

Reported Stressors and Desired Resources Expressed by Hawai'i Farmers and Ranchers

At a Glance

From November 2021 to March 2022, 345 Hawai'i agriculture professionals completed a survey about work-related stress. The survey data will be helpful to CTAHR and other allied agriculture professionals to guide the development of educational resources to support ag producers. This survey was funded by USDA's Farm and Ranch Stress Assistance Network-Hawai'i Department of Agriculture (HDOA) and is part of the Seeds of Wellbeing (SOW) project.



Reported Stressors

The SOW survey included a list of 14 stressors experienced by agriculture professionals. Respondents were asked to identify the level of stress they experienced for each.

Uncertainty and COVID-19 were ranked highest, with more than 65% rating these as "somewhat" to "extremely" stressful (Figure 1). Production concerns were third, followed by financial, time, pests and diseases, and labor. Mental health, technology, equipment, family, and marketing were ranked lowest.

Stressors varied when viewed by different demographic categories (Figure 2). Livestock and seed professionals reported uncertainty and weather as "extremely" stressful. Respondents from Hawai'i and O'ahu islands reported feeling stressed across a greater range of stressors than those from Kaua'i or Maui. Those with responsibility of 50+ acres indicated production as a greater contributor of stress than those with responsibility over less acreage. Finances and time management were primary stressors for those between ages 19 and 45.

Many of the stressors were fairly broad, so respondents were asked to provide additional detail within each category. The following categories emerged as the greatest contributing factors of stress among Hawai'i's agriculture professionals.

August 2022

Subject Category: Mental Health Issues, MHI-2

Thao Le

Heather Greenwood

Department of Family and Consumer Sciences
thaole3@hawaii.edu, (808) 956-2232

Emma Brown

Alex Wong

James Crum

Seeds of Wellbeing

Amjad Ahmad

Department of Tropical Plant and
 Soil Sciences

Melelani Oshiro

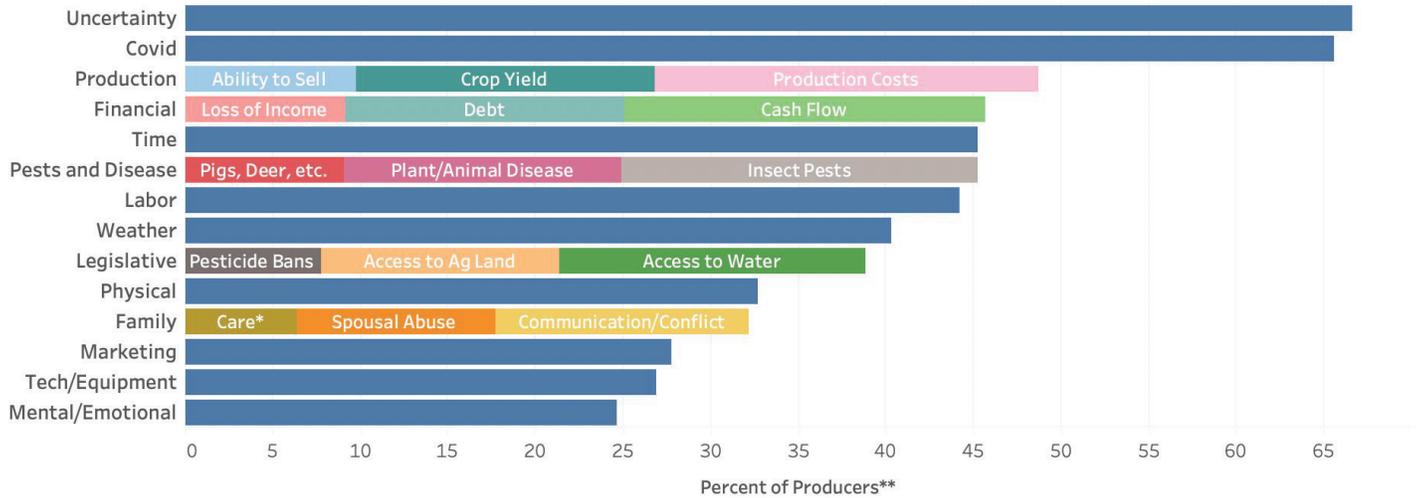
Department of Human Nutrition, Food,
 and Animal Sciences

Shannon Sand

Department of Natural Resources and
 Environmental Management

THIS INFORMATION HAS BEEN
 REVIEWED BY CTAHR FACULTY

Figure 1. Top Stressors for Hawaii Ag Producers (N=345)

