



# NE Q23

ENHANCING  
THE HEALTH OF  
AGRICULTURAL,  
FORESTRY AND  
FISHING WORKERS



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## MISSION

By conducting research, providing education and developing programs, we work to improve the health and safety of commercial farmers, loggers and fishery workers.

## CREDITS

All content writers: Northeast Center staff and Erika Street Hopman  
Design: Iron Design  
Photos: supplied

John May Farm Safety Fund Coordinator, Dahlia Sheehan-Yassin conducting tick drags to assess tick density as part of our Vermont Tick Study.





## MESSAGE FROM OUR DIRECTOR

In past “Year in Review” messages, I have generally focused on what our staff and partners have done over the past year to improve the health, safety and well-being of workers and business owners in the agricultural, forestry/logging and fishing sectors. After all, a Year in Review serves as our report card or an opportunity to discuss how we’ve taken public investments and changed things for the better for our industry partners.

However, this year I felt compelled to focus instead on the considerable efforts and work that agriculture, forestry/logging, and fisheries (AgFF) workers and industry partners have undertaken to improve worker health and safety in AgFF operations. In the past, AgFF industries have been negatively portrayed in the media. While some worker abuses exist, in our experience, industry leaders have worked diligently to provide safer, better conditions for their workers and opportunities for continued career growth. It is also important to note that if workers and business owners are forced to work long hours in suboptimal conditions, we, as consumers, play a part in these conditions, given our access to cheap, easily accessible food and wood products. Improving work conditions for AgFF workers is a responsibility that should be shouldered by all of us, as well as business owners.

Given the challenges faced by AgFF operations, I wanted to highlight the considerable efforts made by these industries to improve safety and worker well-being. In 2023, we have documented over \$480,553.59 in safety project investments on 49 farms in the agricultural community. Roughly 5,371 workers have been trained in safety practices/hazard recognition, and \$18,433.30 in personal protective equipment purchases have been made. Hundreds of commercial fisheries workers across the U.S. participated in our sleep deprivation study, taking time away from work to participate in health assessments and surveys (incredible, given that time away from work means profit loss). Fishermen, loggers, and farmers have participated in roughly ten advisory board meetings over the year and fought hard for funding increases for health and safety in AgFF worksites. Over the past year, 239 farmers installed rollbars on tractors and 45 installed PTOs on tractor drivelines. These are only the investments that we can directly document; no doubt, there are many others that AgFF employers have made on their own.

AgFF workers or industry representatives have submitted proposals to translate health or safety solutions into AgFF worksites, and forty-six farmers have agreed to trial tick-borne disease prevention strategies on their farms. Farm owners have hosted onsite health assessments for their workers in conjunction with the NEC and have participated in interviews that have allowed us to assess the complete cost of work-related injuries in agricultural operations.

While these efforts from the AgFF community will hopefully lead to improved work conditions and greater sustainability for AgFF operations, there is never a guarantee. Research is by its nature experimental, which means no one has invested more in improving AgFF health and safety than the AgFF operations and workers who have taken the time to participate in NEC research. We thank you for your investments, your vote of confidence, and your willingness to work with researchers to find solutions. Your efforts have been integral to the many improvements that have been made in workplace safety and worker wellbeing. Congratulations to all of you for an impressive year!



*Julie Sorensen*

**Julie Sorensen, PhD**  
julie.sorensen@bassett.org  
Director, NEC

# INTERNATIONAL CONNECTIONS

## THE UMEÅ-BASSETT COLLABORATIVE

In August, researchers from the Bassett Research Institute (including the Northeast Center) and Umeå University's Department of Epidemiology and Global Health joined in Cooperstown, NY, to celebrate the 30th anniversary of the Umeå-Bassett Collaborative. Umeå University is situated in Västerbotten County in northern Sweden. The Department of Epidemiology and Global Health is home to international masters and PhD public health and epidemiology programs.

Initiated in 1994 by Drs. Thomas Pearson (Bassett Medical Center) and Lars Weinehall (Umeå University), this collaboration has led to thirty-seven joint peer-reviewed publications, several grant-funded research studies, five PhDs, and two honorary doctorates. Four of the PhD and honorary doctorate awards have been to Northeast Center staff: Drs. Julie Sorensen (2009), Pam Milkovich (2019), and Melissa Scribani (2023) have each earned PhDs from Umeå University, and Dr. Paul Jenkins was awarded an honorary doctorate in 2017, celebrating his contributions to the Collaborative.

During this weeklong celebration, researchers from both organizations also talked about the collaboration's past, present, and future. As part of these discussions, the group drafted a Memorandum of Understanding between the two organizations to formalize ongoing collaborations and develop a strategy for the next decade. This includes continued and expanded opportunities for exchange visits, joint research studies, and Ph.D. education for Bassett researchers.



(L-R) Lars Weinehall, Tommy Ibrahim, Mary Muncil, John May, Don Bordley, Priscilla Martin, Julie Sorensen enjoy each other's company at the Umeå Celebration.

Umeå University and researchers at the Department of Epidemiology and Global Health were recognized for their ongoing contributions to the Bassett Research Institute and Northeast Center at a banquet held during the week.

## LEARNING TO "BESAFE" THROUGH INTERNATIONAL CONNECTIONS

In August, farm safety researchers and practitioners from across Europe, Australia, and the US gathered at the BeSafe International Farm Safety and Farmer Health Conference in Dublin, Ireland, hosted by Teagasc. Northeast Center Director Dr. Julie Sorensen had the honor of presenting the conference's keynote address (see more on page 5), "Human Behavior: The Black Box of Injury Prevention," and she, along with three additional Northeast Center investigators, Drs. Erika Scott, Mandy Roome, and Pam Milkovich, presented on various projects underway at the Northeast Center. More important than sharing our research, the Northeast Center team had an opportunity to connect with and learn from agricultural safety researchers and practitioners from across the globe. Topics covered during the conference included translating research and knowledge into on-farm practice, understanding and utilizing aspects of culture to improve safety and health, leveraging policy and partnerships for safety and health, and farmer mental health. Attendees also had the opportunity to tour the Teagasc Grange, a working farm and research center, to learn about the resources it provides farmers.

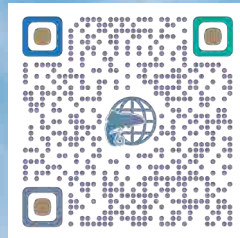


(L-R) Julie Sorensen, Mandy Roome, Pam Milkovich, and Erika Scott gather for a photo while attending the BeSafe Conference in Dublin, Ireland.



## FISHING FOR KNOWLEDGE AT IFISH6

The sixth International Fishing Industry Safety and Health Conference (IFISH6) will allow researchers from across the globe to connect, showcase their research, disseminate their safety innovations and solutions, and develop new and effective partnerships. This year, the Northeast Center has had the pleasure of joining the National Institute for Occupational Safety and Health (NIOSH) and the Food and Agriculture Organization of the United Nations (FAO) in organizing this event, which is set to take place January 8-12, 2024 in Rome, Italy. The 2024 conference will emphasize the health and safety of fishermen in developing countries, specifically from Latin America, the Caribbean, Asia-Pacific, and Africa. Additionally, workshops with the International Maritime Organization and the International Labor Organization are currently being discussed, as are panel sessions, plenaries, and an IFISH6 Innovation's Exchange initiative, which the Northeast Center will lead.



# AWARDS & RECOGNITIONS

## MASSACHUSETTS LOBSTERMEN'S ASSOCIATION

Dr. Mandy Roome and the Northeast Center received awards from the Massachusetts Lobstermen's Association for their work on providing affordable, accessible, and easier-to-use lifejackets to commercial lobstermen. The award was presented in March 2023 at their annual conference in Hyannis, MA.



Mandy Roome, after presenting at the 2023 Massachusetts Lobstermen's Association conference.

