Natural Disaster Mental and Public Health Resources within the Agricultural and Rural Communities

A Discussion After AgriSafe's Natural Disaster Preparedness, Response, and Recovery Think Tank from September 2025

Executive Summary: This White Paper discusses the results of the Natural Disaster Preparedness, Response, and Recovery Think Tank hosted by AgriSafe in September 2025 during National Farm Safety and Health Week. Key gaps are identified in the mental and public health response for agricultural and rural communities after natural disasters. Proposed solutions include crucial public health education and outreach before natural disasters occur, including trainings such as Mental Health First Aid and Psychological First Aid within agricultural communities. Local organizations, extension offices, and first responders are encouraged to take advantage of available tools to identify, support, and connect those affected before, during, and after a disaster.

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Introduction

As natural disasters continue to affect the United States, causing increasing financial damage each year, the agricultural community is experiencing impacts that extend beyond financial loss. After Hurricane Helene devastated rural communities in 2024, resulting in 225 deaths and approximately $14.8 billion in losses to crop and livestock production throughout Tennessee, Virginia, North Carolina, South Carolina, Georgia, and Florida (Munch, 2024), AgriSafe became involved in the response and recovery efforts due to its infrastructure supporting mental and public health needs within agricultural communities. While AgriSafe has always been at the forefront of agricultural-based public health innovation and responding to emerging issues since its inception, AgriSafe only recently expanded their disaster preparedness, response, and recovery capacity. After Helene, AgriSafe began an internal process of evaluating issues related to the availability of resources of mental and public health issues in natural disaster response and recovery aimed at the agricultural and rural communities. In addition to grant work following Hurricane Helene, AgriSafe also began responding to the Smokehouse Creek Wildfire of 2024, which ravaged 26 eastern counties (27,000 sq miles) in Oklahoma and the Texas panhandle. The wildfire killed two people, destroyed 12,000 head of cattle, damaged 500 structures, and destroyed hundreds of water wells, resulting in an estimated $123 million in agricultural losses (Fannin, 2024). As early as 2016, AgriSafe CEO Natalie Roy had identified a lack of public health resources for farmers and ranchers in national disaster response efforts. While many disaster response efforts in agricultural communities are effective, they often focus primarily on rebuilding infrastructure, caring for animals and crops, and recovering financial losses.

To begin addressing this gap in knowledge and resources, AgriSafe decided to include a natural disaster focused think tank during National Farm Safety and Health week in September 2025. Natalie Roy, Ian Costello, and Damon Cleaton would present a webinar in the form of a think tank, providing attendees an opportunity to answer questions to address possible insufficiencies in the accessibility of mental and public health resources in response and recovery of natural disasters amongst agricultural communities. This think tank was formulated to explore areas of opportunity on a national level, with attendees from all regions of the United States.

AgriSafe is continually expanding its reach into the disaster space. This White Paper is a discussion of the results of the "AgriSafe Natural Disaster Recovery Response Think Tank" aimed at gathering information on the accessibility and availability of mental and public health resources in rural and Ag communities in a post-disaster response landscape, as well as a culmination of the grant work AgriSafe has done in response to Hurricane Helene and the Smokehouse Creek Wildfire. It is to be used as a guide for where agricultural natural disaster

preparedness, response, and recovery should go in the future, as well as a list of currently available resources.

Disaster Defined

While there is no "one size fits all" definition of disaster, the most important determination of a disaster is the extent of disruption it causes. One of the most fitting definitions of disaster comes from the International Federation of the Red Cross and Red Crescent Societies (n.d.) which states that, "disasters are serious disruptions to the functioning of a community that exceed its capacity to cope using its own resources." The first disruptions that come to mind post-disaster are electricity, water, and transportation among a myriad of others, which focus more on a "property loss" lens. However, disruptions could be further reaching and have public health implications such as communicable disease outbreaks, contaminated drinking water, or an overwhelm or interruption of healthcare services. In rural and agricultural communities, disasters can ruin crops, harm or kill livestock, and affect the health and well-being of farmers, farmworkers, and rural residents financially, psychologically, and physically.

Disasters, natural or man-made, can affect regions from top to bottom, displacing communities and affecting the most vulnerable populations. Vulnerable populations are typically thought of as the elderly, children, and/or socioeconomically challenged individuals. However, simply being at high to moderate risk of exposure to natural disasters is another way vulnerability can be defined. '

Risk in the Agricultural and Rural Communities

National Risk Index
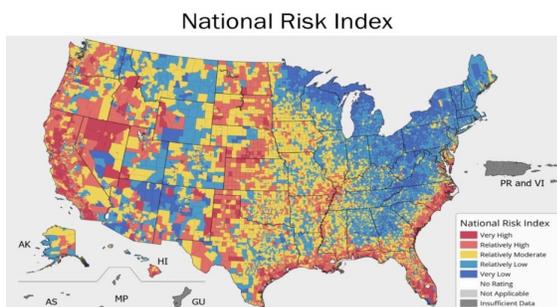
According to the Federal Emergency Management Agency's (FEMA) National Risk Index (NRI) for Natural Hazards (2023), pictured to the left, "very high," "relatively high," and "relatively moderate" areas fall in many of the United States major agricultural regions. The NRI "provides information for communities most at risk to 18 different natural hazards," and is a great way to "validate, measure and better understand [a] community's natural hazard risk"(FEMA, 2023). When cross-referenced with the USDA map on the next page, which shows the percentage of family farms in each state, which equates to

those who are at the most risk of losing life and livelihood in any sort of disaster, it is apparent that there are some patterns.

Firstly, it is important to note that 95.9% of total U.S. farms are family owned, and each state is over 90%, meaning at least 9 in 10 farms belong to a family that could lose everything (U.S. Department of Agriculture, 2021). Looking at Oregon, Idaho, California, Texas, Oklahoma, Missouri, Arkansas and Florida, for example, not only do these states have high percentages of family farms, but they are also almost covered in "very high" to "relatively high" risk of natural hazards according to FEMA.

