Too Fast, Too Furious: Slaughterhouse Line Speeds In The Era Of Covid-19

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Too Fast, Too Furious:
Slaughterhouse Line Speeds in the Era of Covid-19

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Abstract
Since 1998, the United States Department of Agriculture (USDA) has allowed meat companies to increase slaughter line speeds in order to increase production of meat and poultry. The USDA grants approvals known as “line speed waivers” that bypass the requirements of current speed and inspection regulations. During the Covid-19 pandemic, slaughterhouses became epicenters of Covid-19 outbreaks, which called into question safety regulations established at these facilities. The USDA continued to grant line speed waivers despite evidence that faster line speeds result in increased worker injuries, animal welfare violations, environmental protection violations, food safety violations, and higher risk of Covid-19.

In an effort to combat health and safety risks, Congress introduced the Safe Line Speeds During Covid-19 Act in July 2020. The act places a moratorium on the USDA’s ability to grant line speed waivers. This document reviews the health impact of slaughter line speeds, and analyzes the potential outcomes and impact of the current policies and the newly submitted act. It explores how slaughter line speeds impact the short-term and long-term health and safety of slaughterhouse workers and the general public.

Literature was reviewed from PubMed, Regulations.gov, the Government Accountability Office, and the Occupational Safety and Health Administration (OSHA). Data was collected from existing reports from organizations such as the Food and Water Watch, Center for Biological Diversity, Human Rights Watch, National Employment Law Project, Food and Environment Reporting Network, Oxfam America, the Center for Food Safety, Southern Poverty Law Center, and the Environmental Integrity Project. Published data and reports from NGOs were reviewed and included in
the analysis. Covid-19 data were taken from county-level and state health departments, and corroborated with New York Times Covid-19 data and CDC data. Further information was gathered and corroborated through reputable journalist sources, such as The New York Times and ProPublica.

Increasing slaughter line speeds increases harm and health risks to slaughterhouse workers, consumers, and community members, which has been further exacerbated during the Covid-19 pandemic. Slaughter line speeds are a seemingly minute policy that have major effects on the food system, slaughterhouse workers, environmental pollution, animal welfare, and population health. The Safe Line Speeds During Covid-19 Act will have important implications for public health and the future of food system policies.
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Terms and Abbreviations

**Meatpacking facility**: an establishment that handles the slaughtering, processing, packaging, and distribution of meat from animals.

**Slaughterhouse**: a building where animals are killed or butchered for human consumption.

**Poultry**: domestic fowl most commonly used for human consumption, such as chickens, turkeys, ducks, and geese.

**Swine**: pig(s).

For the purposes of this study the terms “meatpacking facility” and “slaughterhouse” are used interchangeably because they both entail the slaughtering of animals, which requires a slaughter line speed.

**CAFO**  Concentrated Animal Feeding Operation
**DOL**  Department of Labor
**GAO**  Government Accountability Office
**FSIS**  Food Safety and Inspection Services
**NPIS**  New Poultry Inspection System
**NSIS**  New Swine Inspection System
**MOU**  Memorandum of Understanding
**USDA**  United States Department of Agriculture
Background
In January 2021, the House Select Subcommittee on the Coronavirus Crisis launched an investigation into the Covid-19 outbreaks at meatpacking plants around the country. By April 2020, as the virus spread and claimed the lives of hundreds of thousands of Americans, meatpacking facilities became “hotspots” for Covid-19. Workers stand shoulder to shoulder working on fast-paced slaughter lines, unable to safely physically distance themselves from each other in poorly ventilated spaces.¹ Meat companies such as Tyson and Smithfield fail to offer paid sick leave to their employees, or sufficient personal protective equipment, creating a perfect breeding ground for a Covid-19 outbreak.² As Covid-19 spread rapidly through slaughterhouses, the inhumane conditions that preceded the pandemic revealed themselves; increased slaughter line speeds - the literal speed at which animals are slaughtered within a slaughterhouse - put workers at higher risk of physical injuries and illness, and leave the general population vulnerable to the harmful effects of environmental protection violations, and the potential spread of infectious zoonotic diseases. Food policies have a large and lasting impact on communities, from the individual to the population level. Slaughter line speeds are one such policy that have a critical effect on all areas of public health including climate change, infectious disease, animal welfare, and occupational health and safety.

Over the past decade, line speeds have continued to increase at alarming rates. The maximum speed at which poultry companies can run their processing lines has

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¹ (Meat and Poultry Processing Workers and Employers | CDC, n.d.)
² (After Hundreds of Meatpacking Workers Died From COVID-19, Congress Wants Answers — ProPublica, n.d.)
doubled in the last 35 years.\(^3\) The current statutory slaughter line speed for poultry, as mandated by the United States Department of Agriculture (USDA), is 140 birds per minute. For pigs, it is 1,106 pigs per hour. However, the USDA grants waivers to the requirements of current speed and inspection regulations. The waivers allow a maximum speed of 175 birds per minute, and eliminate slaughter speed limits altogether for pigs.

Line speeds are determined based on the number of animal carcasses an official inspector is able to inspect once they have been slaughtered.\(^4\) In 1998, the USDA increased slaughter line speeds in a select number of slaughterhouses as a pilot project. Twenty chicken facilities and four pig facilities were appointed to increase line speeds as fast as they wanted, so that the USDA could document whether food safety standards could be maintained while the slaughter process sped up.\(^5\) The intent was to speed up slaughtering to increase production and therefore increase profit. This pilot project also removed most official USDA inspectors from the slaughter line and handed their responsibilities over to company employees.

In 2012, the USDA proposed the experiment become permanent, with the maximum line speed for chickens set at 175 birds per minute. This proposal was met with harsh backlash from workers’ rights advocates, animal welfare groups, and environmental protection groups. The Food Safety and Inspection Services (FSIS) and USDA received over 175,000 statements opposing the rule during the public comment period, and the increase in line speeds was removed from the final rule.

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\(^3\) (Lives on the Line: The High Human Cost of Chicken | Oxfam America 2016)
\(^4\) (Civil Action Case 6:19-cv-06910 | United States District Court for the Western District of New York)
\(^5\) (Setting the Record Straight on the Obama Administration’s Privatized Poultry Inspection System | Food & Water Watch, n.d.)
The National Chicken Council and the National Pork Board have continuously pushed for faster line speeds because they want to increase efficiency, improve production methods, and keep up with global marketplace competition. (Slaughter facilities in Germany and Brazil, for example, were running their line speeds up to 200 birds per minute in 2017.) In a petition to adopt a new inspection system and waive slaughter line speed limits, the National Chicken Council stated it would be a step towards "leveling the playing field within the U.S. chicken industry, eliminating competitive barriers between the U.S. and international chicken producers, [and] removing arbitrary limitations on operational control in establishments." The "arbitrary limitations" mentioned, neglect the serious dangers associated with faster line speeds.

In September 2017, FSIS rejected another petition from the National Chicken Council to allow faster line speeds. Instead FSIS offered individual slaughter facilities the option to request a waiver for existing line speed requirements, so they can operate at the new maximum speed. This announcement by FSIS was made with neither public comment period nor public transparency and was uniformly opposed by food safety, animal welfare, and workers’ rights organizations. In 2018 the USDA began accepting applications from poultry facilities requesting waivers to operate at the new maximum line speed, 175 birds per minute.

As the Covid-19 pandemic devastated the U.S. in 2020, the USDA continued to approve line speed waivers for 15 additional poultry plants, thereby endangering more lives. Statutory line speeds are already dangerous. Chicken processing facilities have

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6 (Poultry Inspectors Check 2 Birds per Second. They’re Being Asked to Speed Up, n.d.)
7 (Poultry Inspectors Check 2 Birds per Second. They’re Being Asked to Speed Up, n.d.)
higher injury rates than coal mines or construction sites, and the highest rates of finger amputations.\(^8\) According to a report from the Southern Poverty Law Center, 78% of workers in poultry processing facilities report the standard line speeds set at 140 birds per minute make working conditions less safe and exacerbate existing injuries.\(^9\) Severe injury rates have been recorded in poultry slaughter facilities operating at standard speeds, and even from facilities operating between 90 and 100 birds per minute.\(^10\) Increased line speeds make it difficult for workers to maintain physical distancing, placing them at greater risk of contracting or spreading Covid-19.