## PEER REVIEWER OF THE YEAR

Dr. Erika Scott was named Peer Reviewer of the Year 2023 by the Journal of Agromedicine. Her research into injury surveillance helps to identify and reduce major injury hazards in agriculture, forestry, and fishing. Dr. Scott has authored or co-authored 33 peer-reviewed articles, 25 since receiving her PhD in environmental health sciences from the University at Albany, School of Public Health in Albany, NY in 2016. Matthew Keifer, MD, Editor-in-Chief of the Journal of Agromedicine, praised her: "Dr. Scott is one of our best. She is consistently willing to take on reviews, something we in the editorial office deeply appreciate. When she does accept, she is prompt, thorough, insightful and versatile, always polite and encouraging to the authors."



Erika Scott named Peer Reviewer of the Year 2023 by the Journal of Agromedicine.

## OCCUPATIONAL HEALTH NURSE CERTIFICATION

Judy Graham, RN received her Occupational Health Nurse Certification in August. Certified Occupational Health Nurses (COHN) assess risks, promote wellness, prevent illness and injury, and strive to protect workers from exposure to work-related and environmental hazards. To achieve certification, a COHN must be a Registered Nurse with 3,000 hours of occupational health nursing experience completed in the previous five years and must pass a rigorous national certification exam. Judy has been with our organization for seven years and, in that time, has contributed to several research projects, including injury surveillance, Lifejackets for Lobstermen, health and safety of Maine loggers, and sleep deprivation and health among commercial fishermen. She provides clinical support for HealthWorks' firefighters and DOT (Department of Transportation) physicals, vaccination, and wellness programs. Judy continually brings fresh and innovative ideas to our center. She's currently spearheading pilot projects to conduct bilingual, on-site health assessments for farmworkers, and also educating bluestone cutters about the respiratory health risks in their occupation.



Judy Graham performs a health assessment as part of the sleep deprivation study.



## GOVERNOR'S PROCLAMATION

On September 12, Governor Hochul issued a proclamation recognizing September 17 – 23 as Farm Safety and Health Week in New York State, specifically outlining the New York Center for Agricultural Medicine and Health's (NYCAMH - the Northeast Center's New York identity) important role in educating and researching farm health and safety issues.

On Monday, October 2, we were honored to have NYS Ag and Markets Commissioner Richard Ball and Dept. Commissioner Jennifer Trodden join us in person for a tour and gathering at our Fly Creek office. Commissioner Ball spent the morning meeting staff, who shared on-farm insights and lessons we learn from the farmers we proudly serve.

At the end of his visit, Commissioner Ball gathered with our staff to present Governor Hochul's proclamation. In his parting remarks, Commissioner Ball said, "When I get the thinkers and the doers in agriculture together, they're all big fans of what you do because you're trusted by the farmer, and you're trusted by the farm worker. And that is a winning combination."



Julie Sorensen and NYS Department of Ag and Markets Commissioner Richard Ball, proudly displaying the Farm Safety and Health Week proclamation from NY Governor Kathy Hochul.

## CELTIC CACHET FOR SORENSEN

Julie Sorensen's presentation of "Human Behavior: The Black Box of Injury Prevention" was attended by researchers from Europe, the United States, and Australia, in addition to agricultural safety specialists and policy makers from across Ireland. Remarkably, while agriculture varies around the world, there were common approaches and challenges in addressing farmer health and safety. Julie joined other researchers in focusing on why people engage in safe and unsafe practices, the challenges to farmers' mental health and well-being, and how these challenges can be met in the future.

Julie Sorensen delivers her keynote address at the 2023 BeSafe Conference in Dublin, Ireland.



# R2P INCUBATOR



(L-R) Julie Sorensen, Pam Milkovich, Leigh McCue-Weil, Liane Hirabayashi.

The Northeast Center launched our research to practice (R2P) incubator in 2023. This new project encourages the development and adoption of new ideas to improve the health and safety of loggers, farmers, and commercial fishermen, with the following goals:

- **develop a blueprint for R2P best practices**
- **create a competitive application process for funding two R2P solutions**
- **establish an advisory board to assist with developing the blueprint, selecting applicant winners, and mentoring the winners**
- **evaluate the incubator**
- **share lessons learned**

The Northeast Center team is led by Principal Investigator Dr. Julie Sorensen, with assistance from Co-Investigator Dr. Pam Milkovich, Incubator Chair Dr. Leigh McCue-Weil of George Mason University, and Coordinator Liane Hirabayashi.

## PROGRESS TO DATE

### Develop R2P Blueprint

- Completed a literature review of research translation efforts
- Conducted a web search of AgFF incubators, identifying examples of successful health and safety products
- Conducting an ongoing patent search for AgFF health and safety products

### Competitive Application Process

- Developed a simple online application on the Northeast Center website, which can be submitted in writing or as a video in English or Spanish
- Received first round of applications
- Reviewed applicants (fall 2023) and selected a winner for the first round to commence in December 2023

### Share Lessons Learned

- Dr. Milkovich presented the R2P incubator literature review results at the BeSafe Conference in Dublin, Ireland, in August 2023
- Dr. Sorensen presented the R2P incubator concept at the Umeå Bassett Collaborative Seminar in Cooperstown, NY in August 2023

### Evaluate the Incubator

- Surveyed the advisory board at the first meeting for initial feedback

### Establish an Advisory Board

- Convened for its first meeting in July 2023.
- Selected experts in manufacturing, engineering, standards, entrepreneurship, marketing, design, patent law, and AgFF industry representatives





## IN THE WHEELHOUSE

The Northeast Center's newest research grant, "In the Wheelhouse: Empowering Fishermen Through Community Partnerships to Improve Health and Safety," has been funded through a United States Coast Guard cooperative agreement for the next three years.

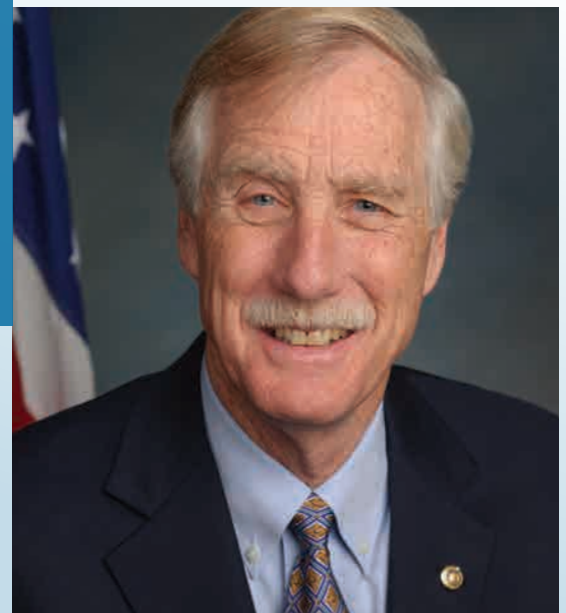
This project seeks to explore the increasing concerns about the mental and physical toll that commercial fishermen face. It will focus on the lobster and intertidal fishing communities in Stonington and Vinalhaven, Maine. Health assessments and interviews with fishermen about barriers to healthcare access and worker well-being will be used to develop a fishermen's well-being program, which will include a fisheries health service navigator to be located within the local healthcare system. The study will begin with a three-day retreat to establish a community hospital partnership to oversee this work.

This study provides a unique opportunity to understand the impact of the factors affecting fishermen's access and utilization of healthcare resources and develop community-led strategies for helping fishing communities.



