

# YEAR IN REVIEW

*“2020 will be a year  
to remember...”* pg2  
- *Dr. Julie Sorensen*



## OUR MISSION

“...to enhance the health of agricultural, forestry and fishing (AgFF) workers by identifying priority health and safety issues and working with AgFF communities and stakeholders to develop prevention solutions.”

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The Northeast Center for Occupational Health and Safety (NEC) is one of 11 agricultural centers across the country designated and funded by the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (NIOSH). Serving a 12-state region from Maine through West Virginia, the NEC promotes health and safety research, education and prevention activities in the high-risk areas of farming, commercial fishing and logging.

## MESSAGE FROM OUR DIRECTOR



2020 will be a year to remember. For many working in the agriculture, forestry or fishing (AgFF) industries it was a year that truly tested one’s “mettle.” Mettle, defined as “a person’s ability to cope well with difficulties or to face a demanding situation in a spirited and resilient way,” is something that workers in these industries have always had in abundance.

However, it is hard to deny that the COVID-19 pandemic presented challenges never before seen in the AgFF sectors. To name just a few, AgFF industries were required to:

- ▶ implement infection control protocols without ready access to disinfectants, sanitizers or respiratory protection;
- ▶ apply COVID-19 guidelines to the unique circumstances of highly specialized production operations; and
- ▶ ensure that workers still willing to work were adequately protected and informed

Despite lost sales and disruptions in markets, distribution systems, labor access, childcare and resources, AgFF industries demonstrated a remarkable amount of ingenuity and resilience. For example, 84% of New York farms and agribusiness operations had a plan in place to mitigate the spread of COVID-19 infection, according to the NY Farm Bureau and Cornell University. Roughly three-quarters of farm operations reported having provided hand sanitizer and face coverings for employees, while 51% identified opportunities for social distancing.

In response to market disruptions overseas, roughly 60% of Northeast commercial fishermen switched to direct sales or delivery to consumers, according to a Rutgers University study. Fishermen also found ways to limit exposures, such as by fishing with family members or individuals with whom they regularly interact.

The Northeast Center’s recent and expansive survey of logging operators will undoubtedly point to novel solutions developed by workers in these industries to mitigate infection control.

Like AgFF industries, the NEC worked diligently to adapt, to provide solutions and to ensure the protection of essential AgFF workers in the Northeast.

In the coming year, we will be interviewing farmers, working with commercial fisheries advocates and surveying loggers to increase our understanding of the pandemic’s impact on the health and welfare of AgFF workers and operations. We invite you to give us your feedback so that we can collectively set a course for strengthening and ensuring the sustainability of this truly essential workforce.

Be well, and congratulations for making it through a truly remarkable year.



*Julie Sorensen*

**Dr. Julie Sorensen**  
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# 2020 COVID-19 RESPONSE



The health and safety of agriculture, fishing and forestry workers have always been our priority. These are high-risk, essential industries, any day of any year. COVID-19 made ensuring their safety all the more critical. As essential AgFF businesses kept working, we did too.

Here are some of the highlights of our response to support the essential AgFF workers during the COVID-19 crisis.

Outreach staff began disseminating cloth face coverings and gallon-sized jugs of hand sanitizer to farms in partnership with Cooperative Extension, as shown here.



Our staff worked tirelessly to get the appropriate personal protective equipment (PPE) in the hands—and on the faces—of those who needed it most and to make sure they understood why it mattered.

Working with farmworkers, we created videos in Spanish and in English on the importance of not only wearing a face covering but also wearing it properly. This included:

- how to put it on and safely remove it
- what to do when in need of water or snack break
- how to prevent cross-contamination
- why wearing a mask is so important

We also developed a video with farmworkers on disinfecting and cleaning high-touch surfaces to prevent the spread of the virus at work. Both videos can be found on the U.S. Agricultural Safety and Health Centers' YouTube page.

[www.youtube.com/user/USagCenters](https://www.youtube.com/user/USagCenters)

Our 2020 schedule for respirator fit test clinics for farms was going to be the busiest year on record. By March, three clinics had been held, fit-testing 150 agricultural workers, before quarantine measures required that the remaining nine clinics be cancelled. However, that did not mean a slowdown in work for our staff. In less than two months our team conducted more than 1,300 respirator fit tests for healthcare workers and 63 fit tests for corrections personnel. The process included respirator fit-testing, user training and medical clearance.

At the same time, Industrial Hygienist Margrethe Hoff dove into a project to reduce exposure for the COVID-19 “swabbers” (diagnostic testers) by exploring new respirator options. Hoff developed new protocols as she identified existing respirators that could be used in new settings, such as elastomeric half-face North 7700s in healthcare settings—a first for our hospital affiliate, Bassett Healthcare Network.



When N95 respirators, commonly used in agriculture, became unavailable due to high demands in the healthcare industry, we consulted farms on safe, affordable alternative respirators, such as half and full-face models. We also produced a video in English and Spanish to demonstrate how to disinfect a half-face elastomeric respirator for safe reuse.

In all, the Northeast Center distributed 1,335 PPE items in the 2019-2020 grant year (totaling more than \$28,000 in value). Each piece of PPE distributed contributed to a worker's safety, whether it was for preventing spread of the virus that causes COVID-19 or protecting workers from respiratory hazards common to certain agricultural tasks.