In July 2020, Representatives Cory Booker (New Jersey), Marcia Fudge (Ohio), Rosa Delauro (Connecticut), and Bennie Thompson (Mississippi) introduced the Safe Line Speeds During Covid-19 Act to Congress. The primary purpose of the bill is to:

- Temporarily suspend all active waivers issued by USDA related to line speeds at meat and poultry establishments
- Suspend the USDA’s authority to issue new waivers
- Suspend implementation of, and conversion to, the New Swine Slaughter Inspection System established under USDA’s final rule published on Oct. 1, 2019
- Prohibit the USDA from using federal funds to develop, propose, finalize, issue, amend, or implement any policy, regulation, directive, constituent

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\(^8\) (Association of Poultry Processing Industry Exposures With Reports of Occupational Finger Amputations: Results of an Analysis of OSHA Severe Injury Report (SIR) Data - PubMed, n.d.)
\(^9\) (Unsafe at These Speeds: Alabama’s Poultry Industry and its Disposable Workers | Southern Poverty Law Center, 2013)
update, or any other agency program that would increase line speeds at meat and poultry establishments\(^{11}\)

- Require the Government Accountability Office to review the actions taken by USDA, the Department of Labor (DOL), the Department of Health and Human Services (HHS), and meat and poultry establishments in response to the Covid-19 pandemic, including:
  - all policies and regulations relating to inspection of establishments during the Covid-19 emergency
  - the extent to which those establishments have implemented guidance and recommendations to space workers 6 feet apart on production lines and in break rooms, locker rooms, and all other workspaces
  - the quantity and usage of personal protective equipment by workers at those establishments
  - any guidance provided to inspectors of those establishments by the Secretary of Labor, or the Secretary of Health and Human Services during the Covid-19 emergency
  - actions taken by the Secretary of Labor, and the Secretary of Health and Human Services to protect workers, animals, and food at establishments that have reported cases of Covid-19
  - the impact of faster line speeds on the ability of those establishments to maintain protections for workers

○ any instance of interference by a Federal agency with a review of a
covered establishment experiencing an outbreak of Covid-19 conducted
by personnel of the Centers for Disease Control and Prevention

- Require USDA, DOL, and HHS to issue a report to Congress that includes
their respective actions taken in response to the Covid-19 pandemic to
ensure the protection of workers, animals, and food, safety

The Safe Line Speeds During Covid-19 Act is an effective and necessary step to
avoid the extreme dangers and health risks associated with increased line speeds. The
bill holds the USDA and Department of Labor accountable for the safety of our food
system by suspending current line speed waivers and prohibiting the authorization of
new waivers. It further requires an official review and report of the USDA, Health and
Human Services, and Labor Department’s pandemic responses as enacted in slaughter
facilities. The major flaw in the bill is that it only extends for the duration of the Covid-19
pandemic. The covered period begins the date the bill is enacted, and officially ends
90 days after the Covid-19 emergency is lifted. For the continued safety and protection
of animals, workers, the environment, and the public, the Safe Line Speeds During

The following sections examine how slaughter line speeds affect public health,
from the individual to the population level. Records from government monitoring

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Congress, n.d.)

Congress, n.d.)

Congress, n.d.)
agencies reveal human rights violations, food safety violations, Covid-19 cases, environmental damage, and animal welfare violations.

**Monitoring and Inspections**

There are several systems in place meant to ensure workplace safety in slaughterhouses and processing facilities. The Occupational Safety and Health Administration (OSHA), a branch of the United States Department of Labor, is charged with enforcing safe and healthy workplace standards. OSHA inspects facilities to assess safety conditions, respond to complaints of safety violations, and act as a guide for both employers and employees in complying with safety standards.

Although OSHA is charged with keeping workplaces safe, U.S. policies can limit the reach and impact of OSHA. OSHA has the ability to inspect slaughterhouses without advanced notice, but slaughterhouse managers have the right to require OSHA compliance officers to obtain an inspection warrant before entering the worksite. This gives the slaughterhouse managers enough time to fix or cover up safety violations they may be hiding before the OSHA officer returns. Due to lack of time, resources, and personnel, it is highly unlikely that any meatpacking facility will be randomly inspected by OSHA officers.\(^\text{15}\) Most commonly, OSHA inspects facilities in response to an incident or injury.\(^\text{16}\) OSHA has been criticized by workers’ unions for slow responses and lack of follow-up after issuing violation fines.\(^\text{17}\) Without follow-up, companies are less accountable for workers’ safety, and repeated injuries are more likely.

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\(^{15}\) (Additional Data Needed to Address Continued Hazards in the Meat and Poultry Industry | Government Accountability Office, 2016)

\(^{16}\) (Additional Data Needed to Address Continued Hazards in the Meat and Poultry Industry | Government Accountability Office, 2016)

\(^{17}\) (Meatpacking Safety: Is OSHA Enforcement Adequate | Drake Journal of Agricultural Law, 2005)
Employees have the right to file complaints through OSHA, triggering an investigation, but the process is not always transparent. For example, slaughterhouse managers are required by law to post "Know Your Rights" posters designed to assist and empower employees. The posters specify how and when to report a problem or injury to OSHA. However, the Government Accountability Office (GAO) found these posters are not always in a visible location, and posters may not be translated in the employee’s native language.\(^{18}\)

80% of front-line meat-processing workers in the U.S. are people of color, and 52% are immigrants.\(^ {19}\) While the precise statistics are unknown, many workers are undocumented, which makes them ineligible for healthcare and certain worker protections. According to the GAO, a government agency that provides auditing, evaluation, and investigative services for the United States Congress, employers often knowingly hire undocumented workers because they are more likely to accept low paying, physically dangerous jobs.\(^ {20}\) Workers may be hesitant to report workplace injuries or illnesses for fear of losing their jobs, losing income, or even being deported. Undocumented workers are constantly faced with the threat of deportation – either by their employer or by federal raids, which makes them unlikely to report problems in the workplace.\(^ {21}\) Through threats and intimidation, workers are conditioned to accept a hazardous and demeaning work environment if they want to remain employed.

\(^{18}\) (Additional Data Needed to Address Continued Hazards in the Meat and Poultry Industry | Government Accountability Office, 2016)
\(^{19}\) (Safety in the Meat and Poultry Industry, While Improving, Could be Further Strengthened | U.S. Government Accountability Office n.d.)
\(^{21}\) (Safety in the Meat and Poultry Industry, While Improving, Could be Further Strengthened | U.S. Government Accountability Office n.d.)
Under the branch of the USDA, FSIS is responsible for inspecting and ensuring the safety and accurate labeling of meat, poultry, and egg products.\textsuperscript{22} In large U.S. slaughterhouses there are four FSIS inspectors per slaughter line meant to inspect each carcass that passes through the line.\textsuperscript{23} In 1994 FSIS and OSHA created a memorandum of understanding (MOU) to better facilitate worker safety in meat and poultry facilities. A 2016 GAO investigation reported problems with the MOU’s implementation, leading to prolonged and worsening safety risks. FSIS inspectors report reluctance to make referrals to OSHA about hazards in meatpacking facilities because they fear it could trigger an OSHA inspection of FSIS, rather than of the facility itself.\textsuperscript{24} Any delay in reporting between federal agencies creates more opportunity for illness, injury, and harassment for workers in meat and poultry facilities.