Family Farms as a Percent of Total Farms, 2017

U.S. = 95.9%

Percent
< 93.5
93.5 - 94.4
94.5 - 95.4
95.5 - 96.4
96.5 - 97.4
97.5 +
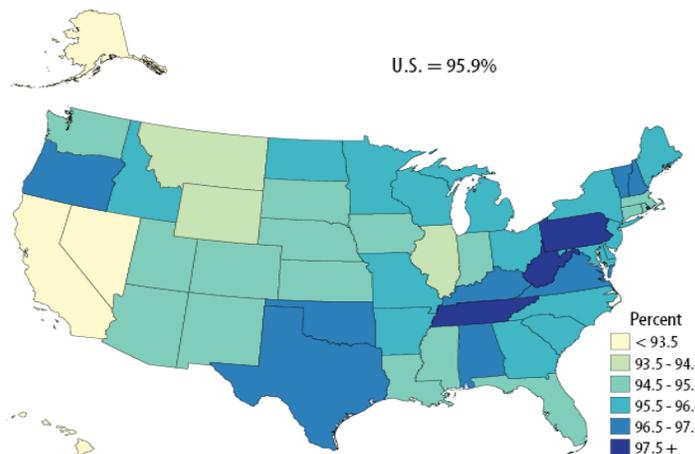
Source: USDA NASS, 2017 Census of Agriculture.

Many people who suffer from natural disasters, especially in these high-risk regions, stand to lose their lives, the lives of loved ones or pets, their homes, their jobs, and their communities. While the Ag community is no different, their losses have further implications such as the loss of a legacy if their farm is destroyed, the loss of one to two years of livelihood if crops or livestock are spoiled, sickened or killed, and the dismantling of an already small community. These additional complications have a strong impact on mental well-being, including increased substance abuse and increased suicide rates in the agricultural and rural communities.

Combined with the already higher risk of mental health conditions and suicidality, and the lack of mental health support available, it creates a dismal picture. According to the National Rural Health Association (NRHA) Policy Brief by Eisenreich & Pollari (2021), "the suicide rate among farmers is 3.5 times higher than the general population." In addition, the Centers for Disease Control and Prevention study, by Sussell et al. (2023) on occupational suicide found that male "farmers, ranchers and other agricultural managers" had suicide rates "more than 50 percent higher than the overall suicide rate of men in all surveyed occupations" (American Farm Bureau Federation, 2024). Physical and emotional demand, challenges affecting their farms and crop or livestock yields, stigma of mental health issues within the Ag community, are all barriers to prevention and show why the rates are so high. In light of this information, AgriSafe Network has been addressing the barriers and trying to close the gap of access among Ag and rural communities. Through education and dissemination of information, AgriSafe has collectively

reached many rural healthcare workers, occupational health and safety professionals, and first responders. In addition to including content experts, AgriSafe invited farmers, ranchers, and community members to join the discussion on gaps and issues in natural disaster preparedness, response, and recovery. Thus, the Think Tank was born.

Think Tank Overview

Methodology

The plan for the "AgriSafe Natural Disaster Recovery Response Think Tank" webinar began after AgriSafe staff saw the mental and public health needs that abounded after Hurricane Helene. This Think Tank sat amongst 9 other webinars during the 2025 National Farm Health and Safety week, taking place on Thursday, September 26. The Think Tank was composed of a brief welcome, an overview of AgriSafe natural disaster work to date by CEO Natalie Roy, an overview of U.S. disaster response from Ian Costello, Interagency Recovery Coordinator, and Damon Cleaton, Ag Producer, interspersed with at least 20 minutes of poll questions.

AgriSafe collected data from the Think Tank participants via Poll Everywhere, where they submitted answers either by text or on their web browser. Both registration and polling questions were used to collect basic demographic information, as well as information on participants' experiences and thoughts regarding natural disaster response. The Poll Everywhere responses were captured and shared live on screen for participants to contribute to and follow the conversation. Lastly, evaluation feedback was collected via a pop-up post-webinar survey.

The questions created by the AgriSafe staff intended to gather information from people working in Ag with three main goals: (1) to explore existing public health resources and uncover critical gaps in infrastructure and preparedness, (2) foster dialogue on building stronger, more resilient public health systems, and (3) share actionable strategies to support the public health needs of agricultural communities before, during, and after disasters. The questions were developed to explore the impact of past natural disasters on the Ag community's mental and public health and facilitate a collective dialogue on how to build more resilient systems. Through two different planning sessions, the AgriSafe team each submitted three individual questions for review. Then similar questions were combined, voted upon by relevance, and written so that questions were specific to the goals and best matched the scope of the Think Tank. There was a total of 20 questions asked during the Think Tank. See below for an overview of the most important questions that provided valuable insights.

Participant Demographics

Attendee Participation By State · **September 25, 2025**

Count: 6 to 1
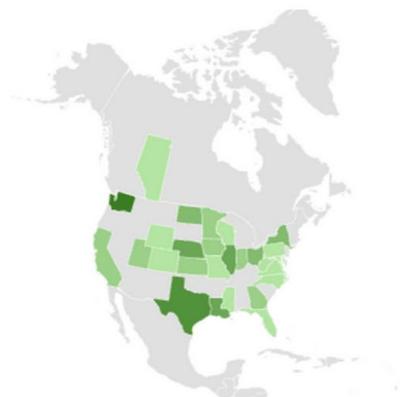
Attendee Demographics

👤 **60** people participated in this webinar session.

45 Attendees identified as female,
13 Attendees identified as male,
2 Attendees didn't respond

Image 2. Registrants Home State and Demographics for Natural Disaster Recovery Response Think Tank September 2025.

The United States map above shows the home state of each person who registered for the Think Tank. A darker color indicates a higher number of registrants. There was at least one registrant from 37 U.S. states as well as Washington, D.C., and Canada.

Participants were asked to note their gender. Sixty participants responded. Of these, 75% (45) identified as female, 22% (13) identified as male, and 3.3% (2) did not provide a response.

Participants were also asked to identify their occupation - there was a mixture of farmers, non-farmers, and first responders/healthcare providers. This shows the importance of responses in different contexts of accessibility and knowledge.

Think Tank Discussion

For this section, we are going to highlight some of the questions asked during the Think Tank, along with their results. For the full list of questions and responses, see the Appendix at the end of this document.

Question A: What health and safety needs are often overlooked post-disaster in agricultural communities? (Options were not provided).

- Mental health (19 responses)
- Long-term impacts (3 responses)
- Post-disaster follow-ups (3 responses)
- Guidance (2 responses)
- PPE, Vaccines, Grief, Loss, Stress, Rebuilding (1 response each)

<u>Aim of question:</u> This question was asked to see where people impacted by natural disasters felt there were gaps in post-disaster response. Not only did this question gather participant perspectives, but it also noted gaps that could later be addressed.

<u>Implications:</u> According to participants, overwhelmingly, mental health is the number one health and safety need overlooked post-disaster in agricultural communities. While many in attendance knew that this Think Tank (and AgriSafe's work) had a mental health focus, the results speak for themselves. No matter their occupation or vested interest, the majority felt that the largest opportunity for growth is mental health in a post-disaster landscape.

Question B: How confident are you in the public health response to disasters in agricultural communities?