# COVID-19 RESPONSE (CONT.)



## Trainings: both online and in person following CDC guidance

In spring, when in-person trainings were considered unsafe, our ag educators promptly pivoted, offering live, virtual safety trainings to respond to the needs of AgFF populations. When it was possible to get back on farms, strict protocols were set in place to provide workers support while keeping them safe.



Our industrial hygienist also advised farms individually on how to implement COVID-19 mitigation measures specific to their operations, such as installing equipment for improving ventilation in milking parlors.

**SCREENING FARM EMPLOYEES**  
Protect Your Employees During Covid-19

- 1 Employees Take Temperatures**
  - Employees can take their own temperature (which helps ensure social distancing) clearly before or as soon as they arrive to work.
  - Confirm that their temperature is less than 100.4°F (38.0°C), and they are not displaying Covid-19 symptoms (see below).
- 2 Practice Social Distancing**
  - Always maintain 6 feet of distance.
- 3**
  - Wear disposable gloves.
  - Check temperatures by reaching around partitions, stay behind barriers at all times.
  - Temperatures should be less than 100.4°F (38.0°C).
  - Ask about and observe for Covid-19 symptoms (see below).

**OR**

**Employers Take Temperatures**

- If an employer is taking temperatures, set up a physical barrier, such as a glass or plastic window.
- Wear disposable gloves.
- Check temperatures by reaching around partitions, stay behind barriers at all times.
- Temperatures should be less than 100.4°F (38.0°C).
- Ask about and observe for Covid-19 symptoms (see below).

**Remember:** Use a clean pair of gloves for each employee and thoroughly disinfect the thermometer after each check.

**Covid-19 Symptoms**

Symptoms may appear 2-14 days after exposure to the virus. If these symptoms or a temperature over 100.4 degrees, send the contact your county department of health for

FEVER, COUGH, LOSS OF TASTE OR SMELL, SOB, THROAT PAIN

Other less common symptoms have been reported, including gastrointestinal symptoms.

Questions or concerns? Call 800-242-7022 or email info@necenter.org www.necenter.org | www.nrcps.org

## Daily news & bilingual print materials

To provide focused and time-sensitive COVID-19 communications for the AgFF industry, the Northeast Center built a designated web page in the spring of 2020 featuring news and resources by state and by industry. Tips on preventing COVID-19 spread in shared worker housing, screening employees and safely transporting farmworkers to job sites were tackled using clear communication, practical tips and examples relevant to the industry.

Similarly, we conducted a “Smart Solutions” contest to encourage farms to share tips on how they were adapting, changing or innovating to make their workers or workplace safer during the health crisis. Tips that could be translated to forestry or fishing were disseminated through social media as well. The contest winner was Candella’s Farm in Marcy, NY, a you-pick berry farm that tie-dyed cotton face coverings to keep their staff safe when interacting with the public. The farm tie-dyed dozens of white cotton face coverings, which New York State distributed free to farms, making the masks less apt to show dirt and more fun for staff to wear.



## Assessing COVID’s Impact on AgFF Workers

### From bad to worse in the fishing industry:

In the September issue of the Journal of Agromedicine, Northeast Center researchers published “From Bad to Worse: The Impact of COVID-19 on Commercial Fisheries Workers.” The information highlighted in the article was gathered from fishermen, fishing industry experts, health and safety advisors, and advocates. This article caught the attention of Coastal Routes Radio, which ran an interview of the researchers’ findings on their Social FIShtancing podcast (episode 17). As Northeast Center Director Julie Sorensen said, “The takeaway message is things were bad [in commercial fishing] before COVID-19, and they are much worse now.”

Tune into the podcast at: [coastalroutes.org/podcasts](http://coastalroutes.org/podcasts)

Find Journal article at: [www.tandfonline.com/doi/full/10.1080/1059924X.2020.1815617](http://www.tandfonline.com/doi/full/10.1080/1059924X.2020.1815617)

### Measuring the fallout for Northeast loggers:

In December we mailed more than 3,500 surveys to loggers in Maine, New Hampshire, Vermont, New York, Pennsylvania, and West Virginia to get a snapshot of how the pandemic has affected their work and overall wellness. Summaries of the information gathered will be shared with loggers and logging industry advocates in order to identify health and safety priorities for this worker community in the months and years ahead.

### Surveying farmworkers nationwide:

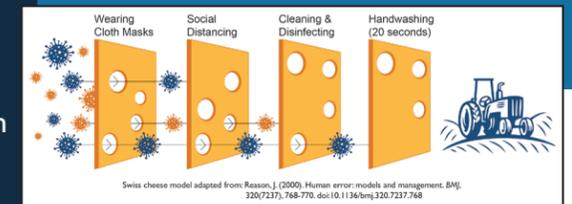
The Northeast Center, in collaboration with researchers from the Western Center for Agricultural Health and Safety and other NIOSH Agricultural Centers, conducted a survey to assess the impact of COVID-19 on farmworkers. Information was collected on work practices, prevention control measures, risks, barriers to protection and healthcare needs. The information will be used to inform policy, reduce COVID-19 exposures and provide information on where, when and how farmworkers can access healthcare.

