

Project Title: AgriSafe Health Hub

Project Summary

The purpose of the NLM funded project is to create an agricultural health and information hub that serves as a clearinghouse for public health information for farmers, ranchers, farmworkers and rural health professionals. Titled AgriSafe Health Hub (AHH), it aligns with NLM best practices by supporting the information needs of rural health professionals and agricultural communities across the nation. The proposed enhanced AHH is an innovation that will become a signature program accessible through the AgriSafe website. It will integrate and organize various learning platforms under one “hub” to aid in the user experience. For example, the AgriSafe Learning Lab, MedlinePlus, and PubMed will be available for access, organized by agricultural health risk. AHH is intended to introduce the user to reliable health information that matches the occupational risk of the farmer through an algorithm-based approach. Active promotion of health information from AHH to the user will include newsletters, video stories from the field, podcasts, promotion of NLM training events and AgriSafe trainings.

Training to be Provided as Part of this Award: No.

Proposed Start and End Dates for the Project: January 18, 2021 – April 30, 2022

Evidence of Need

Population

Census data identified 3.4 million farmers working in the United States, with over 1.3 million agricultural producers and 233 million acres of privately owned and managed forestland in the Southern region alone. The Southern region's impact on U.S. food and forest production is impressive. However, the current challenges facing farmers and foresters pose severe physical and mental health threats to the producers, their families, and the country. The Southern region is home to a diverse farmer population. According to the USDA 2017 data, 92% of the US Black producers farm in the Southern region. Black producers tend to be older and more likely to have served in the military (USDA, 2017). Over 51% of the U.S. Hispanic producers are in the Southern region (USDA, 2019).

The United States Department of Labor, Occupational Safety and Health Administration (OSHA) states that farmworkers are exposed to numerous safety, health, environmental, biological, and respiratory hazards. These include vehicle rollovers, heat exposure, falls, musculoskeletal injuries, hazardous equipment, grain bins, unsanitary conditions, pesticides, and many others. Agriculture remains one of the most hazardous occupations in the nation with farmers and agricultural workers experiencing high incidences of chronic debilitating disease and illnesses related to workplace hazards. Farmers, ranchers, and other agricultural managers experience a higher-than-average fatal work injury rate at 24.7 per 100,000.

The occupational hazards faced by the agricultural industry, are only multiplied by the factors of increasing age of farmers and a smaller workforce faced with the challenge of feeding an ever-growing population by 2050, with estimates reaching around 9 billion (Food and Agriculture Organization of the United Nations, 2009). Health threats that emerge from production agriculture are especially complicated. Ag production is rapidly changing and as a result, new hazards can be found across a spectrum of risks caused by machinery, livestock, weather, chemicals, financial strain, lack of health care access, and labor demands.

AgriSafe's rapid response to COVID-19 is an example of our role in providing timely and adequate health information. The emergence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and associated coronavirus disease 19 (COVID-19) has profoundly affected humans on a global scale in a noticeably brief time. Individuals working in agriculture who, as "essential workers," are exempt from stay-home mandates, and are naturally at increased risk of negative health, economic, social, and familial consequences from the on-going COVID-19 pandemic. Additionally, the unusual persistence and multimodal transmission cycle of SARS-CoV-2 emerging from ongoing scientific study requires customization of otherwise standard prevention messaging to agricultural workers to further prevent infection and disease exacerbation. AgriSafe Network is on the frontlines of translating science into practical prevention strategies for those providing health services to farmworkers and farmers.

One effect of the COVID-19 pandemic response was the massive amount of information in both written and visual media published. Public health organizations, academic institutions, and community-based programs all around the country created COVID-19-specific sites and resources with varying focuses on subject matter and audience. The speed

of production, breadth of knowledge, and volume of information presented additional stressors for those in search of answers and assistance during an already stressful time.