- Very Confident (0 responses)
- Fairly Confident (1 response)
- Somewhat Confident (16 responses)
- Slightly Confident (8 responses)
- Not Confident (4 responses)

<u>Aim of question:</u> The team at AgriSafe wanted a baseline confidence rating on how attendees felt about current response efforts to past natural disasters.

<u>Implications:</u> No participant responded that they were "very confident" in the public health response to disasters in Ag communities, and only one respondent felt "fairly confident." The vast majority (over half) replied "somewhat confident" which indicates an opportunity to improve public health response efforts in agricultural communities. The second most submitted response of "slightly confident" reinforces that while there is opportunity, some of the current response efforts are effective.

Question C: What is the <u>Least</u> Reliable Disaster Response? Answers are ranked in order of the popularity of responses. (Options were provided).

Farmers ranked options in the following order:
1. Access to disaster response professionals with Ag focus
2. Mental health & social support for farm and rural residents
3. Emergency Communication
4. Rural Infrastructure

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Non-farmers ranked options in the following order:
1. Mental health & social support for farm and rural residents
2. Access to disaster response professionals with Ag focus
3. Emergency Communication

First responders and healthcare providers ranked options equally:
1a. Access to disaster response professionals with Ag focus
1b. Mental health & social support for farm and rural residents
1c. Emergency communication

Aim of question: This question aimed to identify strengths and areas of opportunity in current disaster response.

Implications: When totaled (and not separate amongst groups), the "mental health & social support for farm and rural residents" was the most popular choice for the least reliable disaster response. This emphasizes the gap where resources and services are needed. Also notable, is the second least reliable response, is "access to disaster response professionals with Ag focus." Again, this shows the opportunity to address this issue, expanding the extent of agriculture-focused disaster preparedness, response, and recovery resources.

Question D: What organizations do you trust when preparing for, or recovering from, a natural disaster? (Options were not provided, responses were aggregated).

- Local government agencies (8 responses)
- Extension (5 responses)
- American Red Cross (3 responses)
- Small Business Association (1 response)
- FEMA (1 response)

Aim of question: This question was purposefully open-ended so that participants could answer organically regarding what organizations they most trusted before, during, and after a disaster.

Implications: As disasters are responded to from the local level and then build up, it is comforting to know that many respondents felt they could trust local government including police, fire departments, public health departments, and local emergency managers. Agricultural cooperative extension being a part of this answer set is also extremely important as that is a rich source of information for this community and shows a potential place for disaster training and

education to be distributed. American Red Cross, the Small Business Association, and FEMA are a nice addition as it shows that when larger organizations or agencies are present, there are some who feel they can be trusted.

Question E: What is the best method to reach farmers/ranchers with information? Answers are ranked in order of popularity of responses. (Options were provided).

    1. Ag Extension
    2a. Farm show / Ag expo
    2b. In-person training
    3a. Mail
    3b. Podcasts / Radio

<u>Aim of question:</u> As any organization knows, the hardest part of information dissemination isn't accruing the information, but how to make sure it is getting to the right audiences. This question was included to directly ask farmers and ranchers for the best way to reach them.

<u>Implications:</u> The first and foremost successful way to reach the Ag and rural communities is through extension. While this is not a surprising response, this now becomes an area of opportunity to address the gaps of successful resource dissemination. It is an area to delve deeper into, to find out precisely how mental health and social support resources in a preparedness or post-disaster landscape should be housed with extension. The other answers provided were tied, with "farm shows/ag expos" and "in-person training" coming in at number two. These answers, while worthwhile, require human power and funding that many organizations might not have. It is worth identifying and prioritizing events that give the opportunity to reach the greatest number of farmers and ranchers. Lastly, "mail" and "podcast/radio" tied for third. These are tried and true ways to get information to people but would need more research on how to make them completely effective.

Question F: How knowledgeable are you on agricultural health hazards and risks related to natural disasters? Answers are ranked by the popularity of responses.

    1. Slightly knowledgeable
    2. Neutral
    3. Knowledgeable
    4. Not Knowledgeable
    5. Very Knowledgeable

<u>Aim of question:</u> AgriSafe wanted to gauge participants' knowledge of agricultural health hazards and risks related to natural disasters, to see whether or not there was a gap. While participants might know a lot about public health consequences of natural disasters, they might not know about agriculture-specific hazards (such as pesticide spills, flooded manure pits, etc.).

<u>Implications:</u> The overwhelming majority (38.1%) felt they were "slightly knowledgeable" about the agricultural health hazards and risks related to natural disasters. While this is a good sign, it also shows an area of opportunity for growth. Only one person responded as "very knowledgeable." There was a tie with 25.8% of respondents feeling they were "knowledgeable" or "neutral" in their knowledge. This is a good sign that many in these communities have at least some familiarity and awareness of health hazards and risks. This serves as a good baseline to improve upon, with specific trainings. A small portion (9.5%) responded "not knowledgeable" making them a key group for future outreach, and they hopefully left the Think Tank feeling more "neutral" or "knowledgeable," as there was great information and resources provided.

Question G: What is the most essential training for agricultural communities during natural disasters? Answers are ranked by the popularity of responses. (Options were provided)

Farmers ranked options in the following order:
1. Chemical hazards
2a. Large animal evacuation safety
2b. Infectious diseases
3a. PPE
3b. Drinking water safety

Non-farmers ranked options in the following order**:**
1. Coping with Grief/Loss
2. PPE
3. Chemical Hazards
4a. Large animal evacuation safety
4b. Infectious diseases

First responders and healthcare providers ranked options in the following order:
1a. PPE
1b. Infectious disease
2a. Drinking water safety
2b. Chemical hazards
2c. Coping with grief/loss

<u>Aim of question:</u> It is always a great idea to find out what the community values as important or where the current gaps may exist by simply asking. These responses allow for the creation of intentional mitigation planning.

<u>Implications:</u> These results were interesting, in that all three demographics had different ideas of essential training for agricultural communities during natural disasters. Overall, farmers chose farm-specific hazards as essential. Non-farmers overwhelmingly chose "coping with grief/loss" as number one, by almost double any other option. First responders and healthcare providers ranked only public health issues, with no votes for large animal evacuation safety. While these results don't necessarily help narrow down one key topic for initial training development, it does show what the different professions find important. These responses show that for each occupation, there needs to be specific training.