## Room for Improvement: An Online Tool for Reducing the Spread of COVID-19 in Farmworker Housing

Because so many farmworkers were at increased risk due to commonly living in shared housing provided by employers, the Northeast Center collaborated with Leigh McCue from George Mason University to develop a farmworker housing simulator project. This web-based, educational tool assists workers and their employers in implementing strategies to mitigate the risk of disease transmission on farms.

The simulation tool was developed using Javascript so that it could be widely accessed from a computer or mobile device. A paper has been submitted on this effort to the Journal of Agromedicine, and a presentation about the tool was delivered at the Southeastern Coastal Center for Agricultural Health and Safety’s 2020 State of the Science meeting in September.

You can find the simulator on our website at [www.necenter.org](http://www.necenter.org)



# SURVEILLANCE



## IMPROVING METHODS FOR TRAUMATIC INJURY SURVEILLANCE IN AGRICULTURE, FORESTRY AND FISHING

### OVERALL GOAL

With this project, we aim to develop and maintain a robust surveillance program that identifies AgFF-related incidents in existing public health data sets using machine learning. This will yield fewer records that individuals have to review by hand, thus making the process radically more efficient.

### SYNOPSIS

Collecting data on injuries and fatalities in AgFF sectors is an extremely important step in protecting the health and safety of workers. With this information we can help AgFF businesses and workers identify the hazards that most frequently lead to death, injury or illness so that they can invest their limited time and money wisely in prevention efforts. At the Northeast Center, we track work-related injuries and incidents in farming, commercial fishing and logging, which allows us to identify fatality, injury and illness trends, emerging issues, develop solutions and ideally measure how interventions or prevention efforts work. In previous years, finding those data has meant sifting through hundreds of thousands of health records, 99% of which have nothing to do with AgFF industries. Historically, this has been done by individuals who manually review records—case by case.

Fortunately, the Northeast Center has been developing a method for using machine learning to identify and track AgFF-related incidents in electronic health records, such as pre-hospital care reports and hospital data. Researchers were able to use a “gold-standard” dataset, consisting of approximately 50,000 manually reviewed records, to develop the supervised machine learning algorithm. This method will vastly increase the efficiency and speed of reviewing health records, thereby reducing the cost of surveillance and offering more up-to-date information on injury trends.

By using machine learning methods, the Northeast Center has been able to reduce the number of records requiring manual review by 60%, as compared to previous methods.

### NEXT STEPS

In the coming year we will be testing other machine learning models, optimizing for expansion across states and in newer years of data

For more detailed information on this method, visit [www.necenter.org](http://www.necenter.org)



Tagged Data



Training the Computer



Predicting Records for Visual Inspection



Building the Model

# FARMING



## Retrofitting On-Farm Grain Bin Structures with Modern, Safe-Entry Technologies

In 2019, there were 38 reported grain bin entrapments nationally. Twenty-three were deadly. Tragically, about one in five of these incidents involve children.

Grain bin entrapments and engulfments are preventable. Grain storage bins produced after August 2018 have anchor points for a lifeline and harnesses to prevent potentially fatal incidents. Unfortunately, more than 260,000 of such structures nationwide were manufactured before these safety technologies became standard. Most entrapments and engulfments occur in these older grain storage structures.

With funding from the Northeast Center ag safety engineers and safety specialists at Pennsylvania State University are researching safe entry technologies for retrofitting these older grain bin models.



Safe entry assessments include testing an anchor point simulator for retrofitting on-farm grain bins with safe entry systems. In addition, researchers are using SolidWorks® 3D CAD (Computer Aided Design) to create a parametrically driven 3D model of a grain bin. Data collection equipment including strain gauges has been installed on two Penn State Farm Operations grain bins to test these models.

In addition to grain bin simulations, researchers are exploring factors that might prevent farms from adopting safe grain bin entry systems and how these obstacles might be overcome.

## Social Marketing of Machinery Safety Shields

Northeast Center intervention projects have offered valuable insights into what works or does not work when it comes to encouraging farmers to replace missing or broken power take-off (PTO) shields. PTO shields can be an effective strategy for preventing machinery entanglements, which are a primary cause of fatalities and severe injuries of adults and children on Northeast farms.

Despite their effectiveness, Northeast Center on-farm audits have found that only slightly more than half of agricultural machinery with driveline implements had intact PTO shields.

Over the past year, the research team has completed its evaluation of a PTO shielding intervention, targeting New York farms in 2019. Researchers learned “influence campaigns” (i.e. emphasizing what authority figures think or what others are doing) were not



successful in encouraging farmers to replace PTO shields. However, our safety educators' efforts to interest farms in PTO shield replacements have been fruitful. In 2020, the center sold 195 PTO replacement shields to farms throughout the Northeast and as far away as Alaska.