AgriSafe identified the need for AHH after completing nine Covid 19 Think Tank webinars attended by over 1000 participants. That experience which occurred during the months of April and May 2000 generated over 300 unique health information sources from a wide range of organizations and government agencies. The ability to collect and catalogue this array of resources under the proposed AgriSafe Health Hub would be an efficient means for users to access the topics they need and be an effective source of communication and collaboration for both public health professionals as well as the public.

Lack of Resources / Personnel

Rural health professionals across our nation are not trained to care for the occupational health needs of farming communities. Despite their occupational risks, farmers are unlikely to receive occupational health care from a trained professional. Many of their farm-related conditions are preventable with access to health professionals trained in the specialized field of agricultural health. AgriSafe's mission is to support a growing network of trained agricultural health and safety professionals that assure access to preventative services for farm families and the agricultural community. The AHH is a new development intended to aid the health professional in making sound clinical decisions because it is supported by research findings from PubMed and clinical tools developed by AgriSafe.

AgriSafe's Role

AgriSafe is dedicated to training rural health and safety professionals who are prepared to serve the unique health care needs of farmers. The sense of urgency to train the rural healthcare workforce has become intense, as they are the front-line resource to prevent and treat illnesses found in this unique population.

In addition to educating health professionals, providing occupational health information to agricultural communities will improve health status. The occupation of agriculture production is one of isolation and limited competency in the area health and safety standards. Most farmers assume the role of safety and health officer with no formal training. They need reliable and authoritative health information to become better informed for themselves and their employees. AHH aligns with the mission of NLM which supports building tools for personal health and advancing public health through the wealth of biomedical data. AHH can streamline the information search process so that the farmer (who often doubles as safety officer) can quickly access reliable information based on farm exposure.

Project Goals and Objectives



The framework by which AgriSafe will build and pilot test the AHH is based on the Total Farmer Health philosophy. In 2015, AgriSafe developed and trademarked the Total Farmer Health® campaign to draw attention to occupational hazards and individual, social, and mental health components that could impact a farmer’s health and well-being. The National Institute for Occupational Safety and Health (NIOSH) recognized our work regarding us as a Total Worker Health® affiliate.

The Total Farmer Health diagram is a visual representation of factors contributing to mental stress and physical harm for the farmer. Reducing adverse outcomes of poor health requires a multipronged public health response. AHH will reflect balanced content from each Total Farmer Health component and will be the methodology in which users navigate AHH.

AgriSafe’s target audience for the AHH will be 1) farmers, ranchers, and farmworkers and 2) rural health professionals primarily in the states served by Region 3. AgriSafe will track monthly user engagement by state to determine reach in Region 3. AgriSafe is especially focused on diversifying resources and health information to meet a cross sector of agricultural producers, many of whom are minority farmers.

Goal #1: Enhance AgriSafe Health Hub (AHH)

- Objective 1: Increase Health Topic content

Goal #2: Educate Farmers, Ranchers, Farmworkers, and Rural Health Professionals through AHH

- Objective 2: Disseminate AHH
- Objective 3: Expand agricultural health content in MedlinePlus

Implementation

Objective	Activities	Outcomes	Means to Evaluate	Person
1: Increase Health Topic Content	<ol style="list-style-type: none"> 1. Add 5 new AHH health topics with a focus on diversity (BIPOC) in agriculture with AgriSafe and NLM content 	Increased knowledge among ag producers and rural health professionals	Website analytics	Sarah Dauterive
2: Disseminate the AHH	<ol style="list-style-type: none"> 1. Create AHH logo 2. Complete AHH usability study 3. Create and launch social marketing toolkit 4. Integrate AHH with AgriSafe LMS and Forum 5. Apply for Google Ads for Non-Profits 	Increased utilization of AHH, AgriSafe Learning Lab, and NLM resources such as MedlinePlus	Track media impact through Meltwater analytic software which tracks by city/State and media reach. Receive \$10,000 in free ads for AHH.	Sarah Dauterive
3: Expand agricultural health content in MedlinePlus	<ol style="list-style-type: none"> 1. Ensure AHH and AgriSafe website meet guidelines for links on MedlinePlus 2. Review agricultural health information in MedlinePlus and suggest additional resources, evidence-based products 	Increased cross posting of resources between NLM and AgriSafe	Track downloads and page views.	Sarah Dauterive