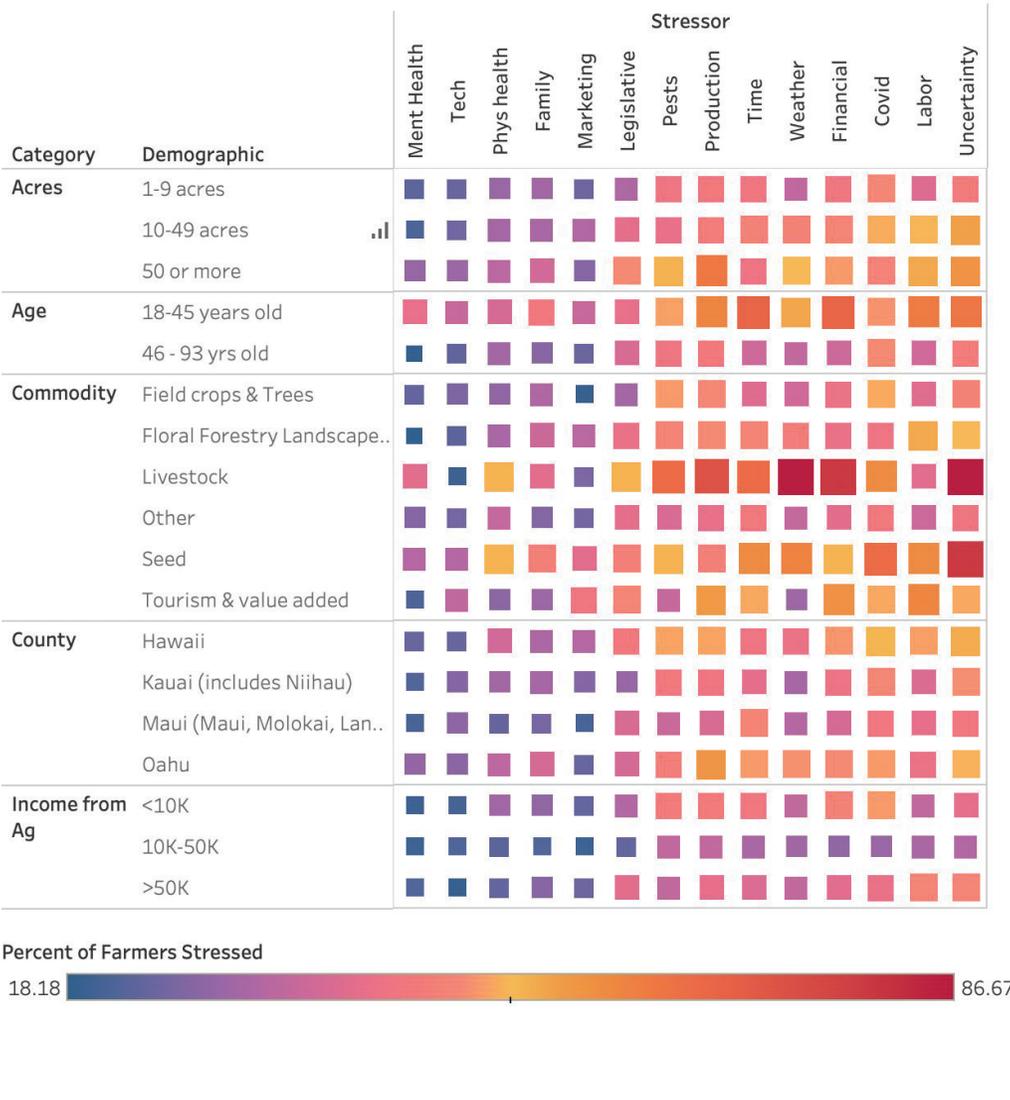


*Care for Children and Elders

**Main categories are measured as percents, subcategories as ranked 1-3, where the largest is #1.



Figure 2. Stressor Type by Category (N=345)



Uncertainty – Uncertainty describes those things outside an individual’s immediate control. Examples include weather, pests, invasive species, regulation, supply chain disruptions, and theft. Fear of the unknown is an aspect of uncertainty that contributes significantly to daily stress and anxiety experienced by many ag producers. While respondents ranked mental health as the lowest source of stress, uncertainty is directly linked to mental health.^{1,2}

Strategies used to manage stress related to uncertainty are similar to those that support an individual’s mental health. For example, practicing mindfulness by focusing on the little things supports individuals as they cope with stress related to uncertainty.³

COVID-19 – The COVID-19 pandemic created changes in regular daily life, as well as disruptions in local, national, and global markets. Uncertainty and shifts in consumer behavior influenced by societal changes and government



policies impacted ag producers in Hawai'i and across the country.⁴ Many of the other stressors measured in this SOW needs assessment (e.g., financial, production, labor, etc.) were also highly linked with COVID-19.