*PTO shield sales continue to increase, largely due to the efforts of NYCAMH outreach team. Bilingual farm safety educator Anna Meyerhoff (above) prepares an order for delivery.*

***“I like the PTO covers because of the ease of installation and ordering. We keep a handful of these in our shop, and if we come across a broken guard it is immediately replaced. It is one of the easiest things we can do for safety. They are well constructed. We have not had one of these break yet.”***

***- Jeremy Bergen  
Bergen Farms and Glenview Dairy,  
who ordered 29 PTO shields from the  
Northeast Center in 2020***

## The True Cost of Farm Injuries and Fatalities

The cost of work-related injuries and fatalities on farms has been largely restricted to calculating the cost of emergency or medical services. Yet such injuries can have long-term, devastating effects on workers' mental health, work security, long-term care costs and the burden to their families and care-givers.

In 2020, Northeast Center Deputy Director Erika Scott, PhD, completed her first year of a three-year research project addressing the gap in understanding the true burden of occupational injury in agriculture. She hopes her findings will allow industry groups and policy makers to more accurately measure the true cost of work-related injury and to adequately prioritize investments in the health and safety needs of agricultural workers.

Dr. Scott's work is made possible through a NIOSH Mentored Research Scientist Development Award (K01).

## National ROPS Rebate Program

Tractor rollovers are the leading cause of death on farms. Rollover protective structures (ROPS) are 99% effective in preventing injury or death in the event of an overturn when used with a seatbelt, and 70% effective even when used without a seatbelt.



The National ROPS Rebate Program provides 70% rebates to farmers who retrofit older tractors. It also provides farmers with information on what new, certified kits are available for their tractor make and model and whether there is funding in their state or not. The program is sponsored by the National Tractor Safety Coalition (NTSC), and administered through the Northeast Center with grants from CDC/NIOSH.

# FARMING (CONT.)



In 2020, the ROPS Rebate Program was awarded an additional four years of funding to continue expansion efforts. The program will focus on using media advocacy to support the ROPS program in three of the highest-risk states—Kansas, Iowa, and Missouri. The research team will work with state-based partners and media advocacy professionals to develop strategic campaigns tailored to each state.

## NY Senator Seward Receives National Award for Farmer Health & Safety Advocacy



Senator Seward with National ROPS Rebate Program Hotline Coordinator Rebecca Meininger

James Seward, who served in the New York Senate for over three decades, was honored at the 2020 North American Agricultural Safety Summit for his tireless service to the farm community. Seward has been a champion for the ROPS Rebate Program since its launch in 2007. He also successfully pushed to increase availability of health insurance for uninsured farmers, while working to decrease the cost of health insurance for small business owners.

“Senator Seward has made marked contributions to the health and safety of farmers,” said director Julie Sorensen, who nominated Seward for the award. “He has demonstrated what is possible when farmers, researchers, health professionals and educators work collectively towards the common goal of worker health and safety.”

## Emerging Issue: Tickborne Disease Risk in Agricultural Workers

Agricultural workers have an increased risk of exposure to tickborne diseases due to the nature of their work. Several studies have shown that cases of Lyme disease are higher in outdoor workers than in indoor workers, but most of these studies have taken place outside of the United States. Those conducted within the United States date back to the 1990s. Currently, there are no consistently effective methods for preventing tickborne disease transmission. These diseases can be seriously debilitating if left untreated and can even lead to death.

The Northeast Center has been reaching out to farmers in southwestern Vermont (Bennington and Rutland counties) to test for four prominent tickborne diseases in the Northeast: Lyme disease, Anaplasmosis, Babesiosis, and Ehrlichiosis. Determining the risk of disease transmission will aid in developing effective interventions to lower transmission rates.

## Center Safety Specialist Elected to International Ag Safety Board

Agricultural safety specialist Jim Carrabba was elected in 2020 to the board of directors for the International Society for Agricultural Safety and Health (ISASH). He has been a valuable member of the Center’s Outreach team for over 15 years. Jim is also a master trainer for the national Rural Firefighters Delivering Agricultural Safety and Health (RF-DASH) program.

## Pilot Project: Techniques for Teaching Ag Safety and Health to a multigenerational Workforce

Agricultural worksites may have as many as four different generations of workers. Each has unique characteristics, influences, work ethics, and values that influence their learning styles and therefore should affect safety specialists’ teaching strategies. This project investigated the differences in learning styles among generational groups in the agricultural workforce.

Over 200 agricultural workers completed either a paper-based or an online questionnaire. The sample sizes for Generation Z and Traditionalists/Silent Generations were not large enough to include, so the results from the study reflect those of millennials, Generation X and baby boomers. These three groups indicated that demonstrations followed by one-on-one trainings are their preferred learning methods. Compared to the other two generations, baby boomers reported printed material and classroom-type presentations as being more desirable than the other two generations.

Regarding the frequency of educational styles used by respondents, electronic learning was most often used, followed by observation. The least frequent method of learning was classroom presentations. Printed materials were a preferred method of receiving safety information and were perceived as effective by baby boomers more than by the other age groups. Electronic learning methods were most frequently used by Gen X and millennial participants. In terms of agricultural safety instruction, safety demonstrations were the most preferred and were viewed as the most effective learning methods, though they are not used as frequently.



# FISHING



## Participatory Ergonomics for the Lobster Industry: Innovating to Prevent Chronic Pain and Common Injuries

The Participatory Ergonomics for the Lobster Industry study was designed to address the high incidence of injury and prevalence of pain among lobstermen working off the Northeast coast. To do this, researchers have been working to develop easily applied ergonomic interventions, which can reduce musculoskeletal disorders in lobster harvesting workers.