Since farms and ranches often have multiple hazardous chemicals that could cause issues (such as manure pits, pesticides, and more) that is a critical topic for them – they live on the farm, where chemical safety and large animal evacuation are crucial health topics for them. For the non-farming community members, it is important that they are aware of mental health and well-being, rather than the farm-focused training because they won't be impacted by those. Lastly, first responders and healthcare workers are the forefront of response efforts, and it is crucial that there are proper PPE trainings as well as outreach and education on infectious diseases during natural disasters, in order to mitigate infections and exposures that could exacerbate the situation. Overall, this shows that AgriSafe should keep building natural disaster resources, to fit the needs of all rural community members, to best prepare, respond, and recover from natural disasters.

Areas of Opportunity

AgriSafe tailored their questions to gather information across the farming, ranching, healthcare, occupational health and safety, and first response industries with three main goals. First, to explore existing public health resources and uncover critical gaps in infrastructure and preparedness; second, to foster dialogue on building stronger, more resilient public health systems; and third, to share actionable strategies to support the public health needs of agricultural communities before, during, and after disasters.

The Think Tank response analysis shows that there are many areas of opportunity for growing mental and public health resources for agricultural and rural communities. The majority of participants said they most trust Ag extension for information and help during disasters,

according to questions A and C. However, responses to Questions D and E suggest that many participants perceive a significant lack of mental health and social support resources for agricultural communities in post-disaster environments. This provides an easy strategic intervention, to provide resources and training via statewide and county extension events. Currently, AgriSafe provides a 24/7 suicide crisis line in 11 states (the AgriStress Helpline), agricultural-competency trainings for healthcare professionals that serve rural communities, multiple suicide prevention trainings, and a wealth of disaster specific resources. While AgriSafe has strong ties in some states, it would be great to grow the resource sharing across all county extension offices for the greatest impact. While the Extension Disaster Education Network is a great start, an opportunity for growth would be ensuring that at least one agent from each county's extension office receives education in natural disaster preparedness, response, and recovery. The first place to start should be in the states with the highest percentage of agricultural in high-risk areas.

Further, there is an opportunity for organizations to take the Think Tank data and combine it with peer reviewed research showcasing knowledge and resource gaps for natural disasters, public health, and agriculture. While land preservation, insurance claims, recouping losses, and rebuilding are important, there needs to be discussion on the availability of mental health and social support for farmers and ranchers, as shown in question C.

There needs to be greater networking and sharing across local, county-wide, state-wide, and national organizations to fully fill the crucial natural disaster public health gaps. AgriSafe has a wealth of resources and a strong platform to offer virtual trainings (live and On-Demand) and looks forward to partnering to maximize these to best benefit agricultural communities. Overall, the Think Tank data shows there is a need and opportunity to create more accessible and inclusive disaster response.

Why Mental Health First Aid Matters in Disaster Response

In the aftermath of disaster, it is often easier to provide material goods and resources to help those who are suffering (lodging, equipment, clothing, food, rebuilding supplies, etc.) but it is more difficult to provide essential mental and psychological support services. Not only are stress levels high after a disaster, but serious and long-lasting mental health issues can occur such as PTSD. It has been found that interventions in the immediate aftermath of a disaster can have minimizing effects on PTSD. In fact, an article in the *Journal of Agromedicine* written by Gaffney et al. (2024), stated that "in the post-disaster setting, hardships caused by the disaster, pre-

existing health conditions, and greater losses of property or basic services have been identified as risk factors contributing to negative outcomes such as posttraumatic stress symptoms and inability to recover." Additional studies, including the Rural Natural Disaster Stress and Recovery (RNDSR) survey data collected in 2022 from rural Illinois have shown that early interventions have only positive indications as stressors from the presence of FEMA and other government organizations, the unknown of property damage, and the abundance and immediacy of news and social media increase stress to a damaging level (Gaffney et al., 2023). It has been recommended that emergency management agencies at rural and local levels should have the knowledge and adaptability to address post-disaster issues and acute stress levels. Additionally, the U.S. Department of Veterans Affairs (n.d.) states, "the majority of people are likely to respond well to this kind of support and provision of resources and will not require formal mental health treatment." While there are many trainings like QPR, CALM, and COMET, natural disasters require additional competency training.

Psychological First Aid (PFA)

An evidence-based method with broad objective and empirical support, Psychological First Aid (PFA) is a more recent practical approach to bridge the gap between the physical and psychological needs of disaster survivors. While the Red Cross has disaster volunteers (generally mental health practitioners) who are trained in Psychological First Aid, their reach can only go as far as those in shelters requesting assistance, or in contact with the Red Cross. In PFA, there is a checklist of stressors and depending on how many a person is experiencing, they may require more immediate assistance. While this is an incredibly efficient and positive way to address the immediacy of mental health issues and stress, it may not be an effective method to address the agricultural or rural communities who may not have a centralized area they gravitate towards after disaster. Many farmers and agricultural workers will be hesitant to leave their crops, farms, animals, livestock, property, and families, and may decide to shelter in place regardless of evacuation orders or the seriousness of the situation. In which case, Mental Health First Aid (MHFA) may be the best tool for the Ag and rural communities.

Mental Health First Aid (MHFA)

While PFA is for post-trauma or post-disaster volunteers or mental health workers to apply to acute issues of stress, Mental Health First Aid (MFHA) might be a better tool for those in rural and Ag areas. The difference is minimal; however, MHFA provides knowledge to community members to help within their community. Gaffney, et al. (2024), mention that in their survey of rural natural disaster survivors, "self-reliance" was reported as a "traditionally rural value," and there is a "distrust of outsiders." MHFA equips individuals to assist those who may be in a mental health crisis, covering common signs and symptoms of a mental health crisis, how to de-escalate and interact with someone in crisis, and how to connect them with help. While more than 4.5 million people in the U.S. are currently trained to help with MHFA, this tool may be a great fit for

rural and Ag specific targets (National Council for Mental Wellbeing, n.d.). In isolated areas, or with farms that cannot be evacuated entirely due to their crop or livestock nature, having someone around who is aware that a family member, friend, or farm worker is showing signs of distress is invaluable.

With the high suicide and substance abuse rates amongst this community, MHFA should be highly considered as a first step teaching implementation in Ag extension, which is the best way to reach farmers and ranchers according to question E (on page 5 of this White Paper) in the Think Tank results. Further, Gaffney et al. (2024), found that rural and agricultural respondents found "community help to be most helpful for decreasing stress." If there is an opportunity to arm friends and neighbors with the right words and reactions to mental health challenges, a reduction in self-harm, suicide, and substance abuse could be anticipated.