Extension faculty will use the outcomes of this study and other CTAHR publications, such as "Farmers perceived needs of extension support during COVID-19 in Hawaii" and "Impacts of the COVID-19 pandemic on community partners in the agriculture industry in Hawai'i," to guide ongoing educational efforts aimed at providing tools and resources to best support farmers.^{5,6}

Time – Time as a stressor relates to managing and balancing competing needs. These include time away from the business, for self-care, and with family, balanced with business management responsibilities. Surveys of agriculture professionals in the Midwest reflect similar levels of time-related stress.^{3,7} While time off is a major challenge, this data points to the importance of utilizing effective stress management tools when possible.

Production Stressors

in order from highest to lowest stressor reported

Production Cost – Crop production costs in Hawai'i are high due to the cost of imported input (i.e., seeds, fertilizer, pesticides, irrigation, infrastructure, construction materials, supplies, etc.). This means that managing time and resource efficiently, automating processes such as irrigation and fertilizing, engaging in cost and capital sharing, and incorporating proven strategies to scale up farm operation are essential. Additionally, new regulations, such as the Food Safety Modernization Act, are increasing infrastructure and supply costs to ensure compliance.

Crop Yield – Respondents rated crop yield as a top stressor and a barrier by some to scaling-up production capacity, revenue, and marketability.

Ability to Sell - Ability to sell was ranked lowest by respondents within the production category.

Financial Stressors

top 3 in order from highest to lowest reported

Cash flow – The financial, labor, and time costs and risks of starting an agriculture business are high. With the high cost of doing business, importing supplies and equipment on islands, positive cash flow requires adequate revenue streams that cover essential business operations and requires basic accounting skills.

Debt - Startup and operational investments often result in debt.

Loss of income - Due to the unique nature, long-term investment, and slow startup speed of agricultural production, loss of income could set the Return on Investment (ROI) back even further than originally expected.

Pest Stressors

in order from highest to lowest reported

Pests - In addition to the usual invasive insects, mites, bacteria, viruses, nematodes, fungi, and rodents, pests such as feral chickens, parakeets, and even the previously "endangered" nene bird pose their own unique political and social challenges for Hawai'i ag producers.

Plant/Animal disease – While USDA-APHIS is tasked with preventing the transportation and spread of plants, animals, and diseases between Hawai'i and the Mainland U.S., unwanted vectors are brought to the state. Educating agricultural producers, travelers, freight and shipping companies, and the public about the importance of agricultural inspections and compliance is vital for the future of the Hawaiian ecosystem and agriculture industry.

Producers can and should stay updated on current agricultural threats to their production areas by connecting with the state HDOA, local industry organizations, CTAHR Cooperative Extension, and other related organizations for resources that help manage invasive plants and animals.

Feral ungulates - Feral pigs and ungulates (i.e., deer) are common problems on many Hawaiian islands. Their lack of natural predators make them an increasingly severe invasive threat. Feral pigs and deer quickly damage farms and ranches through rooting of plants and ground by pigs and grazing by deer. Deer are particularly of great concern on Maui and Moloka'i, where a recent study has estimated a feral deer population of >10,000 animals on Maui island.⁸ Feral deer remove forages that ranchers use to support grazing operations, forcing many ranchers to spend more on fencing and supplemental feed to protect their grazing areas and sustain their livestock.

Feral ungulates also threaten food safety through fecal contamination of edible crops and ecosystems.⁹ Most current mitigation strategies of fencing, trapping, and hunting involve costs, but some enlisted hunters may be willing to work out an exchange of product for their time.