In the past year, the research team and lobster fishermen have identified two problems contributing to strain, excess cabin noise and obstruction in the mechanical pathway of the traps from the water to the boat.

Using the study's participatory ergonomics approach, fishermen and researchers tested noise proofing insulation, which was installed in the engine compartment. This resulted in a minor reduction of noise as measured by the NIOSH Sound Level Meter. In response to the obstruction in material handling, a steel plate was installed under the hauling block and an obstructive steel rail was removed, which improved handling and reduced ergonomic strain.

Another participating crew had identified a work technique and minor adjustment of a hauling block location as method for addressing ergonomic hazards. With these adjustments the crew was able to change workers' posture when lifting and pulling the trap onto the boat. The research team also discussed the possibility of recruiting a physical therapist to set up a walk-in clinic for lobstermen on days when the weather is bad. However, this community-based

intervention has unfortunately been delayed due to COVID-19 precautions.

## Lifejackets for Lobstermen: Increasing Use Among Lobstermen

The most frequent cause of death in the Northeast lobster fishing industry is falls overboard.

NIOSH surveillance indicates that none of the victims found after dying in a falls overboard had been wearing a lifejacket or personal flotation device (PFD). Preliminary research conducted by the Northeast Center in 2015 revealed the use of lifejackets was a relatively uncommon practice in the lobster fishing industry due to a number of barriers that include comfort, practicality and social norms.

The Lifejackets for Lobstermen Project was launched to identify solutions, remove barriers and increase fishermen's interest in wearing lifejackets. During the project, fishermen worked with the Northeast Center to identify comfortable options and eliminate challenges to using them. Project coordinators also reached out to manufacturers, retailers, safety trainers and other researchers, as well as the National Institute for Occupational Safety and Health, the Royal National Lifeboat Institute, and the Old4New campaign in New Zealand, to create an outreach program using "Lifejacket for Lobstermen" vans. The vans traveled along the coast to bring fishermen-selected devices dockside at a discounted rate, providing an opportunity to try them on, compare them side by side, and consider new lifejackets/PFDs they may not have been familiar with.



During the vans' 157 days dockside, fishermen bought 1,087 lifejackets and PFDs.

**"THE MOST FREQUENT CAUSE OF DEATH IN THE NORTHEAST LOBSTER FISHING INDUSTRY IS FALLS OVERBOARD..."**

The Northeast Center now plans to transition the project to Fishing Partnership Support Services (FPSS), who collaborated on the project. FPSS is integrating the lifejacket van into their safety trainings and expanding the program to all fisheries and ages. Contact Fishing Partnership Support Services at **617-928-3443** or visit [fishingpartnership.org](http://fishingpartnership.org)

Want to learn more about the project and outcomes? Download the Lifejackets for Lobstermen Summary Report at [necenter.org/fishing/resources](http://necenter.org/fishing/resources) or request a print copy. Call the Northeast Center at **607-547-6023** or email the research team at [LifejacketProject@bassett.org](mailto:LifejacketProject@bassett.org)

The Lifejacket Project was a collaboration with Fishing Partnership Support Services, Maine Lobstermen's Association, Massachusetts Lobstermen's Association, McMillan Offshore Survival Training and the Atlantic Offshore Lobstermen's Association.

## Sleep Deprivation: Assessing Health Impacts on Fisheries Workers

Northeast Center researchers have teamed up with fishing safety experts around the country to conduct a two-year study on how sleep deprivation affects fishermen's health and their risk of injury or fatality.

The study's aim is to close the current gap in sleep studies research by developing and trialing the technology, data collection tools, methods and protocols necessary for advancing sleep studies research in commercial fisheries.

An expected outcome will be to generate data that can be used to facilitate more expansive and detailed studies of sleep deprivation in the fishing industry and to develop practical and actionable solutions for commercial fishermen.

Collaborators include Laurel Kincl of Oregon State University, Jerry Dzugan of AMSEA, and Leigh McCue of George Mason University. The NIOSH and U.S. Coast

Guard's 2019 Commercial Fishing Occupational Research Cooperative Agreement and Training Project Grant Award is providing a 50% cost share to fund the study.

## Mobile Apps for Commercial Fishing Safety

Researchers have been field-testing two smartphone apps designed to improve safety in the commercial fishing industry.

The Small Craft Motion Program (SCraMP) app provides real-time vessel motion monitoring data, giving the captain early warning of instability and allowing corrective actions to be taken before capsizing occurs.

The Fishing Vessel Drills (FVdrills) app is designed to facilitate safety drills by providing checklists, dynamic scenarios, electronic logs and reminders.

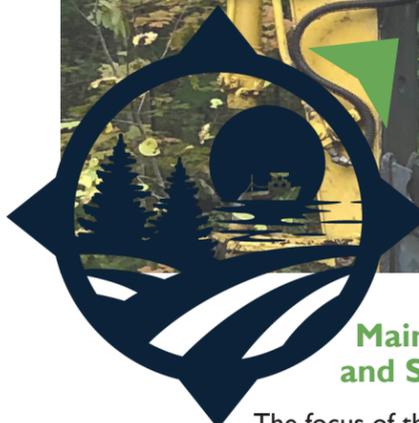
Because vessel disasters and falls overboard are the most prominent hazards in commercial fishing, preventing vessel instability and training a crew to respond safely during emergencies are essential to maintaining safety at sea. While these apps hold enormous potential, they can only improve safety if they are accepted and used by fishing vessel operators.