Schedule/Timeline January 18, 2021 – April 30, 2022

Activities	Jan	Feb	Mar	Apr
Complete AHH logo	X	X		
Add 5 new AHH health topics		X	X	
Complete usability study		X	X	X
Create and launch social marketing toolkit			X	X
Ensure AHH and AgriSafe website meet guidelines for links on MedlinePlus	X			
Review agricultural health information in MedlinePlus and suggest additions	X			
Integrate AHH with AgriSafe LMS and Higher Logic Forum	X	X		
Apply and secure Google Ads for Non-Profits	X			

Evaluation Plan

Activities	Data Collection	Data Type	Collection Tools	How Data Used
Complete AHH logo	Weekly	Workplan logs	Smartsheet	Market AHH to potential patrons
Add 5 new AHH health topics	Weekly	Workplan logs	Smartsheet	Increase knowledge among ag producers and rural health professionals
Complete Usability Study	Weekly	Web Traffic Reports, Interviews	Heat Maps, Observations, Google Analytics	Continued Enhancement of AHH
Create and launch social marketing toolkit	After usability updates	Workplan logs	Meltwater	Promote AHH nationally and especially among the states served by Region 3
Ensure AHH and AgriSafe website meet guidelines for links on MedlinePlus	Weekly	Workplan logs	Smartsheet	Greater visibility for reliable and appropriate agricultural health information
Review agricultural health information in MedlinePlus and suggest additions	Monthly	Web Traffic Reports	Google Analytics	Greater visibility for reliable and appropriate agricultural health information
Integrate AHH with AgriSafe LMS and Forum	Weekly	Workplan logs	Smartsheet	Ease of access for patrons to health and safety material
Apply for Google Ads for Non-Profits	Monthly	Web Traffic Reports	Google Analytics	Promote AHH nationally and especially among the states served by Region 3

Publicity/Promotion

AgriSafe's target audience for the AHH will be 1) farmers, ranchers and farmworkers and 2) rural health professionals primarily in the states served by Region 3. The AHH will be promoted to these two groups through AgriSafe newsletters, the creation of a social media toolkit, in person and online trainings, and at relevant conferences. Specific mention of the inclusion of MedlinePlus and PubMed content in the AHH will be a key promotional point.

AgriSafe has growing strength with digital media, active company profile pages are available on Facebook, Twitter, LinkedIn and Instagram. In 2020, AgriSafe reached over 50 million people through traditional, digital and social media. AgriSafe's partnership with RFD-TV, Successful Farming Magazine and rural radio stations is at no cost and provides free marketing exposure to our AHH.

Continuity/Sustainability Plan

Return on investment for corporate funders is potentially high because of AgriSafe's visibility. The sustainability business model will include commodity, insurance, and agribusiness support. In addition, the AHH will be completed and sustained through consistent integration in future proposals. Since the hub supports programming across diverse health issues it is logical to assess a maintenance fee for each future grant secured.

Personnel Qualifications

Natalie Roy is the Executive Director of the AgriSafe Network. As the Project Director, her functions include oversight on the evaluation, financial oversight, and supervision of the staff working on the project. She will be responsible for promoting and sustaining AHH through new partnerships and corporate contributions.

Sarah Dauterive is a masters prepared librarian who will coordinate the objectives of this proposal. This includes content development, usability and accessibility work, and management of the AHH communication with AgriSafe's digital platforms. Sarah's work is supported by a dynamic and skilled staff at AgriSafe. Supervision of her work will be under the leadership of Executive Director, Natalie Roy.

Laura Siegel is a masters prepared technical writer with experience in health communication. She manages the work with the Monsido subscription (for Section 508 compliance), copyediting, and original writing for a variety of AgriSafe platforms. She will be supervised by Sarah Dauterive and assist in ensuring the AHH is accessible and marketed to our target audience.