**NPIS and NSIS**

The New Poultry Inspection System (NPIS) and the New Swine Inspection System (NSIS) are voluntary programs launched by the USDA, meant to streamline inspection regulations and push towards a more automated process in slaughterhouses. The NPIS became an official rule in 2018 and the NSIS in 2019. The official rule allows qualifying slaughter facilities to apply to convert to the new systems.\textsuperscript{25} Qualifications include a demonstrated history of regulatory compliance, and new equipment or technologies, that allow the establishment to operate at faster line speeds.\textsuperscript{26} Although these

\textsuperscript{22} (Home | Food Safety and Inspection Service, n.d.)  
\textsuperscript{23} (Poultry Inspectors Check 2 Birds per Second. They’re Being Asked to Speed Up, n.d.)  
\textsuperscript{24} (Better Outreach, Collaboration, and Information Needed to Help Protect Workers at Meat and Poultry Plants | U.S. Government Accountability Office, n.d.)  
\textsuperscript{25} (Modernization of Swine Slaughter Inspection | Food Safety and Inspection Service, n.d.)  
\textsuperscript{26} (Modernization of Swine Slaughter Inspection | Food Safety and Inspection Service, n.d.)
requirements are in place, the USDA has granted approval to numerous facilities that do not meet eligibility requirements.\(^{27}\)

The NPIS and NSIS systems ultimately result in self-regulated inspections in slaughter facilities, meaning a decrease in the number of USDA inspectors and instead replacing them with company employees. This is highly dangerous because company employees are often under-trained in key food safety inspection tasks.\(^{28}\) The NPIS and NSIS also allow facilities to increase slaughter lines to the maximum speed; 175 birds per minute for poultry and no line speed limits at all for pigs. When the USDA grants waivers for slaughterhouses to increase line speeds, they are also granting them permission to operate under the NSIS or NPIS.

While the traditional FSIS system is required to have four inspectors per slaughter line, NPIS-certified facilities are required to only have one.\(^{29}\) A second, “offline” inspector is required to test for *Salmonella* and *Campylobacter* bacteria at a rate of one per 22,000 processed carcasses. That’s three birds per eight-hour shift. Offline inspectors are also required to pull 10 birds off the line every hour to check for fecal material and other issues. In traditional non-NPIS facilities, inspectors are required to pull 20 birds per *eight*-hour shift.\(^{30}\) The NPIS system has more frequent “spot” inspections, but fewer inspectors in the facilities and less overall oversight from the USDA.\(^{31}\) The Safe Line Speeds During Covid-19 Act only requires the temporary suspension of the NSIS in pig facilities, but does not mention the NPIS in poultry

\(^{27}\) ([*Trump’s USDA Is Letting Factories With Troubling Safety Records Slaughter Chickens Even Faster — ProPublica*, n.d.])

\(^{28}\) ([*Translating the New Swine Inspection System | Food & Water Watch*, n.d.])

\(^{29}\) ([*Poultry Inspectors Check 2 Birds per Second. They’re Being Asked to Speed Up*, n.d.])

\(^{30}\) ([*Translating the New Swine Inspection System | Food & Water Watch*, n.d.])

\(^{31}\) ([*Translating the New Swine Inspection System | Food & Water Watch*, n.d.])
facilities. It is unclear why the bill does not specify the NPIS system as well. Along with the short timeline of the bill, excluding the NPIS is a flaw in the bill.

The watchdog group Food and Water Watch analyzed food safety data from ten pig slaughter facilities, five NSIS facilities and five comparably-sized facilities operating under traditional inspection. Regulatory violations recorded from 2012-2016 detail 32 instances at five NSIS facilities in which a company inspector failed to identify a carcass so infected to the point where consumption of the meat could cause food poisoning.32

From the same records, the five NSIS facilities received 84% of the total non-compliance reports for food safety violations.33 As noted below in more detail, NSIS and NPIS facilities have an unacceptably high rate of noncompliance with food safety standards. These violations are serious and highlight the lack of proper inspection training for company employees. A 2013 audit from the USDA Inspector General stated that 15 years after the NSIS pilot, “the USDA could not determine whether the goals of the program were met because of inadequate oversight.”34 The lack of training, accountability, and monitoring in facilities with faster line speeds and fewer USDA inspectors is very likely to be a danger to consumer health and food safety.

In 2018 there were 835 federally inspected livestock slaughterhouses and almost 3000 federally inspected poultry slaughterhouses in the U.S.35 As of June 2020, 141 poultry processing facilities have converted to the NPIS system, and 151 more have requested to convert.36 NSIS information was not available for pig processing facilities.

32 (Translating the New Swine Inspection System | Food & Water Watch, n.d.)
33 (Translating the New Swine Inspection System | Food & Water Watch, n.d.)
34 (Translating the New Swine Inspection System | Food & Water Watch, n.d.)
35 (The United States Meat Industry at a Glance, n.d.)
36 (Home | Food Safety and Inspection Service, n.d.)
**Consumer Safety**

Faster line speeds pose greater risks for consumers. The risks stem from both the fast speeds at which animals are slaughtered and processed, and the new self-regulated systems. Processing animals' bodies at faster speeds creates a pressurized environment in which workers are more likely to make a critical mistake and miss “carcass contamination.”

The USDA has a “zero tolerance policy” when it comes to contaminants such as fecal matter, digestive contents, and milk. These contaminants can carry deadly pathogens such as *Salmonella* or *E. coli*, which can cause serious illness to consumers. *Salmonella* is particularly concerning because the U.S. treats approximately 1 million serious cases every year, and it can be highly prevalent in meatpacking facilities. 2018 FSIS data from meatpacking facilities nationwide revealed that 39% of minced chicken, and 14% of chicken wings, legs, and breasts contained *Salmonella*. Pig products showed a 9% contamination rate, and cow products showed a 5% contamination rate. Pig slaughter facilities operating under the NSIS pilot program were twice as likely to be cited for violations for fecal and digestive matter on carcasses than other traditional facilities. These violations are highly consequential.

*Salmonella* can be found in the intestines of poultry and livestock, and is spread through fecal contamination containing the bacteria. Most frequently, it is spread during

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37 ([Health and Safety | USDA](https://www.usda.gov)), n.d.
38 ([Pilot Swine Slaughter Plants with ‘Self-Inspection’ Rules Have Almost Twice as Many Violations for Carcass Fecal and Digestive Matter | Food & Water Watch](https://www.foodwaterwatch.org)), n.d.
39 ([Dirty US Meat Could Flood into UK after a Brexit Trade Deal — The Bureau of Investigative Journalism](https://www.bureauinvestigativestorytelling.com)), n.d.
40 ([Dirty US Meat Could Flood into UK after a Brexit Trade Deal — The Bureau of Investigative Journalism](https://www.bureauinvestigativestorytelling.com)), n.d.
41 ([Pilot Swine Slaughter Plants with ‘Self-Inspection’ Rules Have Almost Twice as Many Violations for Carcass Fecal and Digestive Matter | Food & Water Watch](https://www.foodwaterwatch.org)), n.d.
transport to slaughterhouses and during the slaughtering process. Practicing top hygiene and food safety standards is the most efficient way to prevent Salmonella contamination. With faster line speeds and a lack of carcass inspection regulation in the NSIS and NPIS facilities, contamination is more likely to occur.

Below is a list of other specific violations recorded by U.S. government officials from FSIS:

- "Dirty chicken, soiled with feces or having been dropped on the floor, being put back onto the production line after being rinsed with chlorine
- Diseased poultry meat - that had been condemned - found in containers used to hold edible food products
- Pig carcasses piling up on the factory floor after an equipment breakdown, leading to contamination with grease, blood and other filth
- Meat destined for the human food chain found riddled with fecal matter and abscesses filled with pus
- High power hoses being used to clean dirty floors next to working production lines containing food products
- Factory floors flooded with dirty water after drains became blocked by meat parts and other debris."

42 (Dirty US Meat Could Flood into UK after a Brexit Trade Deal — The Bureau of Investigative Journalism, n.d.)
43 (Dirty US Meat Could Flood into UK after a Brexit Trade Deal — The Bureau of Investigative Journalism, n.d.)
The citations listed above are not attributed specifically to slaughterhouses with or without line speed waivers, operating in NPIS, NSIS facilities, or traditional facilities. It is apparent from these data that food safety regulations and occupational safety standards must be better managed within all meat and poultry processing facilities no matter what the line speeds or inspection standards.