The purpose of this project is twofold:

- ▶ to field test whether the apps are used by as well as useful to commercial fishing vessel operators
- ▶ to determine the impact of these apps on monitoring vessel stability and conducting safety drills.



# LOGGING



## Maine Logger Health and Safety Study

The focus of this study was to learn more about the health and safety concerns of loggers in Maine, which has more forest cover than any other contiguous U.S. state and the largest logging workforce in the Northeast. Data have been collected from hundreds of Maine loggers through a series of questionnaires and in-person health screenings. Guided by an advisory board of industry insiders, including loggers themselves, this project aims to identify a practical path to ensuring the safety and sustainability of the industry well into the future.

“...MAINE, A STATE WITH MORE FOREST COVER THAN ANY OTHER CONTIGUOUS U.S. STATE...”

Having completed its fourth year of data collection, the study has distributed final surveys to loggers, which have included financial questions as well as questions about social support and overall health. Health information collected before and after the pandemic will deepen the logging industry’s understanding of the emotional and financial impact of COVID-19 on their workers.

In addition to surveys, health screenings or physical exams were conducted with a total of 84 loggers, offering a rare look at the overall health of this workforce. In the coming year, researchers hope to complete additional interviews and focus groups with loggers related to these findings.

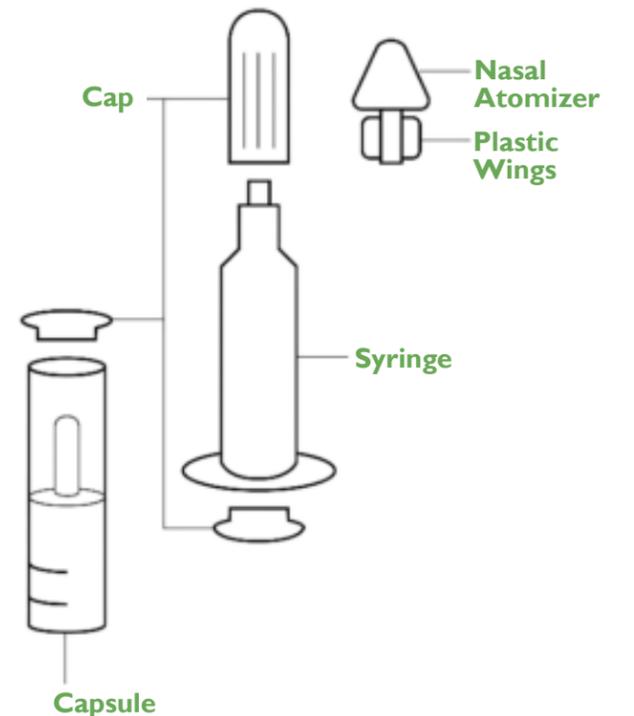
Commenting on eating healthy, one logger said, “Unfortunately, it is an inconvenience most of the time. I prioritize by convenience. If there are leftovers, that is convenient, you just pack it up and are good to go. At times, I just go to the store to grab a sandwich which isn’t the most healthy...but again, it’s convenient.”

## Capturing a snapshot of loggers’ health and lifestyle in a photo

Data from the Maine loggers’ health screenings and surveys showed that many loggers’ body mass index (BMI) levels are high, and their commute times and workdays long. The research team wanted to learn more about how the long days at remote work sites affected workers’ ability to eat healthy. The team chose an innovative approach referred to as “Photovoice” to better understand loggers’ experiences with making healthy choices.

Photovoice is a participatory action research method. It combines photography and worker comments about a particular topic. For this project, participating loggers were asked: “What do you typically eat on a work day and where do you get your food?”

The loggers were asked to email or text at least one photo of their meals each week with a description. After six weeks, each logger was interviewed to get feedback on the Photovoice process and thoughts on their own eating habits.



## Emerging Issues: Preventing Opioid Overdoses

Opioid misuse has become a noted public health crisis, and rural areas are no exception. At the start of 2020 the Northeast Center, Professional Logging Contractors of Maine (PLC) and Fishing Partnership Support Services (FPSS) crafted an opioid awareness and naloxone training tailored for logging workers. FPSS assisted in training development given their extensive experience delivering similar training in the fishing community. This training was scheduled to be delivered at PLC’s annual spring safety training series in spring 2020. Unfortunately, spring safety trainings were cancelled due to COVID-19, however, the Northeast Center hopes to provide naloxene training to loggers in the spring of 2021.

### Work Safety Facts

Maine Logger Health & Safety Study

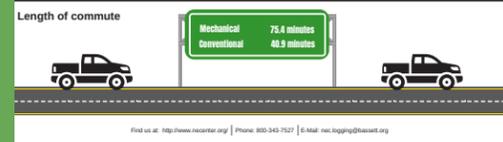
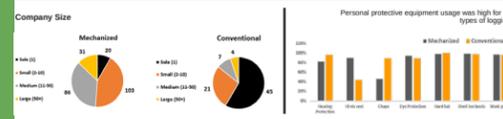
Who are our loggers?