Conclusion and Next Steps

There is clearly a gap in public health response to natural disasters in agricultural communities. Organizations and researchers are encouraged to use the Think Tank data as evidence to continue improving this work in the public health space. AgriSafe plans to continue attending disaster response conferences, making new partnerships and connections, and providing webinars and resources regarding emerging issues in agriculture. AgriSafe is also working to build an AgriSafe Disaster Action Response Team (ADART), consisting of key public health and agricultural occupational health and safety personnel who can provide timely public service announcements (PSAs) during natural disasters. Individuals interested in joining this team should email info@agrisafe.org or complete the contact form on AgriSafe's website.

Individuals and organizations should continue to find resources in their communities, including but not limited to: local and county extension offices and universities who partner with extensions, the USDA Farm Service Agency (FSA), local public health departments, county emergency management offices, the American Red Cross, community food banks, faith based organizations specific to disaster relief, local fire and EMS services, and the National Voluntary Organizations Active in Disaster (National VOAD). Building relationships with these organizations and assembling a household emergency preparedness kit before disaster strikes ensures that when the time comes, individuals and communities are ready to act swiftly and access the public health support they need only if necessary.

For organizations that are based in agricultural communities, make sure to learn about agricultural-specific health and safety hazards and have educational materials and resources handy before disasters strike.

Resources

Mental Health Resources

- AgriSafe's QPR Trainings
- AgriSafe's CALM Trainings - Conversations / Counseling on Access to Lethal Means
- AgriSafe's Animal Depopulation Resiliency Training
- AgriSafe's FarmResponse® Training
- AgriSafe's monthly Mental Health Innovations Exchange meetings
- The AgriStress Provider Directory
- The AgriStress Helpline®
- Changing Our Mental and Emotional Trajectory (COMET) Trainings
- Mental Health First Aid (MHFA) Trainings
- Psychological First Aid (PFA) Trainings
- The 988 Suicide Crisis Lifeline

Disaster Resources

- FARM AID Resources for Farmers
- The SAMHSA Disaster Distress Helpline
- Reach out to your local extension office
- National Voluntary Organizations Active in Disaster (National VOAD)
- The NASAAEP – Partners in Animal Disaster Response
- The Extension Disaster Education Network (EDEN)
- AgriSafe's Weather-Related Health Topics Page
- AgriSafe's Zoonotic Diseases Health Topics Page

AgriSafe's Educational Handouts

- Wildfire Health Threats Handout (Spanish version)
- Warm Weather Flood Health Threats Handout (Spanish version)
- Farm Flood Health Risks Social Media Posts (Spanish version)
- Cold Weather Flood Health Threats Handout (Spanish Version)
- Agricultural Respirator Selection Guide (Spanish Version)
- Preventing Heat-Related Illnesses (Spanish version)
- Preventing Cold-Related Illnesses
- Foreign Animal Diseases and Farmers' Mental Health (Spanish version)
- Avian Influenza and Farmers Mental Health (Spanish version)
- Mental Health and Its Impact on Farm Families (Spanish version)

References

American Farm Bureau Federation. (2024, June 4) Modern Farmer: Farmers face a mental health crisis. Talking to others in the industry can help. *Modern Farmer*. https://www.fb.org/in-the-news/modern-farmer-farmers-face-a-mental-health-crisis-talking-to-others-in-the-industry-can-help

Eisenreich, R., & Pollari, C. (2021). Addressing higher risk of suicide among farmers in rural America. National Rural Health Association. https://www.ruralhealth.us/getmedia/98f1009e-5418-4c06-910c-cdbb965cdb2e/NRHA-Policy-Brief-Increases-in-Suicide-Rates-Among-Farmers-in-Rural-America.pdf

Fannin, B. (2024, May 6). Preliminary Texas Panhandle wildfire agriculture losses top $123 million, costliest in state history. *AgriLife Today*. Texas A&M AgriLife. https://agrilifetoday.tamu.edu/2024/05/06/preliminary-texas-panhandle-wildfire-agriculture-losses-top-123-million-costliest-in-state-history/

Federal Emergency Management Agency. (2023). National Preparedness Report. U.S. Department of Homeland Security. https://www.fema.gov/sites/default/files/documents/fema_2023-npr.pdf

Gaffney, K. K., Duysen, E., Medcalf, S., & Wichman, C. (2023). Rural and agricultural natural disaster stress and recovery: A comparison. *Journal of Agromedicine*, 28(*4*), 797-808. https://doi.org/10.1080/1059924X.2023.2230987

Gaffney, K. K., Duysen, E., Medcalf, S., & Wichman, C. (2024). Rural Natural Disaster Stress: A Survey of Community Resource Use and Effect. *Journal of Agromedicine*, *29*(4), 688–700. https://doi.org/10.1080/1059924X.2024.2388862

IFRC: International Federation of Red Cross and Red Crescent Societies. (n.d.). What is a disaster? https://www.ifrc.org/our-work/disasters-climate-and-crises/what-disaster

Munch, D. (2024, October 8). Hurricane Helene devastates rural southeast. *Market Intel*. American Farm Bureau Federation. https://www.fb.org/market-intel/hurricane-helene-devastates-rural-southeast

National Council for Mental Wellbeing. (n.d.). Mental Health First Aid. https://www.thenationalcouncil.org/our-work/mental-health-first-aid/

Sussell, A., Peterson, C., Li, J., Miniño, A., Scott, K. A., & Stone, D. M. (2023, December 15). Suicide rates by industry and occupation — National Vital Statistics System, United

States, 2021. *Morbidity and Mortality Weekly Report, 72*(50), 1346–1350. https://doi.org/10.15585/mmwr.mm7250a2

U.S. Department of Agriculture, National Agricultural Statistics Service. (2021). 2017 Census of Agriculture: Family farm maps highlights. https://www.nass.usda.gov/Publications/Highlights/2021/family_farmer/maps.php

U.S. Department of Veterans Affairs, National Center for PTSD. (n.d.). *Early interventions following disaster events*. https://www.ptsd.va.gov/disaster_events/for_providers/early_intervention_tx.asp

Apendix

AgriSafe's Natural Disaster Think Tank Questions and Responses

1. According to the USDA 10 production regions, which region do you reside in? (Select one)

Response	Count
Corn Belt	8
Delta States	6
Northeast	5
Appalachian	4
Northern Plains	3
Southeast	2
Southern Plains	2
Mountain	2
Pacific	2
Lake States	1