**“This project will evaluate interventions to reduce death and traumatic injuries by addressing the cumulative effect of the unique challenges fishermen face.”**

Susan M Collins and Angus S. King, Jr.,  
United States Senators





## LIFEJACKETS FOR FISHERMEN

Commercial fishing has had one of the highest fatality rates of any occupation in the United States. Drowning is the leading cause of death within this industry, generally occurring after a vessel disaster or a fall overboard. In 2019, after consulting with lobstermen for several years, the Northeast Center launched Lifejackets for Lobstermen vans to connect lobstermen with comfortable and workable lifejacket options and encourage their use. In eight months, this program sold over one thousand lifejackets to lobstermen at discounted pricing. Over the past year, the Northeast Center has partnered with Fishing Partnership Support Services (FPSS) to expand this program and embed it within the larger fishing community.

In the new iteration of this program, Lifejackets for Fishermen, workers from any fishery can access the program by engaging in FPSS health and safety training or by visiting an FPSS office. True to the original program, Lifejackets for Fishermen offers three core components:

1. **Try-before-you-buy opportunities to find lifejacket models that fit each individual's needs**
2. **Education about lifejacket use and maintenance**
3. **Cost savings when purchasing a lifejacket**

While Lifejackets for Lobstermen allowed for direct lifejacket sales, Lifejackets for Fishermen uses a more sustainable rebate approach. This provides a 50% reimbursement for the cost of their lifejacket of choice from any supplier for eligible fishermen.

The Northeast Center will assess this transition's success using surveys and interviews over the next few years. Additionally, Northeast Center staff will collaborate with researchers at the Pacific Northwest Center for Agricultural Safety and Health (PNASH) to compare the implementation of the lifejackets program in two different settings. The knowledge gained from these efforts will help us understand how to quickly and efficiently bring proven safety and health programming to the fishing community.

**“I see that the fishing community is listening, and our work is succeeding at saving lives at sea.”**

Russell Kingman

FPSS Executive Vice President  
Dan Orchard and Safety  
Instructor Russell Kingman





## MAN THERAPY: TACKLING STRESS AT SEA

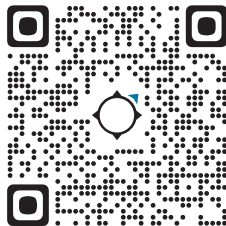
The commercial fishing industry is known for its grueling work conditions and unpredictable nature, which can take a toll on the mental health of fishermen. Unsurprisingly, the industry has one of the highest suicide rates in the country, with an average of 80 deaths per 100,000 individuals - over ten times higher than the national average. Experts believe the lack of access to mental health resources is a significant contributor. Despite this evident need, the industry has historically been underserved regarding mental health care resources.

The lack of access to these resources for commercial fishermen is due to various factors, including a lack of awareness and understanding of their mental health needs, a shortage of mental health care providers in coastal communities, and financial barriers.

Our 2022 Year in Review noted that the Northeast Center and Maine Coast Fishermen's Association worked with Man Therapy to create a campaign targeting commercial fishermen. Man Therapy is an innovative approach that uses humor and relatable content to raise awareness about mental health care and provide resources for fishermen.

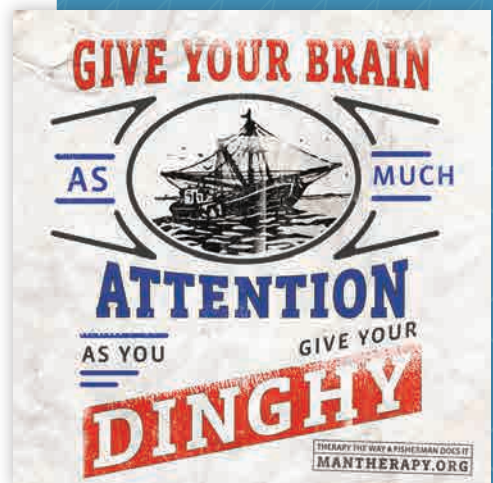
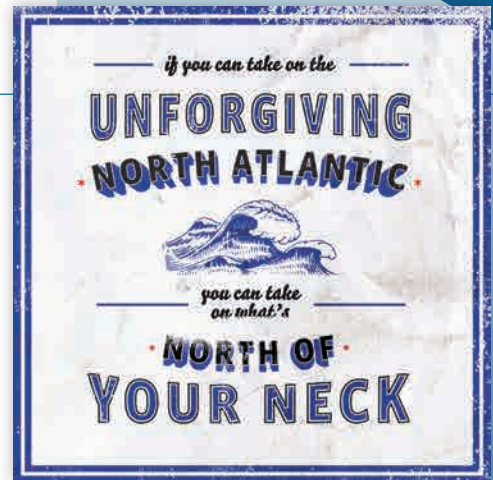
Access to mental health care resources is critical for the well-being of commercial fishermen and their families. This is the perfect time to continue bringing light to this crucial issue to ensure that these vital members of our coastal communities receive the care they need and deserve.

Through this collaborative project, the Northeast Center developed a website to pool mental health resources and outreach materials for commercial fishermen and those working with commercial fishermen. All posters produced in the Man Therapy campaign can be downloaded from our website.



**“A campaign with recognizable images and accessible language, and of course some levity, is so important to help support fishermen in their efforts to be able to talk about mental health concerns as well as seek help.”**

Monique Coombs, Director of Community Programs, Maine Coast Fishermen's Association (MCFA)



Social media and poster designs developed by Man Therapy with the Northeast Center and Maine Coast Fishermen's Association to raise awareness and destigmatize prioritizing mental health care.



## SLEEP DEPRIVATION IN THE FISHING INDUSTRY

As highlighted in our 2022 Year in Review, the Northeast Center joined partners from Oregon State University, the Alaska Marine Safety and Education Association (AMSEA), and George Mason University to study and better understand sleep, sleep deprivation, and impacts on health in the commercial fishing industry. This required our staff and partners to set up health assessments in ten East and West Coast locations, make thousands of calls to fishermen, and collect data in hundreds of surveys and health exams.

Given the considerable amount of data captured in this study, probably the largest and most comprehensive data set on fishermen’s sleep and health in the U.S., it has taken several months to clean, organize, and analyze data. However, several significant findings have been identified, and these will be shared with fishermen who participated in the study, as well as collaborators, researchers, and industry

partners through the distribution of a final study report.

The final report will share these findings with fishermen, including recommendations for addressing hazardous exposures and improving diet and brain health.

A link to the final report can be found on the Northeast Center website, and research will be shared at the upcoming IFISH6 Conference in Rome, Italy.



### Key findings include:

The average consecutive hours of sleep at sea in the participating fisheries was **3-4** hours a night.

The prevalence of post-traumatic stress disorder among male fishermen is **3x** higher than in the general population of U.S. men.

Around **20%** of fishermen reported pain so severe that it interferes with sleep.

Roughly **50%** reported not having quality sleep, with 1 in 5 having a diagnosed sleep problem.

Around **14%** of crab fishermen had elevated levels of exhaled carbon monoxide (potentially from either smoking or exposure to diesel smoke).

**Most** fishermen had elevated blood pressure.







	TASK	DESCRIPTION	DATE
PHASE 1	Interviews with Fishermen	In-depth discussions about sleep and health, development and piloting of surveys	2019
PHASE 2	Sleep Surveys	Phone surveys with 262 fishermen	2021 & 2022
PHASE 3	Fishing Forward Podcast	Collaboration with University of Guelph and Dalhousie University to bring sleep and health information to fishermen as quickly as possible after hearing fishermen's concerns in the interviews	2021-2022
PHASE 4	In-Person Health Exams	Free health exams provided by healthcare teams at harbor locations for 162 fishermen	2022
PHASE 5	Wearable Technology	Identify a wearable & workable device for fishermen to accurately track sleep time and stages	2019-2022

**How Much Sleep Are Fishermen Getting While on the Boat?**

The data in the table below is all based on self-reported sleep schedules. Lobstermen served as a control in this sample as they typically do not sleep on the boat.