246 + 79  
325  
total loggers

99% Male  
1% female

Did you know...  
the average years in the logging business is  
27.5  
years?

Where our loggers live



Find us at: <http://www.necenter.org> | Phone: 800-543-7527 | E-Mail: [nec.logging@necenter.org](mailto:nec.logging@necenter.org)

Survey results of data collected to date have been summarized in infographics, featured here.

Join and receive a \$100 L.L. Bean gift card

## Give us your best shot!

# PHOTOVOICE PROJECT

Maine Loggers: Share your pictures. Tell your story. A project about real lives and real people.



“This is what happens when I go to the local Irving station for diesel at lunch time. Bad food choices!”

# OUTREACH



## WORKING WITH AgFF WORKERS...

FACE TO FACE

ON OR OFF THE FARM

YEAR ROUND

The Northeast Center's farm services and educational programming staff has worked with hundreds of farm businesses over the past year. These connections keep us in touch with Northeast agriculture. As a result, our offerings stay relevant and responsive to real needs.

In 2020, with the onset of the COVID-19 health crisis, the workers we serve were aptly labeled "essential." Ensuring the health and safety of these essential workers presented new challenges, as well as new opportunities, such as online learning and video instruction.

Our outreach services and programs are typically provided at no cost and offered in person at the worksite or at a convenient central location for participants (i.e. classrooms, events or in coordination with other professional training opportunities). Safety specialists located in multiple states are available for both on-farm visits and trainings as well as for consultations by phone or video conferencing. They offer an array of safety trainings related to on-the-job safety for farm employees as well as for owners and managers.

While we can help a farm meet its regulatory standards, the Northeast Center is not a regulatory organization. We exist solely to serve business owners and workers' needs.



# OUTREACH SERVICES: 2020 OVERVIEW



## Safety Trainings in English

**71** sessions  
**1,066** workers trained

We offer trainings on a broad range of topics, from animal handling, to Lyme disease prevention, to the Worker Protection Standard (EPA WPS). We customize each training based on the individual farm's needs.

New this year: *Safe Handling of Non-Ambulatory "Down" Cows* and *COVID-19 Safety and Prevention Training for Agricultural Workplaces*



## Safety Trainings in Spanish

**101** sessions  
**1,527** workers trained

Two of our safety educators provided tractor safety training at a one-day tractor workshop for Spanish-speaking farmers and workers (photo above), hosted by the Hudson Valley Farm Hub in November. This workshop covered tractor/PTO safety, proper hearing protection, and slow moving vehicle (SMV) signage. In addition to access to real tractors, the group also had effective visuals of the importance of using ROPS and a seat belt through our "Mr. Good Egg" demonstration. A short video of this demo can be found on our YouTube page at [youtu.be/FP0s6XaMsys](https://youtu.be/FP0s6XaMsys)

While a large majority of our Spanish trainings cover the Worker Protection Standard (WPS), hygiene, food safety, sun & heat protection, animal and machinery safety, any of our training topics can be provided in Spanish.

## Safety Surveys

**23** in-person sessions  
**26** virtual sessions  
**84** served farm owners and managers

On-farm safety surveys are conducted with one of our safety specialists. They tour the farm operation with the owner or manager to identify specific safety hazards and provide verbal and written recommendations for how to eliminate, fix or mitigate these hazards.

In 2020, safety consultations were modified and conducted virtually, via live video, to comply with COVID-19 safety precautions. (Example in photo below.)

These safety surveys provide farm owners and managers one-on-one consultation time to ask questions and receive advice on improving safety and complying with regulatory standards.



## Farm Emergency Response Program

**32** sessions  
**290** trained

- Gearing up in front of a mobile grain rescue training unit, a firefighter (above) prepares to learn how to use a rescue tube. Read about our grain bin safety project with Penn State on page 8. About 50 people attended this event, most of whom were rural first responders.
- Our emergency preparedness trainings include first aid and CPR.

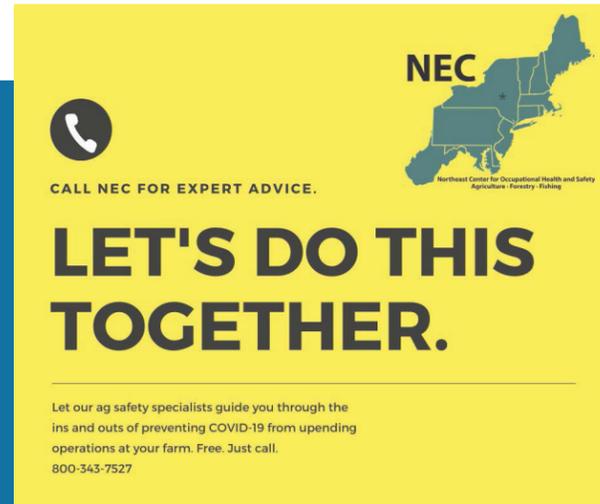
# OUTREACH SERVICES



## Logging Safety Trainings

**12** classes  
**99** trained

- Logging safety classes are offered to loggers, farmers and landowners with varying levels of logging expertise. Educational sessions were evaluated using pre- and post-training tests as well as direct observation. Trainees are scored during the class on their safety knowledge and logging skills. Evaluation results are being used to fine-tune future trainings.
- COVID-19 continues to impact availability of courses. There are currently 123 people on the waiting list for our logging safety courses.