USDA Farm Production Regions
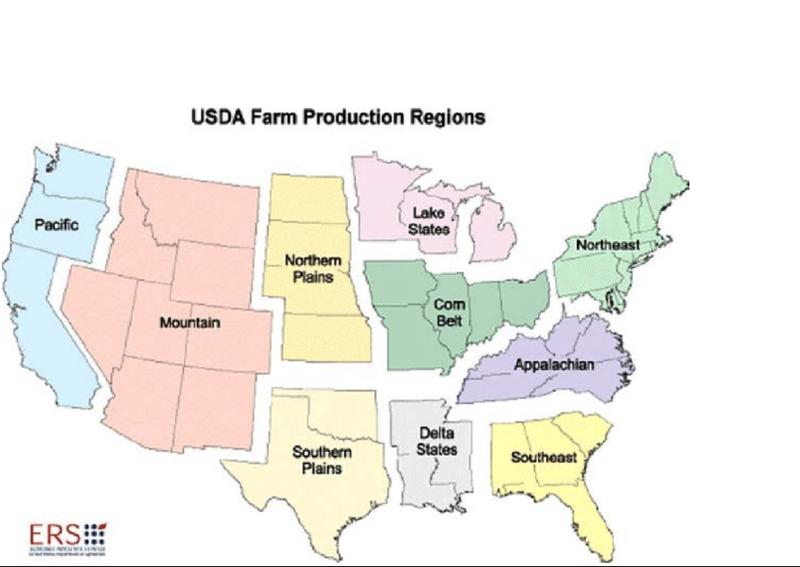
2. Are you a farmer, rancher, or farmworker? (Select one)

Response	Count
No, I am not.	22
Yes, I currently am.	8
No, but I have been in the past.	3

3. Are you a healthcare provider or first responder? (Yes or no)

Response	Count
No	21
Yes	11

4. Have you ever been a victim of a natural disaster? (Yes or no)
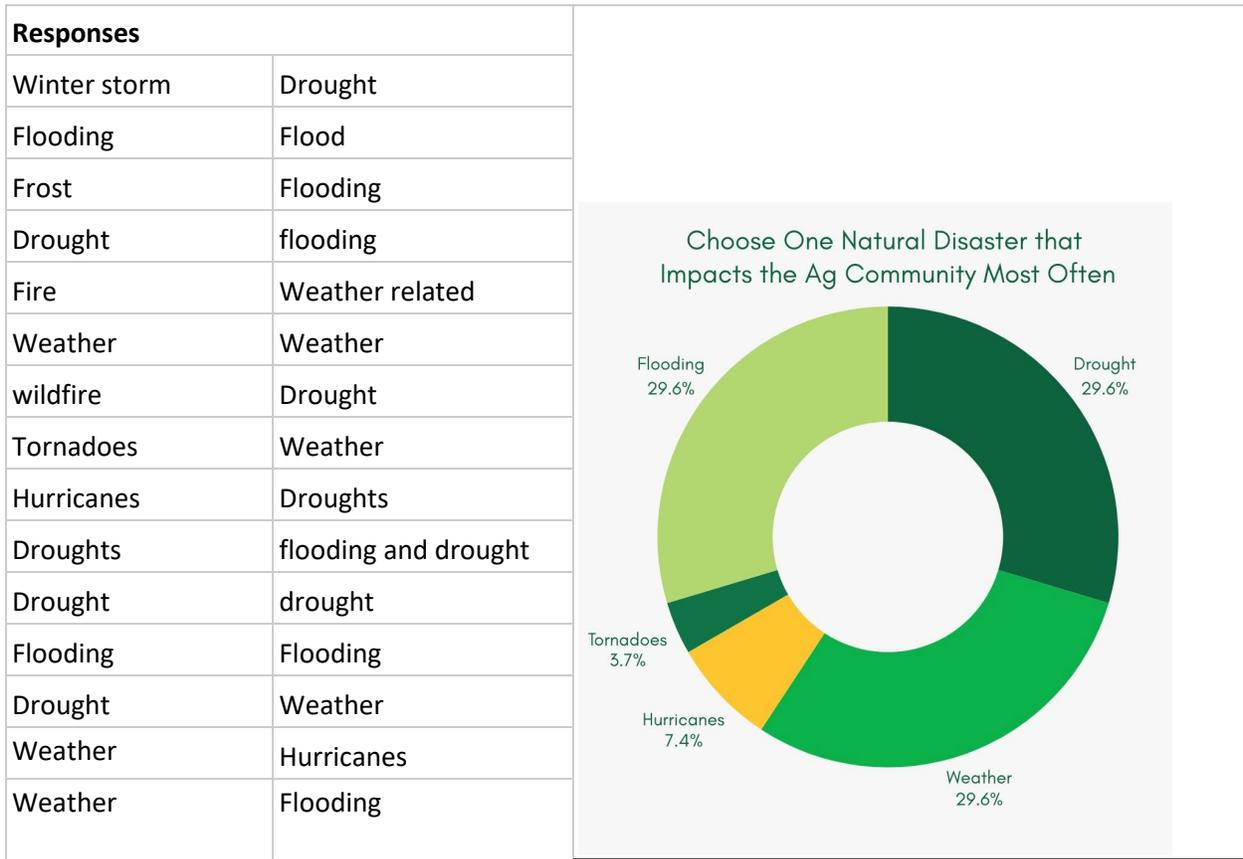
Response	Count
Yes	18
No	15

5. Have you participated in disaster recovery either as a victim of a disaster or in a service/volunteer role? (Yes or no)

Response	Count
Yes	26
No	10

6. If yes, what knowledge, resources or help do you wish you had at the time? (Open text)
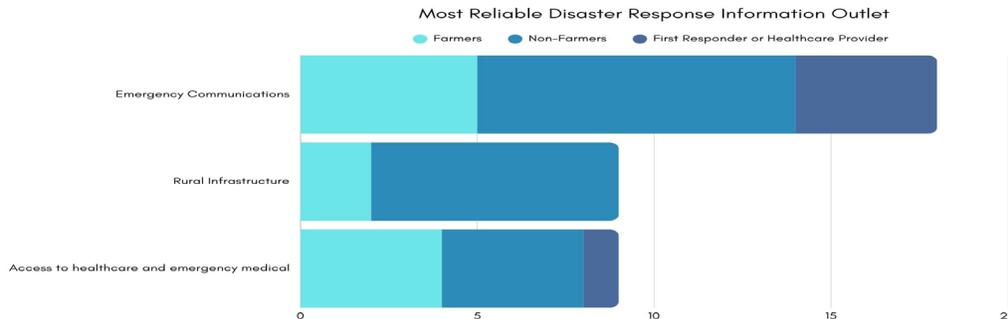
Communication (radios, mapping, etc.), PPE, and access to mental health resources for responders.
How to better assist ag facilities with insurance/recovery funds
Direction to recovery funding resources/opportunities
A more clear understanding of where to find most recent info/resources or more clarity on who was leading efforts
PPE is another one that I didn't even realize I needed at the time (I was working as a youth with a group). We were not given PPE, and we worked without it.
Better communication capabilities between EMS and multiple law enforcement agencies. More potable water.
Access to resources, clear information, helpers/assisters familiar with the geography
OSHA has many resources for disaster response.
Connections to help/assistance
Storage facilities
We need more weather ratios for the rural areas because not everyone lives near a siren. I wish there was a central location for resources at the time.
Local mental and emotional support networks
I would've liked to have had clarity on the application process for any kind of assistance other than insurance, especially since internet was not available due to electrical outage for days.
I wish I was older at the time because I was a child during the incident.
Need more help in southeast Ohio
PPE
Any knowledge would have helped
Better connections with local SMEs
As a volunteer, a manual would have been helpful
I used EDEN info
Mental Health training when talking with the victims.

