (FPDI), USDA/APHIS, EPA, DHS/CMO, and Northern Command
  - Coordinate federal, state, and local process regulations, zoning, permitting for mass euthanasia/depopulation and disposal ([USDA Carcass Management Dashboard](#))
  - 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



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- 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
- Contracting refrigerated trailers and tractors to move the carcasses to disposal sites from the depopulation/culling locations. Use military personnel to assist in loading and to drive the trucks.
- 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

## Situation Update – April 29, 2020

Since the previous update, the following developments have occurred:

- Daily pork slaughter numbers were down by approximately 200,000 animals for April 29 (271,000 head) as compared to a year ago (471,000 head) and to the Wednesday of the week ending April 10 (478,000 head). Processing capacity is approximately 500,000 hogs/day. ([Daily Estimated Livestock Slaughter \(SJ\\_LS710\)](#))
  - Estimates to date range from 1,200,000 (USDA slaughter numbers) to 1,400,000 (industry estimate) market weight hogs – minimum 280 lb. each, many are in excess of 300 lb. at this point – that must be culled due to COVID-19 causing processing plant closure and reduced capacity
  - Pork processing capacity is reduced by approximately 44% (industry estimate) which adds 200,000+ animals to the depopulation amount each day
  - [Pork Checkoff map of current capacity](#)
  - “[Congressman] Peterson [said](#) that the meat processors are working with state and federal representatives to find ways to safely resume processing. He said it could take two to three weeks or more before processing can be resumed. It's likely that processing when it resumes will have to occur at a slower pace due to safety needs.” – West Central Tribune, April 27, 2020
  - Euthanasia started – JBS Worthington euthanized 3,000 hogs April 29, 2020 – [Reuters](#)



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- President Trump delegates DPA with respect to Food Supply Chain to USDA
  - [Executive Order on Delegating Authority Under the DPA with Respect to Food Supply Chain Resources During the National Emergency Caused by the Outbreak of COVID-19](#)
  - [USDA To Implement President Trump's Executive Order On Meat and Poultry Processors](#)
  - [President Donald J. Trump Is Taking Action To Ensure The Safety Of Our Nation's Food Supply Chain](#)
- Guidance issued for worker safety in processing facilities
  - [Meat and Poultry Processing Workers and Employers](#) - CDC
  - [Use of Respirators, Facemasks, and Cloth Face Coverings in the Food and Agriculture Sector During Coronavirus Disease \(COVID-19\) Pandemic](#) – FDA
  - [Coronavirus \(COVID-19\) Pandemic: Addressing PPE Needs in Non-Healthcare Setting](#) – FEMA
- SwineCast 1103, At The Meeting - [A Veterinarian Coping With COVID-19](#)
  - Perspective from JBS Live Pork on depopulation and disposal - podcast
- Humane culling methods should be prioritized ([On-Farm Euthanasia of Swine Recommendations for the Producer](#))
  - When considering culling methods, the human safety and mental health impact should also be evaluated and considered.
  - [Congressman Peterson says plans being developed to euthanize hogs at JBS Pork in Worthington](#) – “Congressman Peterson said JBS Pork has agreed to re-engineer its plant to euthanize the hogs using the same processes as it does when slaughtering. Instead of continuing on the conveyor line for processing, the carcasses will be removed...The plans for handling the euthanized animals are still being developed, and all options are being examined, Peterson said. The Worthington plant has the capacity to euthanize roughly 13,000 hogs per day, he said.” – West Central Tribune, April 27, 2020
  - [JBS reopens U.S. pork plant to put down pigs, dispose of carcasses, not produce meat](#) – up to 13,000 hogs per day, plant started euthanizing 3,000 pigs on Wednesday – Reuters, April 29, 2020
- Disposal methods may include rendering, incineration, composting, and burial ([USDA Carcass Management Decision Cycle](#))
  - Selection of methods must consider local conditions related to availability of methods and local quantity of hogs being culled
  - Preparation for a potential African Swine Fever outbreak indicated that grinding with a carbon source to create compost and soil amendments may