SLEEP MEASURES	SALMON FISHERMEN	LOBSTERMEN	SCALLOP FISHERMEN	CRAB FISHERMEN
AVERAGE TOTAL HRS	4.9	Control	4.5	5.0
LEAST TOTAL HRS	1.6	Control	1.1	2.6
AVERAGE CONSECUTIVE HRS	4.0	Control	3.5	3.7
LEAST CONSECUTIVE HRS	1.4	Control	1.0	2.2
CONSECUTIVE DAYS/ LEAST HRS	4.4	Control	3.9	5.2





# LOGGING RESEARCH

## EXPANDING INSIGHTS INTO NORTHEAST AND APPALACHIAN LOGGING

Logging remains a vital component of the rural economy. At the same time, it continues to hold notoriety for being one of the most dangerous industries in the country. The logging industry has the highest civilian occupational fatality rate of any industry in the United States – **nearly twenty-three times** the overall worker fatality rate.<sup>1</sup> Through our emerging issues funding mechanism, we are gathering feedback on the health and safety concerns of the industry in New York, Pennsylvania, and West Virginia.

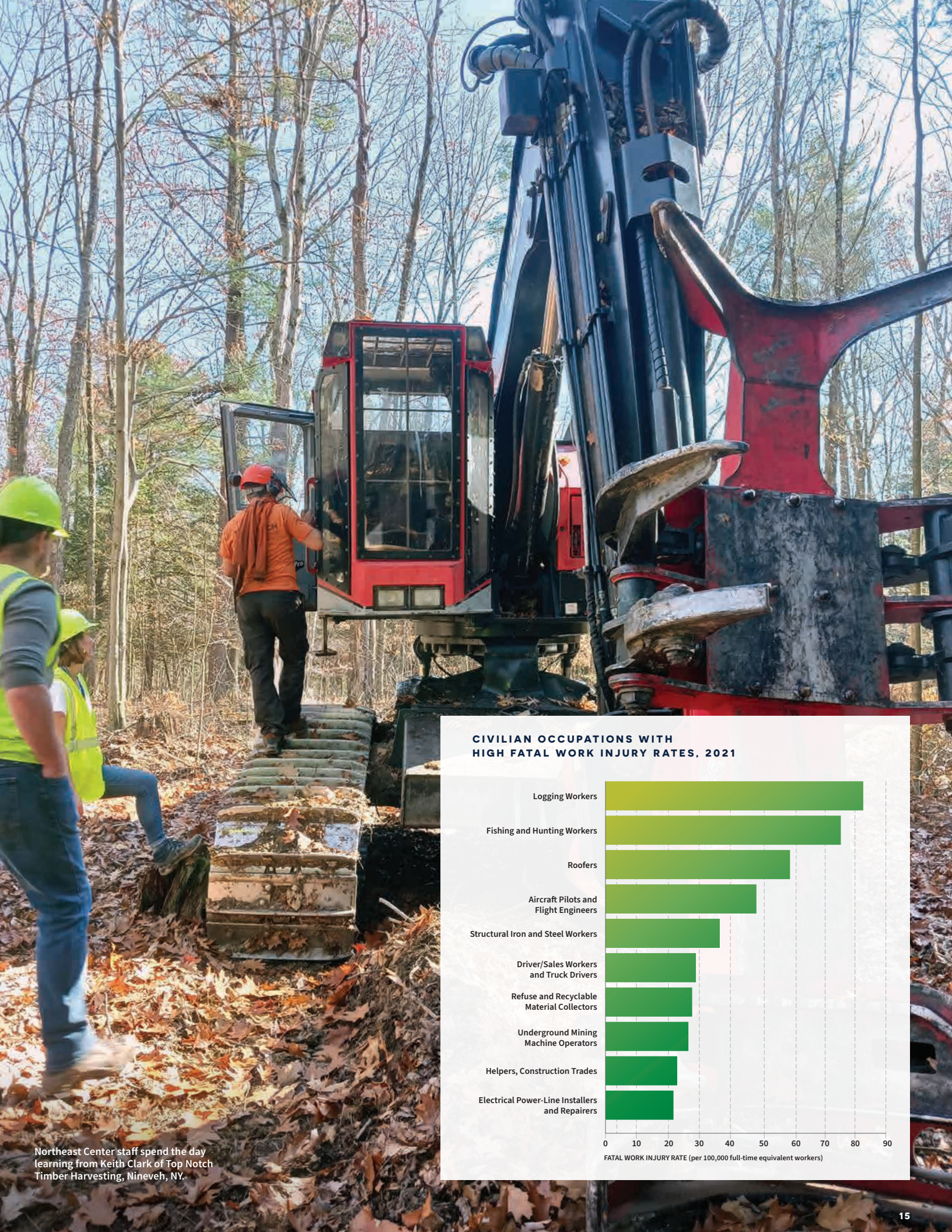
This project aims to elicit feedback from the logging community through a series of key informant interviews with logging workers, owners, and industry stakeholders. This work is being conducted by Northeast Center staff in partnership with logging safety professionals at West Virginia University. The interviews cover various topics ranging from health, safety, and economics to future opportunities for sustaining the industry.



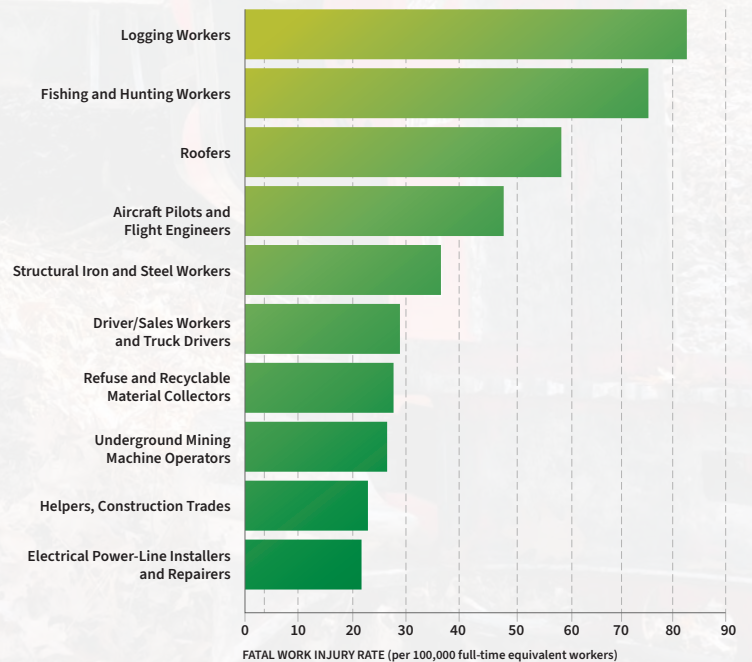
Left: Logs at the landing ready for transportation, Top: A processor operator describing the machine's computer system to NEC staff.

1. Bureau of Labor Statistics. Civilian occupations with high fatal work injury rates, 2021 (2022). <https://www.bls.gov/charts/census-of-fatal-occupational-injuries/civilian-occupations-with-high-fatal-work-injury-rates.htm>





### CIVILIAN OCCUPATIONS WITH HIGH FATAL WORK INJURY RATES, 2021



Northeast Center staff spend the day learning from Keith Clark of Top Notch Timber Harvesting, Nineveh, NY.



# SURVEILLANCE RESEARCH

## DOCUMENTING THE BURDEN OF AGRICULTURAL INJURY

The burden of agricultural injury has yet to be adequately defined in the research literature, especially regarding non-financial externalities such as grief, pain, and suffering experienced by workers, their families, businesses, and communities. Northeast Center Deputy Director Dr. Erika Scott teamed up with Heather Chauncey, LCAT, Clinical Case Manager and Therapist, to interview injured workers, industry stakeholders, and disability specialists to gain an understanding of these phenomena. From these interviews, we are identifying prominent themes and relevant variables within datasets to better extract burden information.

