

MARSHALL COUNTY, IOWA

RESILIENT COMMUNITY FOOD SYSTEM RESEARCH BRIEF

Impacts from COVID and severe climactic events



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INTRODUCTION

This research brief is formatted to give an in-depth analysis of findings related to impacts of the climactic events and COVID-19 on Marshall County, Iowa. Iowa State Extension and Outreach and Marshall County Extension have been working in partnership to understand impacts of COVID-19 and natural disasters across the county.

The research was conducted between 2020-2022. Participants consisted of community advocates, farmers and food businesses, non-profits, a college, and state organizations. Data collection included surveys, interviews and focus groups; resulting in 35 survey responses, 19 interviews, and two focus groups (six participants total), each with IRB¹ approval and informed consent.

Overall, this research has shown strong community collaboration and networking across the county as well as the need to continue developing relationships with individuals that work across different geographic locations (beyond Marshalltown) and with diverse populations and ethnic groups. Additionally, the research has shown a strong interest in food access, increased programming, and awareness of organization response during disasters. Discussion around improving environmental conditions and agricultural practices also showed up through interviews and focus groups. Another key discussion suggested a clear understanding of limitations as it relates to infrastructure for meat processing.

SUGGESTED PRIORITIES FROM ACTION PLANNING

The priority that will be acted on through funding from the Agricultural Marketing Resource Center will be for supporting food access by expanding the efforts of little free libraries across the county. The primary goal will be to support increased access for food distributed through 20 little free pantries across the county and to evaluate the successful implementation through focus groups of volunteers and anonymous surveys from users of the pantries. The \$10,000 will be allocated to Marshall County Extension and Outreach, which will then provide food supplies to each of the 20 little free libraries for four months. Additional support for evaluating the success of this initial project will be conducted by the Food Systems Team within ISU Extension and Outreach, Farm, Food and Enterprise Development.

No. 01 _____
Improve Iowa State University Extension and Outreach's ability to support and respond to disasters, including preparedness and recovery.

No. 02 _____
Create a community disaster plan and communication strategy.

No. 03 _____
Develop hazard mitigation and food management plan.

No. 04 _____
Educate about impacts from farms, food businesses, grocers, and consumers related to disaster and COVID19.

No. 05 _____
Restore the natural environment, soil, and water quality.

No. 06 _____
Scale up local agriculture through increased meat and specialty crop processing, gardening, and land access.

¹ Institutional Review Boards and Protection of Human Subjects - study exempt

COMMUNITY OVERVIEW

This section reviews values and ways that community members participate and connect in community. Individuals who participated in the resilience survey were asked to select their top three societal values from a pre-created list; if they had additional values, they could add in options in “other.” Education, Trust, and Community Ownership were ranked as the highest values, with 46% agreeing that Education is a top value. In addition to these values, one individual wrote “honesty” and another shared that “[we] are a close-knit and helpful community.” The sentiment of being close and reliable occurred in 53% of interviews.

The intent of this research is to understand the interest and ability to have a resilient food system. Primarily, understanding the community’s interest in local and regional foods, and the willingness to participate and purchase from farm and food businesses that operate within a local or regional geography.

When asked specifically about how important it was to support local farm and food businesses, over 86 percent believed it was either extremely important or very important.

Survey participants were asked about their shopping patterns and where they purchase food, ranging from direct-to-consumer options, like farmers markets and Community Supported Agriculture (CSA), to larger grocery chains and supermarkets. 91% of participants stated they purchased from local or regional grocery stores, like Hy-Vee or Fareway, followed by farmers markets (65%) and utilizing personal garden or farms for consumption (50%).