7. In one word, what type of natural disasters impact agricultural communities most often? (Open text)

Responses	
Winter storm	Drought
Flooding	Flood
Frost	Flooding
Drought	flooding
Fire	Weather related
Weather	Weather
wildfire	Drought
Tornadoes	Weather
Hurricanes	Droughts
Droughts	flooding and drought
Drought	drought
Flooding	Flooding
Drought	Weather
Weather	Hurricanes
Weather	Flooding

Choose One Natural Disaster that Impacts the Ag Community Most Often

Drought 29.6%
Flooding 29.6%
Weather 29.6%
Hurricanes 7.4%
Tornadoes 3.7%

8. Which of the following disaster responses do you feel is MOST reliable? (Select one)

Response	Count
Emergency communication (cell service, radio, broadband)	18
Rural infrastructure (roads, bridges, power, water)	8
Access to healthcare and emergency medical services	8
Access to professionals trained in disaster response with a focus on agricultural health and safety	1

Most Reliable Disaster Response Information Outlet

Legend: Farmers, Non-Farmers, First Responder or Healthcare Provider

Categories: Emergency Communications, Rural Infrastructure, Access to healthcare and emergency medical

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9. Which of the following disaster responses do you feel is LEAST reliable? (Select one)

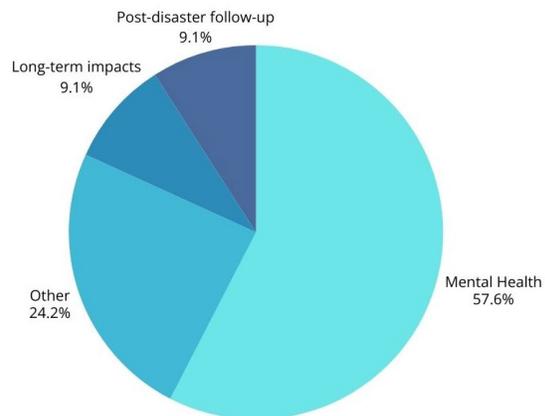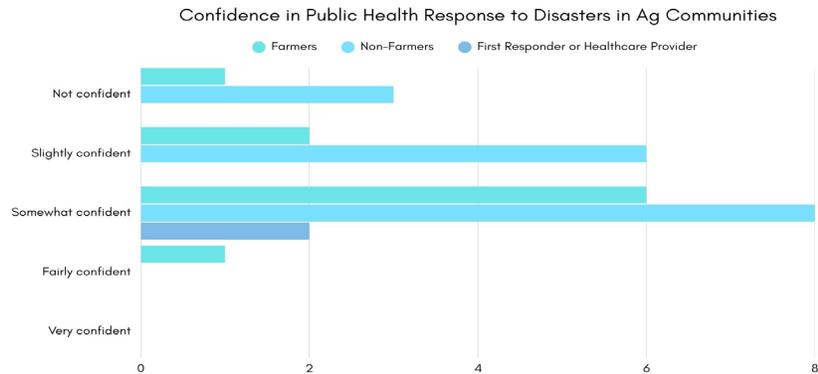| Response	Count
Emergency communication (cell service, radio, broadband)	15
Rural infrastructure (roads, bridges, power, water)	10
Access to healthcare and emergency medical services	4
Access to professionals trained in disaster response with a focus on agricultural health and safety	1

Least Reliable Disaster Response
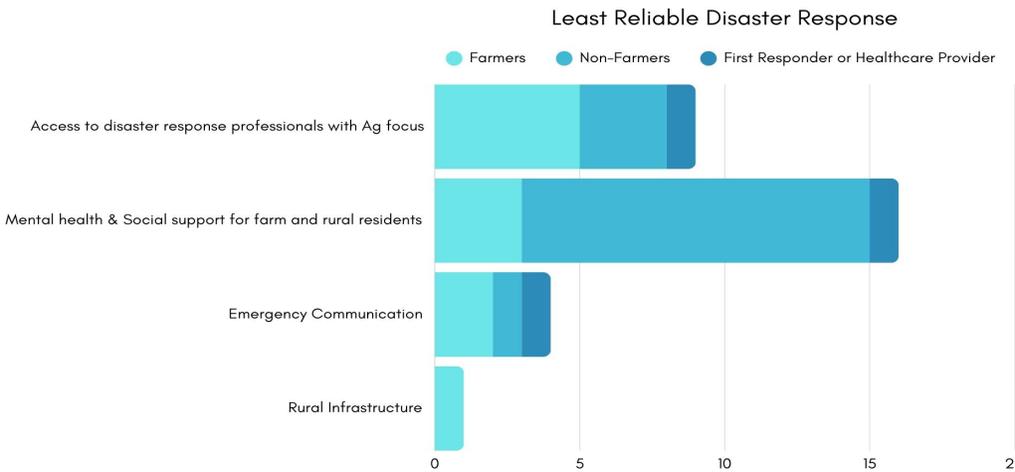
10. What health and safety needs are often overlooked post-disaster in agricultural communities? (Open text; responses were aggregated)

| Summarized info	Count
Mental health	19
Long-term impacts	3
Post-disaster follow-ups	3
Guidance (handling volunteers, clean-up)	2
Vaccines (Tetanus)	1
PPE	1
Grief	1
Infrastructure rebuilding	1
Stress	1
Loss	1

11. How confident are you in the public health response to disasters in agricultural communities? (1–5 scale)

Response	Count
1 (Not confident)	4
2 (Somewhat confident)	8
3 (Confident)	16
4 (Fairly confident)	1
5 (Very confident)	0

Confidence in Public Health Response to Disasters in Ag Communities

12. What are the top 3 strategies to reach farmers and ranchers with preparedness and recovery information? (Select three; responses were aggregated)