## HELPING TO FORGE A PATH FOR NATIONAL AGFF SURVEILLANCE

Dr. Scott was recently appointed for a second year to work with the Office of Agricultural Safety and Health (OASH) on surveillance initiatives. The OASH is a part of the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Health and Safety (NIOSH). Dr. Scott will continue to work with OASH, NIOSH surveillance researchers, and the Council of State and Territorial Epidemiologists (CSTE) to develop and promote a coordinated approach to disease and injury surveillance for the whole AgFF

sector. This initiative will benefit not just NIOSH but also partnering agencies, NIOSH grantees, policymakers, industry associations, and other safety and health organizations. As the AgFF sector faces unique challenges in collecting injury and illness data (injury reporting exemptions, rural and remote workspaces, immigrant and migrant populations, high rates of self-employment, etc.), there is a particular need for coordinated, quality surveillance data which is currently lacking in a nationally accessible and standardized format.



Erika Scott delivers a presentation on Agricultural Injury Burden during the 2023 BeSafe Conference in Dublin, Ireland.





## IDENTIFYING OPTIMAL ROUTES OF DISSEMINATION

Though we continue refining our methods for identifying traumatic injuries in agriculture, forestry, and commercial fishing, we recently focused on understanding the best ways to share what we learn with stakeholders. The science and art of surveillance encompasses not only the collection, analysis, and interpretation of data but also getting these data into the hands of those who can shape and deliver prevention activities.

Research dissemination has been examined in terms of what (the message), to whom (the target audience), via what medium (the channel), and how (format). We decided that it was imperative to understand these factors for AgFF surveillance stakeholders, thus allowing us to serve their needs better now and in the future. We conducted a survey distributed via REDCap using a web link to organizational stakeholders, which included advisory board members, safety trainers, industry managers and workers, and research collaborators.

In total, there were 75 respondents (21% response rate). Not surprisingly, we learned that the respondent's occupation and industry influenced their preferences; however, most preferred shorter-length updates, like one-page summaries or short reports. Social media and news preferences were also different among stakeholders.

### Our stakeholders use surveillance data for:

1. Trend analysis
2. Tailoring activities and solutions for education, training, outreach, and interventions
3. Research purposes such as grant proposals and evaluation

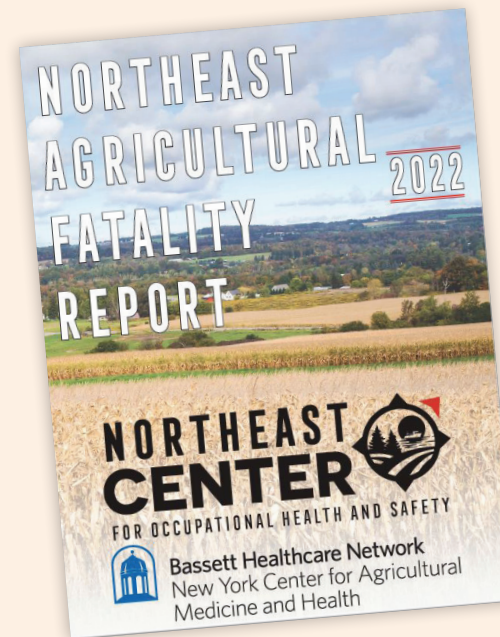
We are using the results of this study to ensure that our data are accessible to those who need them most.

## AGRICULTURAL FATALITY REPORT EXPANDS BEYOND NEW YORK STATE

Beyond capturing non-fatal traumatic injury through our surveillance study, we also collect information related to agricultural fatalities. This year, we expanded the scope of our fatality report to include the entire Northeast. The information we use is captured through a variety of sources. While many incidents are captured using electronic press clippings, we supplement our data by comparing with aggregate sources such as the AgInjuryNews database and the New York State Census of Fatal Occupational Injuries (CFOI).

Once identified, these incidents are visually inspected and coded by a team member, in much the same way as machine learning data, using the Occupational Injury and Illness Classification (OIICS) and Farm and Agricultural Injury Classification (FAIC) systems. Once data are collected, we conduct analysis based on age, gender, event type, injury source, and other factors. For the Northeast region, 37 agricultural fatalities were identified (31 men, six women), with 21 in Pennsylvania, eight in New York, two in West Virginia, and one fatality each for Connecticut, Delaware, Maine, Massachusetts, New Jersey, and Vermont. No fatalities were identified for Maryland, New Hampshire, or Rhode Island. Pennsylvania and New York collectively represented nearly 80% of fatalities in the region.

Looking at specific events, 40% of all fatalities involved motorized vehicles, with jackknife and overturn events contributing the most. Off-road and industrial vehicles were the source of 35% of fatalities across the Northeast Center's region, and agricultural machinery contributed another 19%. Such fatalities occurred both on public and non-public roadways. Other contributors to fatalities included oxygen-deficient environments such as grain bins and silos.





# FARM SERVICES AND OUTREACH

The Northeast Center's farm services and educational programming staff works with hundreds of farm businesses annually. These connections keep us in touch with Northeast agriculture so that our offerings stay relevant and responsive to real needs.

Our outreach services and programs are typically provided at no cost. We offer them at the worksite or a convenient central location for participants.

We have farm safety specialists located in multiple states for on-farm visits and training and for phone or virtual conferencing consultations. They offer an array of training related to on-the-job safety for farm employees as well as for owners, managers, and youth.

Many of our trainings have been adapted for videoconferencing. We continue to build our video collection of safety demonstrations and social media posts.

While we can help a farm comply with regulatory standards, the Northeast Center is not a regulatory organization.

## SAFETY TRAINING IN ENGLISH

**69** sessions

**1331** workers trained

We offer a broad range of topics, from animal handling to zoonotic disease, and continue to develop new modules to cover emerging issues. All training sessions are customized to fit the farms we are visiting and their specific needs.



## SAFETY TRAINING IN SPANISH

**126** sessions

**2127** workers trained

All our training topics can be provided in Spanish. Some of the most requested topics include milking parlor safety, fruit & vegetable production/harvest safety, skid steer operation and safety, chemical application and storage safety, sun and heat safety, and Worker Protection Standard (EPA WPS).



## FARM SAFETY SURVEYS

**95** on-farm site visits

**121** owner/managers served

During an on-farm safety survey, a Northeast Center safety specialist tours the farm operation with the owner or a manager to identify specific safety hazards. The safety specialist provides verbal and written recommendations for eliminating, fixing, or mitigating these hazards. 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.

Since 2021, we have used GoPro cameras for farmers to film their farms as part of our survey, thus reducing staff travel time and increasing the number of farms we can serve. This has worked so well that we recently added a third camera.





## FARM EMERGENCY RESPONSE PROGRAM

**33** sessions

**223** workers trained

Farm Emergency Response Program training helps farm workers and farm families learn what to do in an emergency without putting themselves at risk. They include CPR, first aid, fire safety, and fire extinguisher use. Our educators deliver many American Heart Association courses to farms, as third-party food safety audits may require CPR and first aid certification for key workers.



## YOUTH TRAININGS

**19** sessions

**329** youth served

Using a combination of discussions, visuals, and hands-on activities, we have safety training geared toward grade school, high school, and college-level students. We use many demonstration modules to make training fun, interesting, and memorable. A new example for 2023 is an animal handling demonstration, complete with an inflatable horse and cow, showing the proper approach areas and blind spots of the animals and the best way to reduce risks while working with them.



## TECHNICAL ASSISTANCE

**126** farm consultations

Our trainers regularly respond to technical questions related to farm safety and regulatory compliance. Requests are received by phone, email, and in person at trade exhibitions and other outreach events.

## LOGGING SAFETY TRAININGS

**16** classes

**135** people trained

Partnering with nationally accredited Game of Logging trainers, we offer a comprehensive training course in chainsaw safety to our farming and rural communities. The program combines demonstration with participation, so all attendees get hands-on experience to practice their new or newly developed skills.