Reported Desired Resources and Delivery Format

The top five desired support types and methods among farmers and ranchers in Hawai'i are shown in Figure 3. Almost half of the SOW survey respondents expressed a need for financial resource support. Other requests are as follows: legislative, nutritional, physical, and time-related support. Note that legislative, nutritional, and physical support were not high perceived stressors, while time was a top five stressor. Producers under age 46 reported the greatest interest in financial support, mental and emotional support, time, legislative support, and food/nutrition. Categories most commonly requested by those over age 45 were financial and legislative. Respondents requested that resources be delivered by mail, website, e-workshops, in-person workshops, and consultation. It should be noted, however, that the reported percentages are low, with only 27% or less of ag producers reporting such preferences.



Desired Support Method

Top 5 among HI Ag Producers (N=345)



Figure 3. Hawai'i's Ag Producers Request for Support & Format of Support

Current Available Resources to Mitigate Stressors

With the needs assessment data, the SOW project team is now focused on developing educational resources, training materials, and outreach content that respond to the identified stressors and are prioritized by importance and urgency. For instance, the interactive Resource Hub was developed to serve as a one-stop-shop where ag producers can access resource information by county location for the different stressors. Federal, Hawai'i DOA, national resources, and other clearinghouse information are also included. This is an ongoing, live resource hub that is updated as more resources become available.



Comparing Results

The stressors and desired resources reported in this fact-sheet are both similar to and different from those reported by mainland faculty. The Western Regional Agricultural Stress Assistance Program (WRASAP)'s survey included 796 ag producer respondents from 13 western states and 3 territories, who also reported financial and time (lack of) to be in their top 3 stressors.

Similarly, financial and physical activity were in the top three for desired resources. Online, webinar, and social media were at the top for methods of receiving information, including podcasts (California & Oregon).

Going Forward

The results from the ag producer survey regarding stress and depression rates among Hawai'i's farmers and ranchers are alarming, however, not surprising. Resources for local ag producers, the production systems they manage, and their mental health are critical. Figure 4 provides resources and contact information related to the noted top stressors. Educational workshops, trainings, and materials are currently being developed and will be available statewide to address these top reported stressors.

Continuing to support local ag producers in all areas will ensure an affordable and sustainable lifestyle for Hawai'i's ag producers, and elevate the bottom line with regards to true sustainability of the islands facing the future.

Acknowledgement

This work is supported by the Hawai'i Department of Agriculture (Contract No. 69794) through the Farm Ranch Stress Assistance Network-State Departments of Agriculture (FRSAN-SDA, 2021), National Institute of Food and Agriculture (NIFA), U.S. Department of Agriculture Grant No. 2021-70035-35371. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the authors and should not be construed to represent any official HDOA or USDA Government determination or policy.

Acknowledgment and appreciation extends to Emilie Kirk, Mayuho Kunogi, Nargis Sultana, and Kasey Purcell for providing programmatic and research support; HFB and HFUU for their gracious assistance; Sothy Eng and Kent Kobayashi for review and input; Phyllis Shimbukuro-Geiser, Chairperson at HDOA for providing this program opportunity; and all the Hawai'i farmers, ranchers, and allied professionals who provided their responses.

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Resources	Contact	Top Stressors Addressed				
		Uncertainty	COVID	Production	Financial	Pests
SOW Resource Hub	manoa.hawaii.edu/sow-well/resources/	X	X	X	X	X
SOW Podcasts	manoa.hawaii.edu/sow-well/media/podcasts/	X	X	X	X	X
SOW Ed. Doodle Videos	manoa.hawaii.edu/sow-well/media/videos/doodles/	X	X			
Farm Aid Hotline	1-800-327-6243 (6am- 7pm PST)	X	X	X	X	X
Western Region Agricultural Stress Assistance Program	farmstress.us 1-800-327-6243	X	X	X	X	X
UH Cooperative Extension	cms.ctahr.hawaii.edu/ce/Find-Us (808) 956-8139	X		X	X	X
Hawaii Department of Agriculture	hdoa.hawaii.gov (808) 973-9600			X	X	X
U.S. Department of Agriculture	https://www.usda.gov/ (202) 720-2791			X	X	X
GoFarm Hawaii	gofarmhawaii.org (720) 580-3276			X	X	X
The Kohala Center	kohalacenter.org (808) 887-6411			X	X	X
O'ahu Resource Conservation and Development Council	oahurcd.org (808) 622-9026			X	X	
Hawaii CARES Hotline	1-800-753-6879 (or text ALOHA to 741741)	X	X		X	
Department of Human Services	humanservices.hawaii.gov (808) 586-4997	X	X		X	
Counselors with Ag Expertise	See Resource Hub	X	X			

Figure 4. Resources for Ag Producers & Professionals