Responses (aggregated)	Count
Ag Extension	21
In-person training	16
Farm Show / Ag Expo	16
Mail	8
Social media (e.g. Facebook, LinkedIn, TikTok, Twitter/X)	7
Public Health Department	6
On-demand training	6
Insurance company	6
Podcasts / Radio	4
Live virtual training	2
Email	1

Best ways to reach farmers with info

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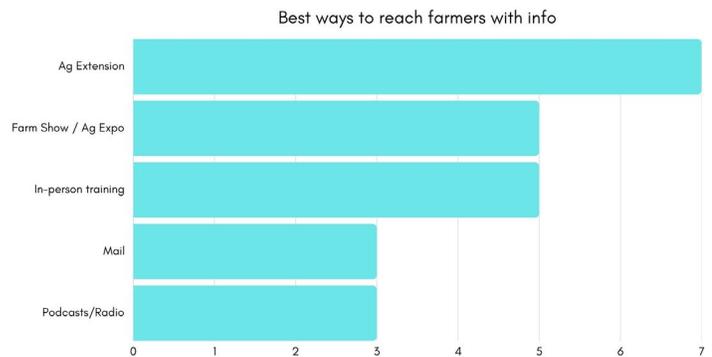
13. In your opinion, which training topic is most essential for agricultural communities regarding natural disasters? (Select one)

Response	Count
Coping with grief/loss	7
Proper personal protective equipment (PPE) usage training	6
Chemical Hazards	6
Infectious diseases	4
Large animal evacuation safety	3
Drinking water/well water safety	2

Most essential training for ag communities during natural disasters
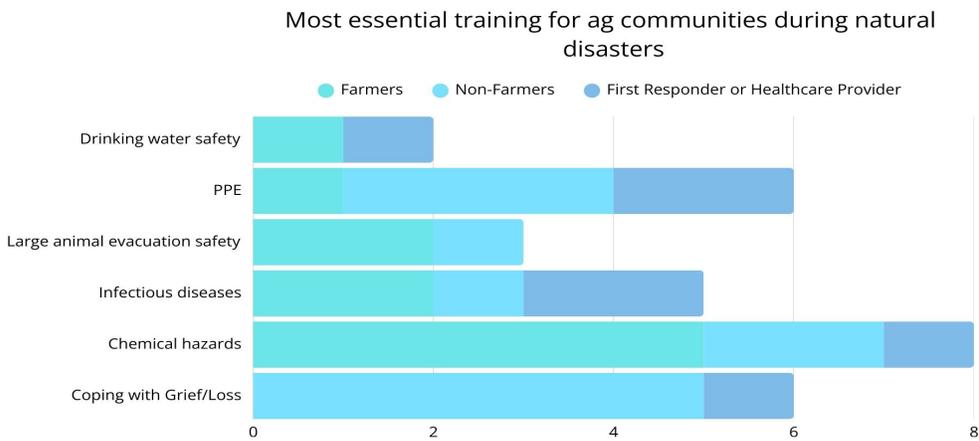
14. What natural disaster–related topics would you like AgriSafe to cover in future resources or presentations? (Open text)

Responses (aggregated)	Count
Tornadoes	4
Emergency action planning (EAP)	3
Drought	2
Foreign animal disease response/preparedness	1
Post recovery steps	1
Creating local Ag Disaster Specialty Response Teams	1
Flooding	1
Mudslides	1
Where volunteers can sign up to help	1
EHD (Epizootic hemorrhagic disease in deer)	1
Preparedness for long-term loss of utilities (electricity, water, etc.)	1

15. What actions can you take after today to strengthen rural disaster resilience specific to agriculture? (Open text)

Responses
More education
Share resources and offer in person educational sessions
Continuing education on the topic
Print out and review important disaster preparedness and health-threat information on disasters that happen in my area
Get more involved with rescue trainings
Get more involved
posting AgriSafe informational publications in my workplace to spread the information
Provide more information and education to those that should have it
Rescue plans
Find more information to become better prepared myself, then share it on social media
Sharing AgriSafe with other folks
Learn more about the mental health support needed
Direct more people to FSA in a quicker manner.
Outreach on available resources
Learn and network
Improve communication and outreach within my team and in my community
Be more informed on ag needs post-disaster
Educate/share education materials with my district
Increase involvement
Reach out to local FSA office
Share information with partners
Become involved

16. Does your employer provide training related to natural disasters? (Yes or no)

Response	Count
Yes	10
No	7

17. If your employer provides training related to natural disaster what specific topics are covered? (Open text)

Response
BCP, how to respond, how to mitigate, specialized target teams
OSHA
ICS, HAZWOPER, First Aid/CPR, Animal Sampling, Water Sampling, Waste Handling
ICS300. ICS400
Animal health
Wildfire, earthquake, evacuations, etc.
What evacuation of the building and coverage
I can attend trainings but it's not provided. I've generally chosen to attend ICS, weather, drought, mental health
Incident Command System
ICS 100, 200, 300, 400, 700, 800
How to mitigate risks, how to prepare, how to respond, how to recover
Animal heath
ICS

18. How knowledgeable are you on agricultural health hazards and risks related to natural disasters? (1–5 scale)

Response	Count
1 (Not Knowledgeable)	2
2 (Slightly Knowledgeable)	8
3 (Neutral)	5
4 (Knowledgeable)	5
5 (Very Knowledgeable)	1
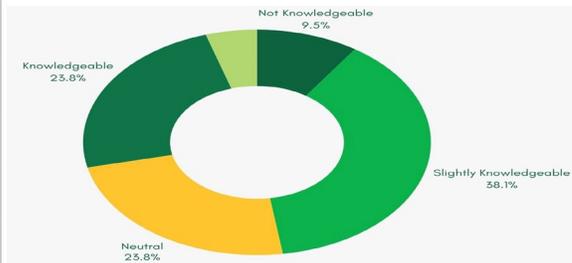
19. In your opinion, which intervention is most helpful in improving human health outcomes after a natural disaster? (Select one)

Response	Count
All three are equally important	13
Educating farm operators/managers before disasters	3
Distributing PPE, well-test kits, etc., immediately after	1
Educating community stakeholders	1

20. Which organizations do you trust most when preparing for or recovering from a natural disaster? (Open text)

Response
Red Cross, local NGOs, public health, ag extension, etc.
NEMA, local Emergency Managers, Police/Fire/EMS, healthcare coalition, public health
OSHA Compliance Assistant Specialist outreach
EMA, Extension, first responders
Local fire department, local health department
SBA
Local Government - Operations Emergency Management Department
our local health department
Local soil and water conservation, local EMS / police
Volunteers
Red cross
USDA
Extension
FSA
Extension
Fire departments
American Red Cross
FEMA
FSA
Extension