FSIS records from 2018 reveal 1,266 violations at pig processing facilities related to fecal matter on carcasses, and 3,293 related to cleaning of surfaces that come into contact with food.44 Food safety records compiled from five NSIS facilities during the pilot program and five traditional facilities reveal worrisome data about the new inspection regulations: the NSIS facilities received 84% of all violations relating to food safety standards, 73% of fecal matter contamination violations, and 61% of violations relating to surface hygiene and equipment sanitation.45

The charts below show a comparison of contamination violations recorded from 2014-2017 in five NSIS slaughter facilities and 21 traditional facilities. Chart 1 shows the number of violations per facility per year, and Chart 2 shows the rates of violations per facility per year. The five NSIS facilities had approximately double the number of contamination violations compared to the traditional facilities.46 The USDA finalized the NSIS rule in 2019 without releasing the data.47

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44 (Dirty US Meat Could Flood into UK after a Brexit Trade Deal — The Bureau of Investigative Journalism, n.d.)
45 (Dirty US Meat Could Flood into UK after a Brexit Trade Deal — The Bureau of Investigative Journalism, n.d.)
46 (Pilot Swine Slaughter Plants with ‘Self-Inspection’ Rules Have Almost Twice as Many Violations for Carcass Fecal and Digestive Matter | Food & Water Watch, n.d.)
47 (Pilot Swine Slaughter Plants with ‘Self-Inspection’ Rules Have Almost Twice as Many Violations for Carcass Fecal and Digestive Matter | Food & Water Watch, n.d.)
Chart 1. Number of regulatory violations per slaughter facility for fecal matter and digestive contents recorded on carcasses during the NSIS pilot period 2014-2017. Source: Food and Water Watch.

Chart 2. The chart above shows the rates of violations recorded for fecal matter and digestive contaminants during the NSIS pilot period. Source: Food and Water Watch.
These data were collected during the pilot phase of the NSIS program, and it is clear the NSIS facilities were not meeting the same safety standards as the traditional facilities. There were significant violations identified during the pilot, yet the USDA passed the rule allowing the NSIS in all pig processing facilities. For the safety of slaughterhouse workers and the general public, meat companies should not regulate themselves. Inspecting their own slaughter lines and managing the speeds of their slaughter lines results in compromised food safety standards, as well as health and safety risks for workers.

Human Rights

Worker injury rates

Meat and poultry processing facilities are notoriously dangerous workplaces. Listed on the website for general hazards in the meatpacking industry, OSHA specifically includes biological and chemical agents, confined spaces, electrical hazards, ergonomic concerns related to repetitive motion injuries, musculoskeletal disorders, hazardous waste exposure, operating heavy and dangerous machinery, noise exposure, respiratory diseases, and workplace violence.\(^{48}\) OSHA data from 2015-2018 reveals that a meat and poultry facility worker lost a limb or digit, or was hospitalized, on average every other day.\(^{49}\) Between 2013 and 2017, an average of 8 workers per year died due to a work related incident in a slaughter facility.\(^{50}\) Along with increased severity of injuries, OSHA recognizes that poultry workers experience higher incidence rates of

\(^{48}\) (Meatpacking - Hazards and Solutions | Occupational Safety and Health Administration, n.d.)
\(^{49}\) (Workers’ Rights Under Threat in US Meat and Poultry Plants | HRW, n.d.)
\(^{50}\) (Workers’ Rights Under Threat in US Meat and Poultry Plants | HRW, n.d.)
injuries as well. Incidence rates of injuries that require one or more days of restricted activity are almost double the rates in other considerably dangerous industries, such as oil and gas well drilling, industrial building and construction, and sawmills.\(^\text{51}\) Incidence rates of occupational illnesses such as musculoskeletal injuries and hazardous chemical inhalation are six times higher among poultry workers than the U.S. national average.\(^\text{52}\) Furthermore, the injury incidence rates in slaughter facilities are likely underestimations due to high worker turnover rates, inadequate reporting, and poor medical management.\(^\text{53}\)

Poultry processing involves a combination of highly repetitive and forceful movements that place employees at increased risk for upper extremity injuries.\(^\text{54}\) Before the industrialization of animal slaughter in the U.S., chickens were mostly sold “whole.”\(^\text{55}\) Now, 90% of chickens are sold “pre-cut,” which means extra processing steps in meatpacking facilities. More people work on the line cutting, pulling, deboning, skinning, and then coating, frying, freezing, and packaging.\(^\text{56}\) One worker may perform the same task on about one chicken every two seconds: more than 2,000 chickens per hour, more than 14,000 chickens per day.\(^\text{57}\) A conservative estimate is that the average worker repeats forceful motions such as cutting, pulling, or slicing over 20,000 times per

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\(^{51}\) (OSHA Poultry Slaughtering and Poultry Processing | Occupational Safety and Health Administration, n.d.)
\(^{52}\) (OSHA Poultry Slaughtering and Poultry Processing | Occupational Safety and Health Administration, n.d.)
\(^{53}\) (OSHA Poultry Slaughtering and Poultry Processing | Occupational Safety and Health Administration, n.d.)
\(^{54}\) (OSHA Poultry Slaughtering and Poultry Processing | Occupational Safety and Health Administration, n.d.)
\(^{55}\) (Unsafe at These Speeds: Alabama’s Poultry Industry and its Disposable Workers | Southern Poverty Law Center, 2013)
Furthermore, slaughterhouse rooms are purposefully chilled around 40 degrees Fahrenheit to reduce microbial growth on carcasses, which in turn keeps workers’ bodies cold and exacerbates the harmful effects of repetitive motions.\textsuperscript{59} Carpal tunnel syndrome (CTS), tendonitis, epicondylitis, “trigger finger,” and other musculoskeletal disorders are a major cause of chronic injuries. According to OSHA records, in 2013 the incidence rate of CTS in poultry workers was more than seven times the national average. Poultry industry employers were also “more than 4.5 times more likely to identify repetitive motion as the exposure resulting in a serious injury, compared to employers in all industries in 2013.”\textsuperscript{60}

A cohort study conducted in 2012 compared the rates of CTS in Latino workers in poultry processing facilities with Latino workers in other manual labor occupations. According to CTS symptoms and nerve conduction studies performed on wrists over one year, the incidence of CTS was higher in poultry processing workers than non-poultry manual workers (19.8\% vs. 11.7\%, $P = 0.022$).\textsuperscript{61} Poultry workers have higher odds (1.89; $P = 0.089$) of developing carpal tunnel syndrome (CTS) over one year compared to non-poultry manual workers.\textsuperscript{62}

Mental distress is an underrecognized, understudied health risk for employees in meat processing facilities. A 2017 study examining serious psychological distress (SPD) among U.S. slaughterhouse workers determined the prevalence of SPD to be 4.4%.

\textsuperscript{58} (\textit{Lives on the Line: The High Human Cost of Chicken} | Oxfam America 2016)
\textsuperscript{59} (\textit{ETools | Poultry Processing Industry ETool} | Occupational Safety and Health Administration, n.d.)
\textsuperscript{60} (OSHA Poultry Slaughtering and Poultry Processing | Occupational Safety and Health Administration, n.d.)
\textsuperscript{61} (The Prevalence of Carpal Tunnel Syndrome in Latino Poultry Processing Workers and Other Latino Manual Workers, n.d.)
\textsuperscript{62} (The Prevalence of Carpal Tunnel Syndrome in Latino Poultry Processing Workers and Other Latino Manual Workers, n.d.)
compared to the U.S. population-wide prevalence of 3.6%. SPD not only affects individuals’ mental health, but can also impact the health and wellbeing of their families and communities. For instance, researchers have established a positive association between the presence of large slaughterhouses in U.S. counties and higher violent crime rates. The study determined that employment in other manufacturing sectors with comparable worker demographics has a negative association with crime rates. Meaning, employment in manufacturing sectors is associated with an overall decrease in crime rates and arrests. This is clearly not the case for slaughterhouse workers or their communities, meaning theoretical and empirical distinctions can and ought to be drawn between slaughterhouse employment and other types of manufacturing employment. More detailed analysis can be found in the “Animal Welfare” section of this paper.