## JOHN MAY FARM SAFETY FUND: ANSWERED QUESTIONS

How often do you face an unsafe situation on your farm and vow to fix it someday? That is a question that many farmers have asked themselves over the years, and often includes, how do I afford to fix it?

The Northeast Center offers farmers free, on-farm surveys with an owner/manager to identify farm safety hazards and ways to mitigate them. Often, the answer to harm reduction is met with a barrier for the farmer – a need for more funds to complete the task. Our answer to this question is simple: How can we help?

Recognizing this question as a common thread for the farms we serve, Northeast Center Director Julie Sorensen delivered an innovative solution: the John May Farm Safety

**“These headlock stanchions have turned a three-person, 5-6 hours of very dangerous work job, into a 15-minute, 1-person job (with no danger!).”**

Meyer Farm, Delaware County, NY

Fund (JMFSF). The JMFSF is a cost-sharing program for small and mid-sized farm operations to make repairs or upgrades,

creating a safer workplace. The farm is reimbursed half the cost for a safety project, up to \$5000. The Northeast Center has made the application process as easy as possible, and Northeast Center staff offers continued support for the project’s duration. Applications are reviewed weekly, with each individual farm’s circumstances considered. Various projects have been funded, mostly animal-handling safety and electrical and lighting upgrades. Other project types funded include slip/ fall prevention and eye wash stations.

The JMFSF utilizes decades of research and our privilege of working directly with the farming industry to address the highest point of the “hierarchy of controls.” This method identifies and ranks safeguards to protect workers from hazards and creates an economical, practical approach to safety. Safeguards are arranged from the most to least effective and include elimination, substitution, engineering controls, administrative controls, and personal protective equipment.

When the JMFSF was established in 2016, all funding came from donations. In an effort to meet the demand from the farms we serve, the Northeast Center lobbied for and successfully received funding from the NYS Department of Ag & Markets. The JMFSF is on track to reach a milestone soon: \$1 Million in money reimbursed to our farmers by the end of 2023. The Northeast

Center plans to celebrate this remarkable achievement in 2024!

Looking forward, the JMFSF team/project team is already thinking of ways to streamline operations to assist the most farms possible. Recognizing rising costs for materials and equipment, we continue to reimagine the best ways to reach a larger eligible pool of farms, such as removing the dairy herd size restriction or increasing the gross income cap for farms to \$1M.



The Dackowsky family of Town Line Livestock with their JMFSF funded squeeze chute.



## CONNECTING FARMERS WITH LIFE-SAVING TECHNOLOGY: THE NATIONAL ROPS REBATE PROGRAM

The National ROPS Rebate Program (NRRP) continues to provide 70% rebates to farmers who purchase and install rollover protective structures (ROPS, also known as rollbars). Since the NRRP launched in 2006 in New York, the team has partnered with agricultural safety and health partners across the US to expand its reach. More than 3,400 farmers in 27 states have installed ROPS through the NRRP, while more than 2,000 farmers in 48 states are currently on a waitlist to participate. Most recently, in 2023, collaborators in Texas secured funding for

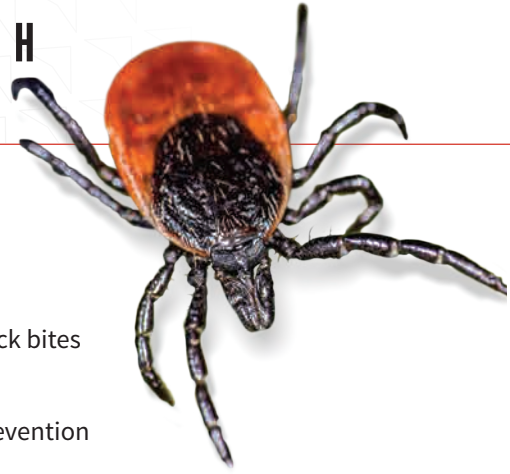
rebates in their state. Additionally, over the last two decades, NRRP staff has made important connections with the American Farm Bureau Federation and the Association of Equipment Manufacturers. In recognition of the importance of the NRRP, these two organizations are actively working to support federal funding for this program. If successful, farmers across the country will be able to install lifesaving ROPS on their tractors through the NRRP.

**“This makes me so happy. I have seen the pain in my friend’s eyes when they lost their father, our neighbor, to a tractor roll over. I am happy to help...promote the ROPS Program, highlighting how this has protected my family and 6 grandchildren for many years.”**

Ed Sorrow (below, with his family),  
first ROPS Rebate recipient in Texas







## NEW STUDY SEEKS TO DECREASE TICK BITES ON VERMONT FARMS

The tick team at the Northeast Center began a study in April 2023 with the goal of decreasing tick bites and encounters for farmers and farm workers in Southern Vermont.

The Northeast Center is testing whether TheraCell® Tick Control Tubes will be a successful prevention strategy on agricultural properties (livestock and dairy farms) by:

1. **Decreasing the number of ticks on the farm**
2. **Decreasing tick encounters (ticks crawling or biting) on farmers and workers**

These tubes are filled with cotton which is treated with permethrin (an effective chemical to kill ticks). Mice and other small rodents take this cotton for nesting material, which in turn kills the ticks infesting them. The ticks act as the pathogen transporters between mice and other small rodents and humans. The Tick Control Tubes were designed for residential properties and have been shown to be very successful at decreasing tick numbers. It is not feasible to bait an entire farm, so we are testing “key areas” where we expect high rodent traffic (i.e., barns and farmhouses) to see if we can recreate the same effect.

## PROJECT TIMELINE

### April 2023:

46 farms were recruited for the study. Ticks were collected from each farm, and Tick Control Tubes were placed around barns and houses at each farm. The team administered a baseline survey asking about health history and farming activities. Bi-weekly follow-ups began to track tick encounters on farmers and workers.

### June 2023:

The team returned to Vermont to collect ticks and replace the Tick Control Tubes. Bi-weekly follow-ups continued.

### September 2023:

The team again collected ticks and replaced the Tick Control Tubes while continuing the bi-weekly follow-ups.

### November 2023:

The team took one final trip to Vermont to collect ticks and remove the Tick Control Tubes. The bi-weekly follow ups ended in December.

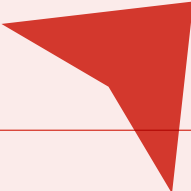
**This cycle will be repeated in 2024, starting in April.**



John May Farm Safety Fund Coordinator Dahlia Sheehan-Yassin (center) and Coordinator Madeleine Zenir (right) contribute to the Vermont Tick study by assisting with tick collections.







## NORTHEAST AG SAFETY AND HEALTH COALITION (NEASHC)

Since forming in 2014, the Northeast Ag Safety and Health Coalition (NEASHC) has connected ag educators, shared new teaching ideas, identified emerging issues in the industry, and created a network of friends and colleagues. This coalition, made possible through a collaboration between the Northeast Center and Penn State University, continues to deliver on these foundations and is ever-expanding on the services available to its members.