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- be a practical solution for large numbers of hogs (2019 collaboration between USDA APHIS, University of Minnesota, Minnesota Department of Agriculture, and N.C. Department of Agriculture & Consumer Services)
- Disposal methods may require mass burial sites due to large volumes of hogs
- Pork shortage media coverage accelerating which will lead to panic buying and hoarding; little communication on potential impact of frozen stores to cover short-term disruption
  - [U.S. Pork Production Devastated with Meat Shortages Expected from This Week as Pigs Euthanized, Plants Closed](#) – Newsweek, April 28, 2020 – Lead sentence “Pork shortages are likely within days following the closures of processing facilities due to coronavirus-related worker illness. High pork prices are likely in the coming weeks.”
  - [USDA Cold Storage March 2020](#) – released April 22, 2020 – overall frozen meat stores down from February but higher than March 2019, overall frozen poultry stores up from February but slightly lower than March 2019
  - [Smaller meat processors step in to help prevent shortage in Wisconsin](#) – WSAW, April 29, 2020
  - [Meat Giants From Brazil Are Ready to Cover American Shortfalls](#) – Bloomberg, April 28, 2020



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April 28, 2020

## Update #3

### Action Opportunity Update – April 28, 2020

- Critical path to issue resolution
  - Euthanize and dispose of hogs under federal leadership, coordination, and assistance
  - 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
  - Support pork producers and processors in achieving new equilibrium with financial and liability considerations with federal support including consideration of Defense Production Act
  - Manage public perception to mitigate adverse public reaction and actions through coordinated federal, state, local, and private sector communication plans
  - Provide direct communication to consumers regarding food availability to mitigate panic buying and hoarding
  
- 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, Food Protection and Defense Institute (FPDI), USDA/APHIS, EPA, DHS/CMO, and Northern Command
  - Coordinate federal, state, and local process regulations, zoning, permitting for mass depopulation and disposal ([USDA Carcass Management Dashboard](#))
  - 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.
  - Identify the most appropriate 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



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- Contracting refrigerated trailers and tractors to move the carcasses to disposal sites from the depopulation/culling locations. Use military personnel to assist in loading and to drive the trucks.
- 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

## Situation Update – April 28, 2020

Since the previous update, the following developments have occurred:

- Daily pork slaughter numbers were down by approximately 200,000 animals for April 28 (283,000 head) as compared to a year ago (471,000 head) and to the Tuesday of the week ending April 10 (482,000 head). Processing capacity is approximately 500,000 hogs/day. ([Daily Estimated Livestock Slaughter \(SJ\\_LS710\)](#))
  - Estimates range from 1,000,000 (USDA slaughter numbers) to 1,200,000 market weight hogs – minimum 280 lb. each, many are in excess of 300 lb. at this point – must be culled due to COVID-19 causing processing plant closure and reduced capacity
  - Each day pork processing facilities have reduced harvest at the current level (about 40% of capacity) an additional 180,000+ animals will be added to the depopulation amount ([Pork Slaughter Plant Update – 36% Idled](#))
  - More processing plant closures or reduced capacity exacerbate the issue
- Congressional leaders and Governors are sending letters to Pence and the Coronavirus Task Force outlining the issue and critical aspects to be addressed. They requested consideration of the Defense Production Act and support for packing plant operations, humane euthanasia of pigs, indemnity, and mental health assistance for those involved in the depopulation. (<https://www.grassley.senate.gov/sites/default/files/lowa%20group-2020-covid-pork-letter-1.pdf>)
- President Trump to sign executive order to keep meat processing open
  - [“Trump to Order US Meat Plants to Stay Open Amid Pandemic”](#) – Bloomberg, April 28, 2020