In both chicken and pig processing facilities, physical injury rates increase as line speeds increase. The United Food and Commercial Workers International Union released a statement that identifies a correlation between faster line speeds and more workers needing assistance at the facilities’ medical station. There is a positive correlation between the number of line speed waivers granted and the number of fatal or catastrophic injuries in slaughterhouses. In 2020 as the USDA continued to grant line speed waivers, reports of serious injuries and incidents at processing facilities rose.

63 (Prevalence of Serious Psychological Distress among Slaughterhouse Workers at a United States Beef Packing Plant - IOS Press, n.d.)
66 (Worker Injuries Rise as Oklahoma Pork Plant Speeds Up Slaughtering, n.d.)
OSHA data reveals 27 inspections were conducted in response to either a “fatality” or a “catastrophe” at slaughter facilities in 2020. This is compared to one inspection from one “fatality” or “catastrophe” in 2017, three in 2018 and five in 2019.67

A 30-year-old worker at a pig slaughterhouse in Oklahoma, profiled in a local news piece, told reporters that he had to transfer jobs when the line speeds sped up at his facility. The higher speeds increased the pain in his hands and shoulders in his former role scraping hair and skin off tongues. Since he’s been in his new position on the line, slicing skin off pigs’ heads, he now reports back problems as well. One of the root problems he cites is that if the company needs to pause production due to a mechanical error or other glitch, the facility makes up for the pause by running even faster later in the day to make up for the time lost.68

Data from this same facility reveal an increase in injuries. The Oklahoma slaughterhouse reported five lacerations in 2020 that required paid medical treatment outside of the facility. Before being granted the waiver, when line speeds were slower, the company reported one laceration in 2019, and zero in 2018.69 The number of less-serious incidents which did not require medical attention also increased over previous years, jumping from 10 each of the prior two years to 19 in 2020.70

**Dehumanization and Unjust Treatment**

A report published by Oxfam America in 2016 discusses a widespread issue faced by poultry workers: inadequate bathroom breaks. Information gathered through interviews

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67 ([Worker Injuries Rise as Oklahoma Pork Plant Speeds Up Slaughtering](https://example.com), n.d.)
68 ([Worker Injuries Rise as Oklahoma Pork Plant Speeds Up Slaughtering](https://example.com), n.d.)
69 ([Worker Injuries Rise as Oklahoma Pork Plant Speeds Up Slaughtering](https://example.com), n.d.)
70 ([Worker Injuries Rise as Oklahoma Pork Plant Speeds Up Slaughtering](https://example.com), n.d.)
with current and former poultry workers, worker advocates, lawyers, and medical experts indicate that poultry workers are routinely denied bathroom breaks. Instead, supervisors will ignore, mock, or even intimidate employees with the threat of firing them. This creates a physically and psychologically unsafe working environment. The Oxfam report notes,

“Workers struggle to cope with this denial of a basic human need. They urinate and defecate while standing on the line; they wear diapers to work; they restrict intake of liquids and fluids to dangerous degrees; they endure pain and discomfort while they worry about their health and job security. And it’s not just their dignity that suffers: they are in danger of serious health problems.”

Workers must ask their supervisor for permission to leave “the line.” Supervisors at each slaughterhouse are under immense scrutiny about how much product they are producing - how many animals they are slaughtering - per day. As slaughter lines speed up, workers are left with more work to accomplish in shorter amounts of time, leaving little time for bathroom breaks, and more risk for physical injuries. The dynamic between line workers and supervisors also leaves workers more vulnerable to harassment and abuse by supervisors due to the pressure to turnout product.

According to the Oxfam report:

“Many workers interviewed by Oxfam and partner organizations report that supervisors treat them with profound disrespect. They yell at the workers, or make fun of them; issue warnings or disciplinary points; or threaten firing or deportation. Many

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workers talk about racial and gender discrimination and harassment. All of these characteristics are exacerbated when the worker needs to ask permission to go to the bathroom, and the supervisor is feeling the heat to keep the line moving. Workers report that supervisors often yell at them when they ask to leave the line. Jose, who worked at a Pilgrim’s plant in Alabama, says the supervisors regularly threatened people: “Go to the bathroom, and from there, go to Human Resources.”

While denial of bathroom access can be psychologically damaging, it also poses serious physical health risks. Biological risks of holding pressure on the bladder for too long include kidney damage, kidney infections, and, most commonly, bladder and urinary tract infections (UTIs). Women face particularly harsh challenges due to menstruation, pregnancy, and a higher vulnerability of bladder infections. Biologically, women are ten times more likely than men to develop bladder infections or UTIs, which increases urgency and frequency of urination. Additionally, to treat these infections, workers are prescribed antibiotics. Studies have shown, however, that poultry workers are more likely to build resistance to antibiotics due to their work and frequently handling chicken flesh that has been treated with antibiotics. This makes simple UTIs extremely difficult to treat.

Increasing slaughter line speeds strains the power dynamic between supervisors and line workers, incentivizes supervisors to deny bathroom breaks to line workers, and leads to both physical and psychological harm. Workers are expected to report any

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72 (No Relief: Denial of Bathroom Breaks in the Poultry Industry | Oxfam America, n.d.)
73 (No Relief: Denial of Bathroom Breaks in the Poultry Industry | Oxfam America, n.d.)
74 (No Relief: Denial of Bathroom Breaks in the Poultry Industry | Oxfam America, n.d.)
75 (No Relief: Denial of Bathroom Breaks in the Poultry Industry | Oxfam America, n.d.)
76 (No Relief: Denial of Bathroom Breaks in the Poultry Industry | Oxfam America, n.d.)
health risks to OSHA, however, a 2016 report from the GAO found that workers may be reluctant to contact OSHA for fear of employer retaliation. This leaves critical gaps in reporting and responding to workplace safety violations, which ultimately leaves workers vulnerable to workplace injuries or harassment.

Covid-19
The Food and Environment Reporting Network (FERN) is one of the few organizations that closely monitors Covid-19 cases within meatpacking plants, food processing facilities, and farms. FERN’s Covid-19 dashboard system and interactive maps show the location of meatpacking facilities and farms where cases of Covid-19 and/or deaths have been reported.

As of February 26th 2021, the number of meatpacking workers who have tested positive for Covid-19 since April 2020 is 57,493 out of 77,980 total meatpacking workers nationwide. Both of these numbers are likely underestimated. The total number of workers is underestimated due to the high turnover of slaughterhouse workers, and the Covid-19 cases are underestimated due to the lack of sufficient testing, surveillance, and reporting throughout the pandemic.

Table 1 shows a comparison of Covid-19 cases and deaths in the meatpacking, food processing, and agriculture industries. Food processing workers typically work inside buildings or warehouses preparing or preserving a variety of foods. In these data,

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79 (Mapping Covid-19 Outbreaks in the Food System | Food and Environment Reporting Network, n.d.)
80 (Slaughterers and Meat Packers, n.d.)
81 (Mapping Covid-19 Outbreaks in the Food System | Food and Environment Reporting Network, n.d.)
meatpacking workers were not counted as food processing workers because they were counted as different sectors, although some of their duties may overlap.

<table>
<thead>
<tr>
<th></th>
<th>Number of workers tested positive for Covid-19</th>
<th>Total number of employees in the U.S.</th>
<th>Estimated % of workforce testing positive per sector</th>
<th>Number of workers who have died from Covid-19</th>
<th>Estimated % of workforce deaths due to Covid-19 per sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meatpacking</td>
<td>57,493</td>
<td>77,980&lt;sup&gt;82&lt;/sup&gt;</td>
<td>74%</td>
<td>284</td>
<td>0.36%</td>
</tr>
<tr>
<td>Food Processing</td>
<td>17,486</td>
<td>41,840&lt;sup&gt;83&lt;/sup&gt;</td>
<td>42%</td>
<td>48</td>
<td>0.11%</td>
</tr>
<tr>
<td>Agricultural</td>
<td>12,910</td>
<td>287,420&lt;sup&gt;84&lt;/sup&gt;</td>
<td>4%</td>
<td>43</td>
<td>0.01%</td>
</tr>
</tbody>
</table>

Table 1. Estimated Covid-19 cases and deaths in the meatpacking, food processing, and agricultural industries. This data is based on FERN reporting from April 2020-February 2021, and the Bureau of Labor and Statistics 2020 data. FERN’s data is collected from state and local health authorities, news reports, and from company reports of outbreaks. FERN corroborates reported Covid-19 data with CDC data. In instances when local reports reflect higher numbers than the CDC, FERN maintains local data.