A crowning accomplishment for NEASHC in 2023 was a first-of-its-kind funding opportunity through a mini-grant program. Funding is awarded to 4-8 successful applicants annually to assist in programming that promotes agricultural safety and health in northeast states. The program is open to any organization that provides a safety or health-related service, outreach, or education in rural and/or agricultural areas. Successful grantees are required to:

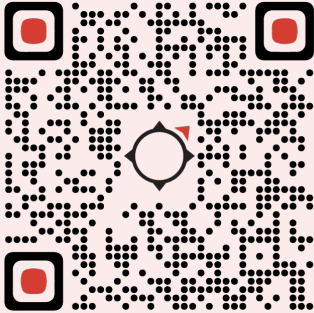
- 1. Provide a report that includes an overview of the project, its impact, and photos**
- 2. Present the project at a NEASHC quarterly meeting, encouraging the coalition’s growth and continued process evaluation**

NEASHC held our in-person annual meeting in Cooperstown, NY. We filled our agenda with news and discussions that fuel our ongoing commitment to serving the Ag population. Some highlights of this year include a review of the updated and expanded NEASHC webpage, which now allows individuals to register for a free membership to NEASHC online, along with easier access to member-only information and articles. We visited Painted Goat Farm, a dairy goat operation in Garrattsville, NY, and received a tour from co-owner Ilyssa Berg. On-site visits to working farms allow our educators to see for themselves and speak directly to an operator about day-to-day operations and the safety concerns that may arise. Northeast Center Clinical Case Manager Heather Chauncey presented an art therapy workshop, which,

while new to most members, was very well received (the mental wellness of our educators is important, too). The day ended with a delicious meal at the Otesaga Resort Hotel in Cooperstown, which provided a great chance for coalition members to relax and continue networking.

NEASHC provided each state with valuable training demonstration modules. These demos included an animal handling presentation and a Mr. Good Egg tractor rollover kit. Together, the attendees practiced delivering the safety training modules. We concluded our meeting with an in-depth discussion on Special Populations and Initiatives. Presentations by representatives from Vermont, New Hampshire, New York, and Pennsylvania demonstrated how each addresses specific populations in their area.

To learn more about NEASHC, and to join for free, please visit our website, or call 800-343-7527.



Coalition members on a farm tour at Painted Goat Farm, Garrattsville, NY.

## MEDICAL EXPERTISE WORKING HAND IN HAND WITH NORTHEAST CENTER RESEARCH

The Northeast Center takes great pride in our occupational health services program, Bassett HealthWorks. With almost thirty years of experience, our team of specialized health professionals has provided exceptional occupational health services to workers in Central New York and beyond. The unique advantage of having research, outreach, and clinical services all under one roof allows us to offer many benefits to our valued customers. Our research health assessment protocols are informed by our clinical experts, and our research, outreach, and HealthWorks staff collaborate closely to ensure that we are providing the highest quality service. Additionally, we are constantly refining and enhancing our systems, procedures, and customer service to incorporate the latest advancements in occupational health. We pride ourselves on meeting our patients where they are, both physically and mentally, and we have successfully assisted companies of all sizes, from small businesses to large multinational corporations. Our services are cost-effective and designed to help our clients succeed.



Bassett HealthWorks staff (L-R) Judy Graham, Vickie Gwozdz, Cristy Carr, Jennifer Farley, Christine LaLonde-Meade, Dr. Brian Quinn, Tanya Hamilton, Casie Collins





## HEALTHWORKS BY THE NUMBERS

FIRE COMPANIES	91
FIREFIGHTER EXAMS	1339
DEPT. OF TRANSPORTATION PHYSICALS	175
OTHER PHYSICAL EXAMS	378

FF FIT TESTING	1320
OTHER FIT TESTING	457
FARM FIT TESTING	69

URINE COLLECTIONS	447
BLOOD ALCOHOL TESTING	28
HAIR TESTING	10

FLU VACCINES	1930
MMR/HEP B/RABIES	88

BLOOD DRAWS	84
AUDIOGRAMS	319
FIREFIGHTER CLEARANCE	1124

## ON-FARM HEALTH SCREENINGS

Bassett HealthWorks and the Northeast Center outreach staff offered an on-farm health screening pilot program in August 2023. At the event, bilingual health screening services were provided for dairy farm workers at Venture Farm, LLC located in Tully, NY. Screening services included the following:

- **Cardiovascular Screening:** Blood pressure, height/weight, BMI, waist-hip ratio, capillary blood test for HDL and total cholesterol, and Framingham Risk Assessment for cardiovascular disease when appropriate.
- **Diabetes Screening:** Capillary blood test for Hemoglobin A1C.
- **Immunizations:** Tetanus (Tdap), COVID-19 and influenza vaccines as needed.
- **Physical Exam:** Healthcare provider for general physical exam and consult.
- **Education:** A Spanish language take-home summary of the screening results for each participant. In addition, Spanish language education materials on diabetes and cardiovascular health were provided at the time of the screening.

Twelve workers participated in the event and gave positive feedback through exit surveys. Three workers were referred for further medical follow-up. Two more health-screening events took place in October and November 2023 as well as flu vaccination clinics.



Casie Collins draws blood in preparation for a biometric health screening in October at Hamilton College.



Dahlia Sheehan-Yassin and Judy Graham explain the process of our on-farm health assessment to a farmworker at Venture Farms in October 2023

# PUBLICATIONS AND PRESENTATIONS

## PUBLISHED/ACCEPTED PAPERS

Bellantoni, J. M., Bulzacchelli, M. T., Orchard, D., Sulman, H. B., Bartlett, J. J., Dzugan, J. (2023). Naloxone training and availability in the US commercial fishing industry. *American Journal of Industrial Medicine*. 66(8),687-691. <https://doi.org/10.1002/ajim.23491>

Dyer, M., Gorucu, S., Bock, R., Thomas, R., Liu, J., Fetzer, L. (2023). Case Study: Modeling a Grain Bin for Safe Entry Retrofit. *Safety*,9(2):28. <https://doi.org/10.3390/safety9020028>.

Fetzer, L., Boyer, P., Hirabayashi, L. Building Capacity through the Northeast Agricultural Safety and Health Coalition. *J Agromedicine*. Accepted 13 November 2023.

Gruenthal-Rankin A, Somogyi T, Roome A, DiGangi EA. 2023. Beyond the report: Prospects and challenges in forensic anthropological investigations of structural vulnerability. *Forensic Science International: Synergy*. <https://doi.org/10.1016/j.fsisyn.2023.100315>

Hansen Ruiz, C. S., Luschen, K., Huber, J., Scott, E. Understanding Stakeholder Dissemination Preferences for an Agriculture, Forestry, and Fishing Injury Surveillance System. *J Agromedicine*. ePublished 15 December 2023. <https://doi.org/10.1080/1059924X.2023.2293832>

Islam, S., Gide, K., Dutta, T., Shaghayegh Bagheri, Z. (2023). The effect of tread patterns on slip resistance of footwear outsoles based on composite materials in icy conditions. *J Safety Res*. <https://doi.org/10.1016/j.jsr.2023.08.017>

McCue-Weil, L., Knight, M., Driscoll, M., Jenkins, P., Sorensen, J. (2023). A case study on the practical use of low-fidelity modeling to mitigate the spread of COVID-19 amongst the underserved farmworker community. *La Matematica*. 2,223-241. <https://doi.org/10.1007/s44007-023-00043-4>

Perez-Sanz, S. B., Garcia, K., Mejia, P., Dorfman, L., Echard, J., Sorensen, J. A., Milkovich, P. J. (2023). The news about rollover protective structures: Findings from an analysis of news from Iowa, Nebraska, Kansas, and Missouri. *American Journal of Industrial Medicine*. 66(7):558-560. <https://doi.org/10.1002/ajim.23490>

Scott, E., Luschen, K., Hansen-Ruiz, C., Krupa, N., Hirabayashi L., Graham, J., Jensen, N., Jenkins, P. Factors associated with injury among Maine logging workers. (2023). *American Journal of Industrial Medicine*, 66(10):866-875. <https://doi.org/10.1002/ajim.23518>

Scott, M. A., Olszowy, K. M., Dancause, K. N., Roome, A., Chan, C., Taylor, H. K., Marañon-Laguna, A., Montoya, E., Garcia, A., Mares, C., Tosiro, B., Tarivonda, L. Challenges and opportunities in rapid disaster research: Lessons from the field in New Mexico and Vanuatu. *Front Sociol*. 8:983972. <https://doi.org/10.3389/fsoc.2023.983972>.