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- [Trump to issue order to keep meat processing plants open amid coronavirus crisis](#)- CBS, April 28, 2020
- Major media outlets amplifying messages indicating food shortages are imminent
  - Messaging will likely lead to panic buying and hoarding and will increase pressure on the supply chain by amplifying perceived shortages
  - [Piglets aborted, chickens gassed as pandemic slams meat sector](#) – Reuters, April 28, 2020
  - [“No Tyson, the meat system isn’t collapsing”](#) – The Counter, April 27, 2020 (Twitter thread)
  - Original Tyson posting most media outlets are citing - [Feeding the Nation and Keeping Our Team Members Healthy](#) – April 26, 2020
- Lawsuits from workforce in meat processing facilities are starting
  - [Lawsuit: Smithfield plant forced workers to crowd together as COVID-19 spread in its other plants](#) – Investigate Midwest, April 28, 2020
  - [Smithfield Foods employee sues over working conditions amid coronavirus crisis](#) – ABC, April 24, 2020
- Although the pork supply chain is currently facing the most significant issue, the beef and poultry supply chains are also facing significant processing capacity reductions and are considering or have already begun depopulation of livestock regionally
  - [Nearly 2 million chickens at Eastern Shore farms set to be destroyed because of coronavirus-related plant shortages](#) – Baltimore Sun, April 24, 2020



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April 27, 2020

## Update #2

### Action Opportunity Update – April 27, 2020

- Critical path to issue resolution
  - Euthanize and dispose of hogs under federal leadership, coordination, and assistance
  - 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
  - Support pork producers and processors in achieving new equilibrium with financial and liability considerations with federal support including consideration of Defense Production Act
  - Manage public perception to mitigate adverse public reaction and actions through coordinated federal, state, local, and private sector communication plans
  
- 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, Food Protection and Defense Institute (FPDI), USDA/APHIS, EPA, DHS/CMO, and Northern Command.
  - Coordinate federal, state, and local process regulations, zoning, permitting for mass depopulation and disposal ([USDA Carcass Management Dashboard](#))
  - 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.
  - Identify the most appropriate 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.





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- Contracting refrigerated trailers and tractors to move the carcasses to disposal sites from the depopulation/culling locations. Use military personnel to assist in loading and to drive the trucks.
- 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.

## Situation Update – April 27, 2020

Since the April 25, 2020 Update #1, the following developments have occurred:

- Daily pork slaughter numbers were down by approximately 150,000 animals for April 27 (318,000 head) as compared to a year ago (468,000 head) and to the Monday of the week ending April 10 (477,000 head). ([Daily Estimated Livestock Slaughter \(SJ\\_LS710\)](#))
  - Estimates range from 750,000 (USDA slaughter numbers) to 1,000,000 market weight hogs – minimum 280 lb. each, many are in excess of 300 lb. at this point) with no available pork processing facility to harvest them
  - Each day pork processing facilities are closed at the current level (about 25% of capacity) an additional 100,000+ animals will be added to the depopulation amount.
  - More processing plant closures or reduced capacity exacerbate the issue.
- Euthanasia and disposal require massive federal assistance
  - Local and state capacity are overwhelmed
  - Regulations at the federal level must be met and may need ‘flexibility’
    - USDA and EPA manage carcass disposal ([Carcass Management Dashboard](#))
- Minnesota discussed depopulation over the weekend with a consortium of producers, producer associations, veterinarian, state and federal authorities.
  - Information sources indicate depopulation will begin with the first 200,000 swine in MN the week of April 27 with the same amount each week for six or more weeks.
  - JBS Worthington may reopen a portion of its facility to assist in euthanasia. However, their capacity will alleviate only 10% of the issue



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- [Coronavirus In Minnesota: 200K Pigs May Be Put Down Due To Processing Plant Closures](#) – CBS, April 26, 2020
- Iowa has a greater number of hogs for depopulation (estimated at double the Minnesota numbers) and may already be discussing options with the National Guard
- Major media outlets have begun reporting on the upcoming mass depopulation
  - [Pork Industry, USDA Discuss Euthanizing Hogs After Coronavirus Closes Plants](#) – Wall Street Journal, April 27, 2020
  - ['The food supply chain is breaking,' Tyson says as plants close](#) – CNN, April 26, 2020
- Media coverage warning of food shortages and increased food waste will place tremendous public scrutiny on the depopulation, disposal and recovery process
  - ['The Food Supply Chain Is Breaking.' Tyson Foods Warns of Meat Shortage as Plants Close Due to COVID-19](#) – Time, April 26, 2020
  - The CNN and Time articles were subsequent to a Tyson sponsored full-page ad in the New York Times – [photo posted on Twitter by @anaswanson](#)