Based on these data, meatpacking workers face a much higher risk of contracting Covid-19 compared with other similar industries such as food processing. This underscores the disproportionately dangerous environment meatpacking workers endure during the Covid-19 pandemic.

Chart 3 below shows the cumulative number of Covid-19 cases per sector from April 2020 to February 2021, and Chart 4 shows the cumulative number of deaths. The charts are a visual representation of the numbers in Table 1 above. The meatpacking sector surpasses the food processing and farming sectors in number of Covid-19 cases, highlighting the excessive risks and lack of safety measures for workers in meatpacking facilities.

<sup>82</sup> (Slaughterers and Meat Packers, n.d.)
<sup>83</sup> (Food Processing Workers, All Other, n.d.)
<sup>84</sup> (Farmworkers and Laborers, Crop, Nursery, and Greenhouse, n.d.)
According to the Bureau of Labor and Statistics (BLS) the agricultural sector has more total employees than both the meatpacking and food processing sectors, thus one might expect to find higher numbers of Covid-19 cases in the agricultural sector. One potential explanation why agricultural workers experience fewer Covid-19 cases is their work is typically outdoors, and they are better able to physically distance. Meatpacking workers must stand close together in enclosed spaces for long periods of time, and work in 40 degrees Fahrenheit, which is more likely to spread airborne illnesses such as Covid-19.85

85 (OSHA Poultry Slaughtering and Poultry Processing | Occupational Safety and Health Administration, n.d.)
The animal agriculture industry has consolidated power since the 1950s, resulting in only a few companies controlling the majority of market share. Meat production per facility has increased threefold since the 1970s, with only 12 facilities currently producing over 50% of the country’s beef, and 12 others producing over 50% of the country’s pork. Chart 5 below demonstrates Covid-19 cases per company. Each bubble represents a different company: red is meatpacking companies, yellow is food processing companies, and blue is agricultural companies. The five companies with the highest number of Covid-19 cases are all meatpacking companies: Tyson, Smithfield, JBS, Cargill, and Sanderson Farms.

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86 (Resilience in a Concentrated and Consolidated Food System | SpringerLink, n.d.)
The data above represent the best available case and death counts among food system workers, and does not include workers’ family members or close contacts.87 Detailed information about FERN’s data and methodologies is found at their website.

According to FERN data and analysts at the Washington Post, poultry facilities operating under the NPIS and slaughtering 175 birds per minute are 10 times more likely to have Covid-19 cases than facilities operating at 140 birds per minute.88

A separate study published in December 2020 in the Proceedings of the National Academy of Sciences confirms FERN’s data. Researchers examined county-level Covid-19 cases and mortality rates reported by state and local health departments, and corroborated Covid-19 data reported from the New York Times89 State and county-level Covid-19 data demonstrate that livestock processing facilities are not only dangerous to the people working inside the facility, but also the surrounding communities. These results are unsurprising given the nature of how Covid-19 is spread. Researchers estimate that the total excess Covid-19 cases and deaths associated with proximity to livestock plants is 6-8% of all U.S. cases, and 3-4% of all U.S. deaths.90 That’s approximately 236,000-310,000 excess cases and 4,300-5,200 excess deaths at the time of research, which was July 2020. Researchers attribute the vast majority of these Covid-19 cases to community spread outside of slaughter facilities.91 The presence of a slaughter facility in a county is associated with four to six additional Covid-19 cases per

87 (Mapping Covid-19 Outbreaks in the Food System | Food and Environment Reporting Network, n.d.)
88 (Trump Administration Approved Faster Line Speeds at Chicken Plants - The Washington Post, n.d.)
89 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
90 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
91 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
thousand. A final and crucial finding reveals counties with slaughterhouses that received waivers to increase their line speeds saw more county-wide cases of Covid-19.

As part of the same study, researchers examined Covid-19 data from poultry facilities granted waivers and compared them with data from facilities with the statutory limit of 140 birds per minute. Out of 120 poultry facilities in the sample, 48 had waivers, 72 did not. Line speed waivers share a positive association with increases in county-level Covid-19 cases, as case rates are twice as high as rates in counties with non-waiver facilities. Facilities issued a waiver in 2020 showed an even stronger association, suggesting that the USDA has been careless and negligent in keeping communities safe during the Covid-19 pandemic. Slaughterhouses, particularly those with faster slaughter line speeds, serve as Covid-19 “transmission vectors” for facility workers and surrounding communities, accelerating the spread of the virus.

While Covid-19 is a zoonotic infectious disease, workers are not exposed to Covid-19 through the animal carcasses they handle. Slaughterhouses and surrounding communities became Covid-19 “hotspots” due to the overcrowded and poor working conditions. Busy and crowded processing lines, lack of adequate personal protective equipment (PPE), and consistent lack of information or misinformation about medical

92 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
93 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
94 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
95 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
96 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
97 (Livestock Plants and COVID-19 Transmission | PNAS, n.d.)
98 (Select Subcommittee Launches Investigation into Widespread Coronavirus Infections and Deaths in Meatpacking Plants | House Select Subcommittee on the Coronavirus Crisis, n.d.)
treatment and testing for Covid-19 created an environment fraught with distrust and illness.99

There are some possible confounding effects among slaughterhouse workers that are worth examining. Even though slaughterhouse workers have maintained their jobs throughout the pandemic as “essential workers,” their work makes them particularly vulnerable to health risks. For example, people working in slaughter facilities in front-line roles are most likely low-income. Low socioeconomic status is a major contributor to health status in the U.S., as it affects access to healthcare, education opportunities, rights afforded to citizens, and certain worker protections.100 Preexisting health conditions are common among low-income populations partially due to lack of access to adequate healthcare. Some of these conditions include asthma, diabetes, obesity, and cardiovascular disease, which can affect immune responses and leave workers more susceptible to viral infections.101 Thus, socioeconomic status of workers may be a confounding factor for Covid-19 transmission rates.

As mentioned previously, this stressful work environment is fraught with workplace harassment and unequal power dynamics, exacerbated by increased line speeds. 80% of front-line slaughterhouse workers are people of color, 52% are immigrants, and many are undocumented.102 Line workers have very little decision

99 (Select Subcommittee Launches Investigation into Widespread Coronavirus Infections and Deaths in Meatpacking Plants | House Select Subcommittee on the Coronavirus Crisis, n.d.)
100 (“Essential” but Expendable: Farmworkers During the COVID-19 Pandemic—The Michigan Farmworker Project | AJPH | Vol. 110 Issue 12, n.d.)
making power, and are often frightened and distrusting of their supervisors.\textsuperscript{103} This dynamic could increase the risk for Covid-19 because workers feel pressured to forego medical attention to keep the lines running, or they feel unable to miss work if they are feeling ill, for fear of being fired or deported.\textsuperscript{104} Many workers at slaughter facilities are not granted paid sick leave in general, and this did not change during the pandemic. Without paid sick leave, workers have the incentive of a paycheck to continue working even if they feel sick. As the American Journal of Public Health comments, “A silent workforce is dangerous during this pandemic because workers may be willing to endure unsafe and unsanitary labor practices.”\textsuperscript{105}

The USDA responded to inquiries regarding the direct link between line speeds and the prevalence of coronavirus cases, but they claimed no such link had been established.\textsuperscript{106} Since the USDA does not regulate worker safety, they said that meatpacking facilities should follow the guidance from the CDC and OSHA.\textsuperscript{107}

On February 6th, 2021, the Centers for Disease Control and Prevention updated their interim guidance for workplaces and businesses based on Covid-19 data. The CDC’s “Critical Infrastructure Guidance” states that “critical infrastructure workers may be permitted to continue work following potential exposure to COVID-19, provided they remain asymptomatic, have not had a positive test result for COVID-19, and additional precautions are implemented to protect them and the community.” The guidance gives