## Technical Assistance

**166** safety consultations  
**200** served

## Youth Trainings

**36** trainings  
**488** youth served

Every day about 33 children are injured in farm-related incidents. More than half involved children who were not working at the time. Tragically, about every 3 days a child is fatally injured on a farm. Using a combination of discussions, visuals, and hands-on activities, we have safety trainings geared towards grade school, high school and college level students.



## BILINGUAL FOTONOVELA DEVELOPED FOR TRAINING NEW DAIRY WORKERS

In 2020, the Northeast Center published a “fotonovela” or comic book for training new dairy workers about on-the-job hazards in Spanish and English. This colorful, easy-to-read, 12-page resource titled “Happy Cows, Safe Workers” was illustrated by artist Salvador Sáenz, a public health educator based in El Paso, Texas. Content was developed by Anna Meyerhoff, a bilingual educator for the Northeast Center.

This fotonovela tells the story of José, a new employee arriving for his first day of work on a dairy farm. His supervisor Manuel points out hazards around the farm, and lets him know how important teamwork and communication are. José learns about safety and health topics related to cows, chemicals, skid steers, confined spaces, and worker housing. He learns about fire extinguishers, and learns what to do in an emergency. Manuel welcomes José warmly and reminds him of the farm goal: “take good care of the cows, work as a team, and get home safe at the end of the day.” The last page also includes information on what to do in an emergency plus space for writing

important contact information.

The fotonovela format is common in Mexico and other Latin American countries, especially for educating learners about health topics. Fotonovelas use images and dialogue to tell a story.

The booklet focused specifically on dairy farming because it is a primary agricultural industry in the Northeast, and it is one with a wide variety of hazards. The occupational injury rate of U.S. dairy workers is twice that of the national average across all industries, according to the Bureau of Labor Statistics.

Sáenz has created a variety of illustrated farm safety materials for the Northeast Center, in English and Spanish, including two other fotonovelas and over 20 posters on a variety of safety topics, including ladder safety and working safely around pesticides.

The booklet was distributed for free to dairy farms throughout the Northeast. It received national publicity, which led to requests for copies from dairy farms across the country.



# 2020 CHAMPIONS



Each year the Northeast Center recognizes specific individuals and organizations who were champions of advancing AgFF health and safety in the Northeast. These are people who we would call “exceptional.”

Looking back on 2020, those who stand out—the exceptional—were also the “essential.”

According to the U.S. Department of Homeland Security, essential workers are those who conduct a range of operations and services that are typically essential to critical infrastructure operations. It’s an umbrella term to which states can apply their own definitions. There was no disagreement, however, as to the essential nature of the work and products provided by AgFF.

So as the COVID-19 pandemic surged, and Americans were told to shelter in place and stay at home—AgFF workers remained on the job.

Even as dairy farmers had to dump thousands of gallons of milk because of lost demand in the market, they couldn’t just take time off from milking. Lactating cows have to be milked, daily.

Crops in the ground couldn’t be left untended. They are carefully timed products that need constant care and maintenance—whether it’s cultivating, irrigating, warding off pests and diseases, or harvesting.

Fishermen continued to provide us with their fresh catch, and found new modes of getting their products to consumers, even though this meant adding more hours to their already lengthy work days.

Of course, we all saw what can happen when the distribution of essential paper products goes awry. The work of loggers is essential to the supply chain, whether it’s paper products or building supplies.

When we filmed a video on face coverings at a farm in Central New York, we learned from the workers (shown in photo) how keenly aware they were of the importance of wearing masks to protect those with whom they worked. Many were brothers or cousins. They shared housing quarters. They worked side by side.

These workers, who showed up for work in the most uncertain and unsafe of times to meet our nation’s essential needs, are our champions.



Find the video “COVID-19 Prevention: Guide to Wearing Cloth Face Masks” or its Spanish version, “Prevención de COVID-19: Una guía para usar las mascarillas de tela” on the U.S. Agricultural Safety and Health Centers’ YouTube page

[www.youtube.com/user/USagCenters](https://www.youtube.com/user/USagCenters)



# PUBLICATIONS AND PRESENTATIONS

## Published Papers

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Sorensen, Julie. An interactive tool to help farm workers assess COVID-19 risk and mitigation. Paper submitted to *J Agromedicine*, August 7, 2020

Tinc PJ, Sorensen JA, Goodspeed MM, Jenkins PL. Do Cialdini's "Principles of Influence" motivate safe practices on farms? A study of NY farmers' PTO shielding behaviors. Submitted to *Safety Science*, July 2020.

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Weil R: [2020] Safety At Sea Takes a Leap Forward. National Association of State Boating Law Administrators Annual Conference, Webinar, September 29.

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# NORTHEAST CENTER



FOR OCCUPATIONAL HEALTH AND SAFETY

## YEAR IN REVIEW 2020

### ACKNOWLEDGMENTS

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