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April 25, 2020

Update #1

## Action Opportunity Update – April 25, 2020

- Prepare to assist pork producers in disposal of large quantities of market weight hogs in coordination with USDA ([Carcass Management Dashboard](#)) because mass destruction of market weight hogs is imminent
  - USDA issued “[USDA APHIS Establishing Coordination Center to Assist Producers Affected by Meat Processing Plant Closures](#)” on April 24, 2020
  - Planning is currently underway on April 25, 2020 with state veterinarians to begin mass depopulation immediately
- Develop a national plan to manage the entire process of depopulation/culling and carcass disposal of the excess hogs in multiple states
  - A planning team with experience in such operations should be composed of representatives from FEMA, pork industry, Food Protection and Defense Institute (FPDI), USDA/APHIS, EPA, DHS/CMO, and Northern Command.
  - Plan should consider potential military involvement and how to manage public perception of such involvement with close coordination between FEMA, states, military, and DHS Public Affairs.
  - Plan should consider identifying the most appropriate depopulation/culling locations (e.g. slaughter facilities, on farm, etc.)
  - Plan should consider contracting refrigerated trailers and tractors to move the carcasses to disposal sites from the depopulation/culling locations. Consider use of military personnel to drive the trucks as the nature of the task will be highly objectionable for many potential contract drivers as was the case after Hurricane Floyd in 1999.
  - Disposal sites, whether incinerators or burial sites, will need evaluation. The environmental and social issues will be significant given the number of hog carcasses needing disposal could exceed 500,000 per week as estimated by current closures and reduced capacity of pork processing facilities. In North Carolina following Hurricane Floyd, it was found that lined pits for up to 15,000 carcasses was the maximum manageable. If burial becomes the preferred disposal method, multiple pit burials may be needed at multiple sites across multiple states. The impact on the local community from placing these burial sites near populated areas will be significant and community and



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political push back should be expected due to land value and odor concerns. Therefore, serious consideration must be given to placing these burial sites on remote industry or federal government owned land where the long-term impact will have little or no public consequences.

- Develop a media plan for press coverage resulting from this process.
  - The depopulation/culling and carcass disposal will be perceived by many organized groups as distasteful, inhumane, and possibly criminal.
  - This will be exacerbated by the difficulties that consumers are experiencing in the food assistance network and supply chain disruptions in grocery retail. The disconnect between consumers seeing empty shelves and media coverage of animal destruction will create public tension and discontent.
  - Given the social and media reaction to swine depopulation/culling and disposal in several foreign countries as the result of the recent outbreaks of African Swine Fever, the operation may also require security support.

## Situation Update – April 24, 2020

Since the original report, the following developments have occurred:

- Weekly pork slaughter numbers were down by at least 400,000 animals for the week ending April 24 (1.80 million head) and 200,000 animals for the week ending April 17 (2.02 million head) as compared to a year ago (2.20 and 2.30 million head, respectively) and to the week ending April 10 (2.33 million head). This indicates that there are currently over 600,000 market weight hogs (about 280 lb. each) with no available pork processing facility to harvest them ([Daily Estimated Livestock Slaughter \(SJ\\_LS710\)](#)).
- Private sector reports that local, select farms began culling this week at both the market weight hog level and at the weanling piglet level. This culling is a direct impact of the pork processing facilities closure due to COVID-19 infection rates in the processing facilities workforce.
- No coordinated plans are in place for large-scale depopulation/culling and disposal.
- Private sector reports indicate that assistance may be needed for humane large-scale mass depopulation and assistance for disposal will be required.
  - Ideas for mass depopulation being articulated include collaboration with the front-end of pork processing facilities where considerably less workforce labor is needed to stun and kill excess hogs, ventilation shut down, carbon dioxide, chemical use, etc. Following depopulation move carcasses must be moved to distant disposal sites. This includes potential military support for



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the movement and disposal similar to that provided in the aftermath of Hurricane Floyd.