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\textsuperscript{103} (“Essential” but Expendable: Farmworkers During the COVID-19 Pandemic—The Michigan Farmworker Project | AJPH | Vol. 110 Issue 12, n.d.)
\textsuperscript{104} (“Essential” but Expendable: Farmworkers During the COVID-19 Pandemic—The Michigan Farmworker Project | AJPH | Vol. 110 Issue 12, n.d.)
\textsuperscript{105} (“Essential” but Expendable: Farmworkers During the COVID-19 Pandemic—The Michigan Farmworker Project | AJPH | Vol. 110 Issue 12, n.d.)
\textsuperscript{106} (Trump Administration Approved Faster Line Speeds at Chicken Plants - The Washington Post, n.d.)
\textsuperscript{107} (Trump Administration Approved Faster Line Speeds at Chicken Plants - The Washington Post, n.d.)
\end{flushright}
further evidence-based guidelines about managing Covid-19 in the workplace, including proper PPE, communicating with employees, adequate screening and testing, creating an assessment plan, cleaning and disinfecting inside processing facilities, managing sick workers, and addressing returning to work.

Consistent throughout the Covid-19 pandemic, the CDC’s top recommendation to the meat and poultry industry is to keep workers six feet apart on production lines, in break rooms, and in locker rooms. The CDC specifically mentions slaughter line speed reductions as part of their suggested production practices that may be required in order to keep workers, workers’ families, and their communities safe. Despite these recommendations, the USDA continued to issue waivers to livestock processing facilities, granting them permission to slaughter at faster speeds and self-regulate inspections. It is clear the USDA directly undermined the CDC recommendations for protecting industry workers from exposure to Covid-19, which led to higher rates of illness and death among slaughterhouse workers and the people in their communities.

Environmental Damage
In 2019, the American Public Health Association (APHA) called for a moratorium on new and expanding concentrated animal feeding operations, also referred to as CAFOs

109 (USDA Allows Poultry Plants to Raise Line Speeds, Exacerbating Risk of COVID-19 Outbreaks and Injury | National Employment Law Project, n.d.)
110 (USDA Allows Poultry Plants to Raise Line Speeds, Exacerbating Risk of COVID-19 Outbreaks and Injury | National Employment Law Project, n.d.)
111 (USDA Allows Poultry Plants to Raise Line Speeds, Exacerbating Risk of COVID-19 Outbreaks and Injury | National Employment Law Project, n.d.)
or factory farms. APHA’s call for a moratorium specifically cites the dangerously large amounts of manure and other untreated waste produced by CAFOs, which are a major contributor to greenhouse gas emissions, air pollution, and water pollution. CAFOs are considered a threat to human health due to the environmental damage they directly cause. Slaughterhouses are generally separate from CAFOs; they are not the same operations. Slaughterhouses are, however, equally damaging to environmental health. The Environmental Protection Agency (EPA) states that industrial slaughterhouses are one of the nation’s largest sources of nutrient pollution to waterways, which threatens safe drinking water and harms local wildlife. Improper discharging of animal waste from slaughterhouses leads to contamination of local waterways with fecal matter and pathogens such as *E. Coli*. In 2015, one pig slaughterhouse run by Cargill was responsible for a “spill” of 29 million gallons of hog waste, killing almost 65,000 fish and polluting local waterways. Faster line speeds create more animal waste per hour and per day, which ultimately results in more air and water pollution.

The Clean Water Act implemented in 1972 was intended to regulate runoff and pollutants into waterways, but these rules are dangerously out of date. The Environmental Protection Agency (EPA) is responsible for setting industry standards for pollution-control from slaughterhouses. These regulations are supposed to be reviewed

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112 (Precautionary Moratorium on New and Expanding Concentrated Animal Feeding Operations, n.d.)
113 (Precautionary Moratorium on New and Expanding Concentrated Animal Feeding Operations, n.d.)
114 (Water Pollution from Slaughterhouses | Environmental Integrity Project, n.d.)
115 (Water Pollution from Slaughterhouses | Environmental Integrity Project, n.d.)
116 (EPA Sued for Allowing Slaughterhouses to Pollute Waterways | US Environmental Protection Agency | The Guardian, n.d.)
and set each year, but many have not been updated for the last 15 years, despite massive changes in the industrial animal agriculture industry.\(^{117}\)

Slaughterhouses discharge water contaminated with animal blood, oil, fat, bile, grease, cleaning chemicals, nitrogen, phosphorus pollution, and potentially dangerous pathogens. When discharged into waterways, this wastewater can cause algal blooms that harm and suffocate aquatic life and turn waterways into bacteria-laden public health hazards.\(^{118}\) As the USDA continues to lift restrictions on slaughter line speeds, the result is that slaughtering millions more animals per hour at facilities around the country produces massive quantities of additional animal waste, blood, and feces poured into systems already ill-equipped to sufficiently treat such waste.

In October 2019, the EPA announced that it would not revise federal water pollution standards for slaughterhouses, even though the EPA has specifically identified slaughterhouses as the largest industrial source of nitrogen water pollution without updated standards.\(^{119}\) A group of 12 environmental and animal advocate organizations sued the EPA based on its decision. That lawsuit is still ongoing.\(^{120}\)

Low-income communities endure the greatest harm from the environmental damage caused by irresponsible slaughterhouse waste management. The largest slaughterhouses in the U.S. are located in rural areas, often near low-income, marginalized communities.\(^{121}\) The Environmental Integrity Project and Earth Justice conducted a study examining the EPA violation records of 98 slaughterhouses across

\(^{117}\) (Public Interest Groups Sue EPA to Curb Slaughterhouse Pollution, n.d.).  
\(^{118}\) (Public Interest Groups Sue EPA to Curb Slaughterhouse Pollution, n.d.).  
\(^{119}\) (Public Interest Groups Sue EPA to Curb Slaughterhouse Pollution, n.d.).  
\(^{120}\) (Public Interest Groups Sue EPA to Curb Slaughterhouse Pollution, n.d.).  
\(^{121}\) (Water Pollution from Slaughterhouses | Environmental Integrity Project, n.d.)
the U.S. from 2016-2018. The records revealed that 74 of the 98 facilities exceeded their permit limits for dumping nitrogen, fecal bacteria, or other pollutants into waterways at least once in two years.

According to the EPA data, over half of the facilities had five violations, and a third had at least 10 violations.\textsuperscript{122} This is especially disturbing because these massive slaughterhouses - run by giant corporations such as Tyson, Smithfield, and JBS - are knowingly contaminating the rivers and drinking water supplies of nearby communities.\textsuperscript{123} The EPA is failing to protect healthy ecosystems and safe drinking water supplies by allowing slaughterhouses to operate under extremely outdated guidelines. Faster slaughter line speeds mean more animals slaughtered and more waste produced in shorter periods of time, with less oversight or accountability.

Animal Welfare
The ultimate goal of faster line speeds is to produce more meat in a shorter period of time, to drive more profit for meat companies. Due to the fast-paced, stressful environments of the slaughterhouse, animals are more likely to be killed in violation of established animal welfare standards.\textsuperscript{124} Farmed animals already endure immense cruelty, living in tiny confined spaces without access to natural sunlight or dirt and grass.\textsuperscript{125} When animals arrive at a slaughterhouse, they will have been forced onto a tightly packed truck with other frightened animals. They travel sometimes hundreds of

\textsuperscript{122} (\textit{Water Pollution from Slaughterhouses} \textsl{| Environmental Integrity Project}, n.d.)
\textsuperscript{123} (\textit{Water Pollution from Slaughterhouses} \textsl{| Environmental Integrity Project}, n.d.)
\textsuperscript{124} (\textit{The Welfare of Birds at Slaughter in the United States: The Need for Government Regulation} \textsl{| Animal Welfare Institute}, 2020)
\textsuperscript{125} (\textit{The Welfare of Birds at Slaughter in the United States: The Need for Government Regulation} \textsl{| Animal Welfare Institute}, 2020)
miles, often through inhospitable temperatures. They are provided no food or water on
the transport trucks.¹²⁶ All animals entering a slaughterhouse are frightened, and many
are sick. There are few welfare standards protecting farmed animals, although there are
some laws regulating "humane slaughter."