Scott, E., Weichelt, B., Lincoln, J. (2023). The Future of U.S. Agricultural Injury Surveillance Needs Collaboration. *J Agromedicine*. <https://doi.org/10.1080/1059924X.2022.2148032>

Shan, D., Neis, B., Sorensen, J. (2023). Introduction to the Special Issue on Governance and Fishing Health and Safety in the North Atlantic. *Marine Policy*. Vol. 155. <https://doi.org/10.1016/j.marpol.2023.105729>

Shishavan, H. Garza, J., Henning, R., Cherniack, M., Hirabayashi, L., Scott, E., Kim, I. (2023). Continuous physiological signal measurement over 24-hour periods to assess the impact of work-related stress and workplace violence. *Applied Ergonomics*. 108. <https://doi.org/10.1016/j.apergo.2022.103937>

Sorensen, J., Milkovich, P. J., Dorfman, L., Mejia, P., Perez-Sanz, S. B. ROPS commentary—Addressing our fatal blind spot: Applying evidence-based solutions to reduce the most frequent cause of death on U.S. farms. *American Journal of Industrial Medicine*. 66(7):554-557. <https://doi.org/10.1002/ajim.23484>

## ORAL PRESENTATIONS

Carrabba J., Milkovich P., Scribani M. Assessing Long-Term Impacts of Agricultural Safety Education in New York Old Order Mennonite Schools. ISASH Conference, Tampa, FL. 21 June 2023

Carrabba, J., Day C., Meyerhoff A. Improving the Safety of Dairy Farms: FARM Workforce Development Evaluator Training. Presented virtually to the National Milk Producers Federation. 18 May 2023, 1 June 2023, 14 September 2023, 12 October 2023

Hirabayashi, L., Sorensen, J., Sheehan-Yassin, D. NYCAMH Safety Programs Update for NYS Ag & Markets. NYS Ag & Markets, Albany, NY. 30 January 2023.

Luschen, K., Roome, A. Navigating Fishing Industry Stressors: A Community Forum. Maine Fishermen's Forum, Rockport, ME. 4 March 2023  
McCue, L. Multi-disciplinary teaming for development of occupational safety interventions. Bassett Healthcare Network Grand Rounds, Cooperstown, NY. 11 July 2023

Meyerhoff, A., Carrabba, J. What's New with OSHA and the New York State Department of Labor. Presented virtually at NY OSHA Dairy Workgroup. 22 March 2023

Milkovich, P., Sorensen, J. Leveraging partnerships and social responsibility to implement a National ROPS Rebate Program in the United States. BeSafe Conference, Dublin, Ireland. 24 August 2023

Milkovich, P., Hirabayashi, L., Sorensen, J., McCue, L. A Look at Entrepreneurship in Farmworker Safety. BeSafe Conference, Dublin, Ireland. 24 August 2023

Milkovich, P., Hirabayashi, L., Sorensen, J., McCue, L. The NEC r2p Incubator. Virtually presented to NEC r2p Incubator Advisory Board. 11 July 2023



Quinn B. Silicosis in our own backyard (Bluestone Cutters). Bassett Healthcare Network Medical Grand Rounds, Cooperstown, NY. 9 June 2023

Roome, A. Careers Outside of Academia in Anthropology. Lecture at Hunter College - CUNY, New York, NY. 30 January 2023

Roome, A. The Anthropology of Infectious Diseases: Ebola, COVID, and Tick-Borne Diseases. Binghamton University, Binghamton, NY. 15 February 2023

Roome A., Luschen, K. Tick Talks. Virtual presentations to Vermont farmers. Twelve presentations, 7 March – 6 June, 2023.

Roome, A. Mitigating Tick-Borne Disease Risk in Agricultural Workers. Presented virtually at NEASHC Meeting. 14 March 2023

Roome, A. Ticks and Tick-Borne Diseases in Upstate New York. Cooperstown Junior/Senior High School, Cooperstown, NY. 21 March 2023

Roome, A. Sleep and Stress at Sea: & Solutions! Massachusetts Lobstermen's Association Annual Trade Show, Hyannis, MA. 24 March 2023

Roome A. Tick Talk: Ticks and Tick-borne Diseases in Dairy and Livestock Workers in Southern Vermont. Mary Imogene Bassett Hospital Research Grand Rounds. June 6, 2023.

Roome A. Workplace Culture and Promoting Adaptable Change in Ag Operations. Be Safe International Farm Safety and Farmer Health Conference. Dublin, Ireland. 23-25 Aug 2023.

Roome, A. Ticks, Tick-Borne Diseases, and Clinical Trials. Webinar, South Central Regional Library Council. 18 October 2023

Salerno, J. NYCAMH: Enhancing agricultural and rural health by preventing and treating occupational injury and illness. Hartwick College, Oneonta, NY. 16 January 2023

Scott, E. Agricultural Surveillance: Injury and Illness. Presented virtually at CSTE Occupational Health Indicators Quarterly Meeting. 21 March 2023

Scott, E. Unpacking the Untold Burden of Agricultural Injury: The Impact on Patients, Families, and Communities. Bassett Healthcare Research Grand Rounds, Cooperstown, NY. 11 April 2023

Scott, E., Luschen, K., Hansen-Ruiz, C., Krupa, N., and Jenkins, P. Factors Associated with Injury among Maine Logging Workers. CSTE Annual Conference, Salt Lake City, UT. 27 June 2023

Scott, E., Lincoln J., Sweeney, M. H., Souza, K. Building partnerships for the future of occupational health and injury surveillance in the agriculture, forestry and fishing industry. CSTE Annual Conference, Salt Lake City, UT. 27 June 2023

Scott, E. Examining the Many Facets of Agricultural Injury Burden: Results from a Scoping Review. BeSafe Conference, Dublin, Ireland. 24 August 2023

Scott, E. Northeast Center Research Update. NFMC Mini-Summit, Marshfield, WI. 21 September 2023

Scott, E. Improving occupational injury surveillance for agriculture and forestry: Ensuring data quality and maximizing efficiency in coding injuries. APHA Annual Meeting, Atlanta, GA. 15 November 2023

Sorensen, J., Lincoln, J., Bischoff, L. Mental Health in the Commercial Fishing Industry. Presented virtually at Stress and Mental Health Concerns in Commercial Fishing Meeting. 23 February 2023.

Sorensen, J., Roome, A. Finding the Value: Reshaping the Concept of Safety to Connect with Risk-Takers. SfAA Annual Meeting, Cincinnati, OH. 30 March 2023

Sorensen J. NYCAMH/NEC Overview. Farm Credit East, Cooperstown, NY. 3 April 2023.

Sorensen J, Milkovich P, Johnson A. Implementing ROPS Programs: Key Factors in OSH Evidence-Based Practice Adoption (08/01/2022 - 07/31/2024). Presented virtually to stakeholders in states with highest risk of tractor overturns. 28 June 2023

Sorensen, J. NIOSH Cross Center Adventures in Fisheries Occupational Safety and Health Research. Virtually presented to NIOSH. 18 July 2023

Sorensen, J. The Black Box of Injury Prevention. BeSafe Conference, Dublin, Ireland. 23 August 2023

Sorensen, J. Nudging Our Way to More Effective Agricultural Health and Safety Solutions. BeSafe Conference, Dublin, Ireland. 24 August 2023

Sorensen, J., Stup, R. Promoting Investments in Workforce Well-being: Helping NYS Dairies Set the Pace for Marketing Social Responsibility. NYS Dairy Promotions Order Board, Albany, NY. 13 September 2023

Sorensen, J. Behavioral Science Insights: nudging workers and employers toward safer behaviors. University of Washington Breysse Lecture Series, Seattle, WA. 26 October 2023

## POSTERS

Meyerhoff, A, Baker, D. “¿Quieres saber lo que pensamos? You want to know what we think?” Migrant Dairy Workers' Views on Farm Safety. ISASH Conference, Tampa, FL. 20 June 2023



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