- Private sector concerns are also focused on length of time pork processing facilities will be closed. Several major facilities, each at approximately 4% of the total capacity, are closed 'indefinitely'. There is also concern that when these plants do re-open that it may be at reduced throughput for an unknown period of time which will extend the need to aggressively cull animals.
- Culling piglets and sows will extend supply chain recovery time. It takes approximately 6 months from piglet weaning to market weight which averages about 280 lb. per hog.
- Market weight hogs (280 lb live weight) grow at a rate of about 1.5-2 lbs per day. Processing facilities cannot handle hogs over 340 lb live weight due to equipment size and limitations. As a result, available shackle space in processing facilities for hogs over 300 lb becomes very limited. It takes about 10 days to exceed these 300 lb weight from the normal market weight. Pork producers are using many strategies to slow growth to market weight. However, this is creating significant space issues in barns as younger stock continues to enter the already at capacity barn space.
- Many local and national organizations who are opposed to the consumption of food animals will vehemently object to the killing of these animals in this manner. There will also be a significant reaction to the destruction of food animals when so many Americans are out of work and in need of food assistance.
- These considerations apply to poultry processing to where plant closures are beginning.



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April 22, 2020

## Original Report

### Action Opportunity (April 22, 2020)

Prepare to assist pork producers in disposal of large quantities of market weight hogs in coordination with USDA ([Carcass Management Dashboard](#)) because mass destruction of market weight hogs is imminent

### Background Context (April 22, 2020)

The African Swine Fever (ASF) outbreak in China in 2018-19 resulted in a loss of approximately 55% of the Chinese swine herd which is about a 44% decrease in Chinese pork production. This decrease is more than the amount of pork produced by US, Brazil, Mexico, Canada, Germany, and Poland combined. The ASF outbreak in China resulted in a net decrease of approximately 7% of the total global meat supply (all species) and about 20% of the total global pork supply. As result of these net decreases, US pork producers accelerated production. By the end of 2019, pork exports had surged leading while pork production was near capacity and active expansion of capacity was underway. Total production capacity in the US was expected to be reached by mid-2020.

Pork processing facilities capacity was estimated at approximately 500,000 head per day across the US with capacity centered in the Upper Midwest and North Carolina in mid-April 2020. As of April 21, 2020, it is reported that about 20-25% of the pork processing capacity has been lost in the Upper Midwest (MN, IA, SD) due to plant closures or slowdowns related to COVID infections. This means that approximately 100,000 market weight hogs per day currently do not have a facility capable of processing them and will need options for disposal. Given the near capacity situation across the market, flexibility to ship to an alternate processing facility is limited. In addition, North Carolina reported on April 22, 2020 that coronavirus is beginning to affect its pork processing capacity with COVID infections at five hog and poultry processing plants. These processing facilities are not yet closed, but the possibility exists that the pork supply chain disruption seen in the Upper Midwest will also occur in the coming weeks in NC.

Pork producers are attempting a variety of interventions to slow the growth of their animals to avoid depopulation of market weight hogs. However, with the quantity of animals



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reaching market weight each day and the high likelihood that additional processing facilities will temporarily or indefinitely close for worker health reasons, it is near certain that mass depopulation of swine herds will be required.

In addition, pork producers are also aggressively culling younger animals to slow overall production. Disposal capacity for these pigs should also be considered. Regaining production when young animals are culled will extend recovery time for the supply chain when processing facilities reopen potentially resulting in longer term tight pork supplies at retail.

This near-term issues spotting report focuses on pork production; however, it is important to note that similar issues with capacity exist in poultry and beef processing. Poultry producers are also depopulating barns and destroying eggs to throttle production. Beef producers have slightly more flexibility with the slower growth rate of their animals and the ability to keep young stock on pasture for extended periods of time.

## **Supporting Documentation** (April 22, 2020 – additional support within situation updates)

African Swine Fever Chinese pork production impact statistics. Private sector confidential. 2019. (Note the estimates provided are higher than official Chinese statistics and were gathered by a private sector US partner with numerous assets in China)

Daily Livestock Report. CME Group. April 13, 2020.

[Coronavirus at meat packing plants worse than first thought, USA TODAY investigation finds.](#) USA Today. April 22, 2020.

['Horrible choices': Iowa livestock producers may have to euthanize pigs as packing plants struggle.](#) Des Moines Register. April 22, 2020.

[Coronavirus invading N.C. meat processing plants.](#) North Carolina Health News. April 22, 2020.