The Humane Slaughter Act of 1958 states that animals must be sedated or
deemed insensible to pain to minimize suffering during slaughtering.¹²⁷ Large animals
such as pigs and cows may be shot in the head by a single gunshot.¹²⁸ Chickens,
turkeys, and all other domestic birds are excluded from the Humane Slaughter Act,
even though birds make up the majority of farmed animals slaughtered in the U.S.¹²⁹

Increased line speeds result in rougher handling of the animals in an effort to
move them faster. This is harmful to the animals and dangerous for the workers,
especially if they are handling large animals such as pigs or cows. With increased line
speeds, animals may experience more broken bones, more frequent use of painful
electric prods, and even a botched stunning process.¹³⁰ Incomplete or missed stunning
results in fully conscious animals being slaughtered and dismembered, a truly inhumane
slaughter.¹³¹ This cruel treatment of animals is unacceptable and should not go ignored
when considering all the factors of line speeds.

¹²⁶ (The Welfare of Birds at Slaughter in the United States: The Need for Government Regulation | Animal Welfare
Institute, 2020, stop eating animals)
¹²⁷ (Humane Methods of Slaughter Act | Animal Welfare Information Center | NAL | USDA, n.d.)
Inspected and Approved under Such Act Be Produced Only from Livestock Slaughtered in Accordance with Humane
Methods, and for Other Purposes. | Congress.Gov | Library of Congress, n.d.)
¹²⁹ (Humane Methods of Slaughter Act | Animal Welfare Information Center | NAL | USDA, n.d.)
¹³⁰ (The Welfare of Birds at Slaughter in the United States: The Need for Government Regulation | Animal Welfare
Institute, 2020)
¹³¹ (The Welfare of Birds at Slaughter in the United States: The Need for Government Regulation | Animal Welfare
Institute, 2020)
The Animal Welfare Institute published a report in 2020 about the welfare conditions in poultry slaughter facilities in the U.S. They compiled records from the USDA and undercover investigations from multiple animal protection organizations such as Mercy For Animals and Animal Outlook. Some of the most common violations documented by the USDA include birds drowning in the “scald tank” instead of bleeding out from throat cutting, improper shackling, stunning, or throat cutting, improper sorting of dead-on-arrival (DOA) and live birds, an excessive number of DOA birds due to inhumane holding conditions, excessive use of force and handling, improper dumping of birds, and mechanical problems resulting in injury or death. Video footage from an undercover investigation at a poultry facility in Maryland specifically notes the faster line speeds as a potential factor contributing to rougher handling of the birds. This footage shows “birds being aggressively slammed into shackles,” fully conscious, as they move toward the blades.

Slaughterhouse workers are affected by animal slaughter as well. Increasingly, workers have been treated for post-traumatic stress disorder, with symptoms including severe anxiety, drug and alcohol abuse, domestic violence, emotional dissonance, and social withdrawal. A 2016 study in the Yale Global Health Review explores a unique type of PTSD some slaughterhouse workers suffer, known as *perpetration-induced traumatic stress* (PITS). Unlike many forms of traumatic stress disorders, PITS sufferers are the “causal participant” in a traumatic situation, rather than the victims.

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133 *(The Welfare of Birds at Slaughter in the United States: The Need for Government Regulation | Animal Welfare Institute, 2020)*
134 *(A Call to Action: Psychological Harm in Slaughterhouse Workers – Yale Global Health Review, n.d.)*
Living with the knowledge of their actions, the fact that they are the reason for another being’s trauma causes symptoms similar to those of individuals who are recipients of trauma: substance abuse, anxiety issues, depression, and dissociation from reality.\textsuperscript{135}

A 2009 study explored the association between the presence of large slaughterhouses and high crime rates in U.S. communities. Researchers examined county-level and state-level arrest records from Uniform Crime Report. They controlled for independent and control variables such as socioeconomic status, ethnicity, immigration status, migration, population density, and unemployment rate in communities. They also compared other industries such as iron and steel forging, truck trailer manufacturing, motor vehicle metal stamping, sign manufacturing, and industrial laundering. These industries were selected because they are similar to the slaughterhouse industry in that they are categorized as manufacturing, they are characterized by high immigrant worker concentrations, low pay, routinized labor, and dangerous conditions.\textsuperscript{136}

The results revealed that slaughterhouse employment is a significant predictor most likely to spike crime statistics in communities, including violent crimes and sexual offenses.\textsuperscript{137} The comparison industries do not have parallel effects, and in fact, some had a significant negative effect on the total arrests variable. For example, an increase in the number of truck trailer employees would expect to decrease the number of total

\textsuperscript{135} (A Call to Action: Psychological Harm in Slaughterhouse Workers – Yale Global Health Review, n.d.)
arrests in those counties. Analysis of these results, alongside personal stories from slaughterhouse employees, is that slaughterhouse workers become desensitized to violence, and their behavior outside of work reflects it.

The study found a significant positive effect of slaughterhouse employment on sex offenses, which has implications about the ways in which workers are treated inside the slaughter facilities. While the variables examined exclude forcible rape and prostitution, they did include sexual attacks on males, incest, indecent exposure, statutory rape, and “crimes against nature.” Researchers note:

“Many of these offenses are perpetrated against those with less power, and we interpret this as evidence that the work done within slaughterhouses might spillover to violence against other less powerful groups, such as women and children. Further, the positive effects of slaughterhouse employment on rape and other sexual assaults were not observed in the comparison industry analyses. The results presented here therefore demonstrate significant and unique effects of slaughterhouse employment on several crime variables. These effects are not found in the comparison industries, and they cannot be explained by unemployment, social disorganization, and demographic variables. Additionally, the differences in the results before and after custom slaughter facilities were added to the slaughterhouse category also suggests that the industrialization of slaughter has the strongest adverse effects, whereas the

139 (A Call to Action: Psychological Harm in Slaughterhouse Workers – Yale Global Health Review, n.d.)
addition of the smaller, custom slaughter facilities likely adds “noise” to the analyses and may even be adding the effects of social capital (related to small businesses and small-scale agriculture).”\textsuperscript{141}

Ignoring the inhumane treatment of animals also ignores the inhumane treatment of humans. Increasing slaughter line speeds creates unimaginable harm for animals in their last minutes of life, while creating prolonged trauma and psychological stress in the lives of slaughterhouse workers, and in their communities.

Conclusion and Recommendations
The Safe Line Speeds During Covid-19 Act aims to address the public health issues examined in this paper. The bill proposes the USDA suspend all current line speed waivers at meat and poultry establishments, and suspend the USDA’s authority to issue new waivers. A crucial component of the bill prohibits the USDA from using federal funds to amend, or implement any regulation, directive, or any other agency program that would increase line speeds at meat and poultry establishments.\textsuperscript{142} The bill would pause the implementation of the New Swine Slaughter Inspection System, but does not include the New Poultry Inspection System, which is still highly dangerous and consequential to consumer health. In order to more effectively address food safety regulations, the bill should include a moratorium on both the NSIS and NPIS.


The Safe Line Speeds During Covid-19 Act holds the USDA and Department of Labor accountable for the safety of our food system, but only does so for the duration of the Covid-19 public health emergency. For the continued safety and protection of animals, workers, the environment, and consumers, the bill must make these standards permanent beyond the Covid-19 pandemic.

Slaughter line speeds are a seemingly minute policy issue that has major effects on the food system, slaughterhouse workers, environmental pollution, animal welfare, and population health. During the Covid-19 pandemic, the realities of the inhumane conditions that preceded the pandemic revealed themselves. The Safe Line Speeds During Covid-19 Act should be enacted with the added provisions mentioned above for the continued protection of population health. Such a change in policy will be a crucial first step towards creating a more just and compassionate food system.
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