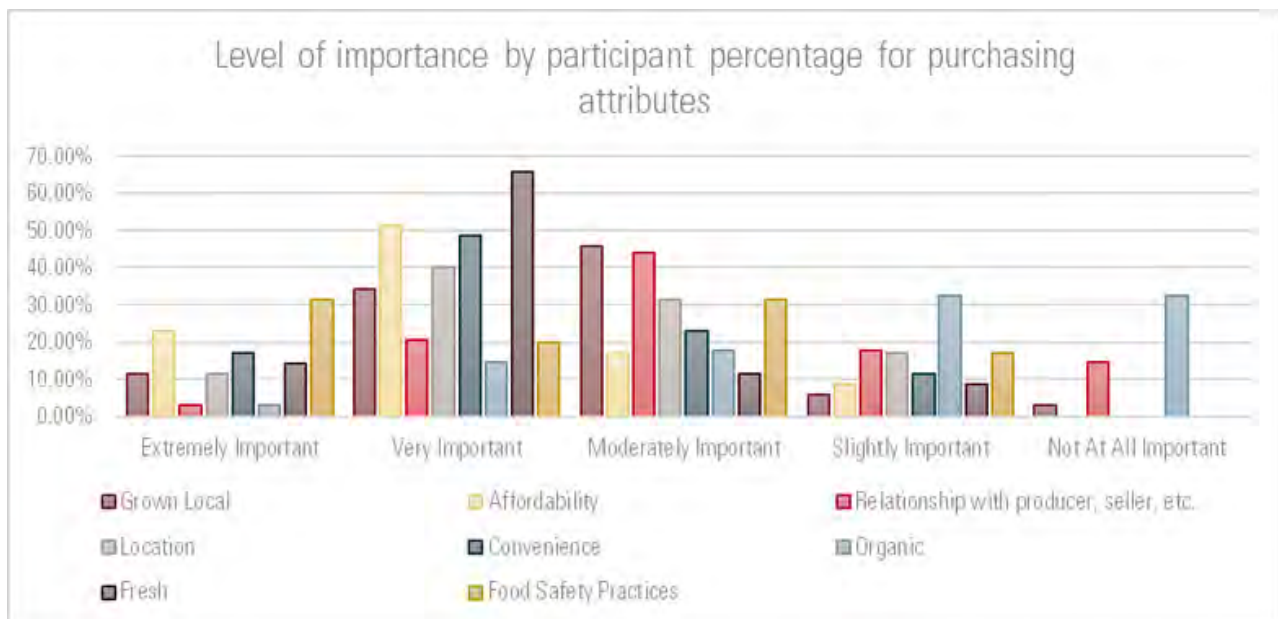


Figure 1: Importance of food attributes by percentage (N=35 except N=34 for Relationship with Producer and Organic; for full data on level of importance of attributes, see Marshall County Resilient Community Food System Snapshot, Appendix D.

To further understand purchasing habits, survey participants were asked about the level of importance for attributes for purchasing food. Based on average rankings (with extremely important equaling 5 and not at all important equaling 1), freshness (3.86) and affordability (3.89) were ranked highest; organic (2.24) and relationship with the producer (2.79) were ranked lowest.

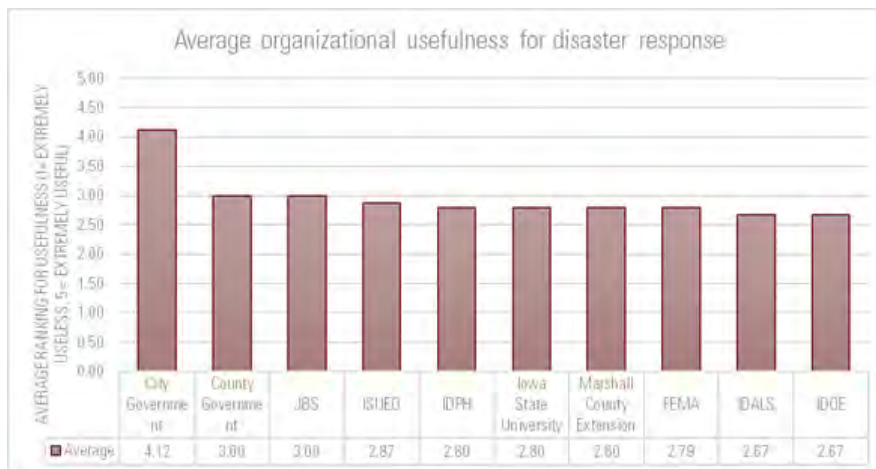
NATURAL DISASTERS IMPACT

Natural disasters impact all of community life, ranging from mild challenges for transportation and ease of access to devastating loss of infrastructure and life. Marshall County has been involved in five designated disasters since 2011.² Interview, focus group and survey participants were asked to reflect on their experiences of natural disasters. Of the 35 survey participants, 34 (97%) shared that they experienced either the 2018 tornadoes or the 2020 derecho; of those respondents, 88% experienced the tornado and 100% experienced the derecho. Of those who experienced a natural disaster, 30 (88%) experienced both events.

Increase in mental stress, damage to home or property, and increase in physical stress were the most common impacts across all disasters.

In Marshall County, discussions around the impact of multiple disasters back-to-back was discussed at length. The 2018 tornado, while only impacting a portion of the community, devastated certain areas and damaged homes, removed trees, and created damage to properties in town. One individual shared their need to “separate the derecho from the tornado...[we were] still in early recovery phase of the tornado when the derecho hit,” and another shared “for the people that were in the original tornado path, the derecho made things 1000 time worse and more challenging...we are already a poor community, and [for] folks that are underinsured or uninsured, this has been crippling for.”

Usefulness of organizations when responding to a Natural Disaster



“... after the tornado, volunteer management was really hard [and] there were too many people that showed up and [we] needed more coordination.”

Figure 2: Average usefulness of organizations for responding to Natural Disasters; see Snapshot Table 7 for total participant numbers.

Individuals were asked about usefulness for organizations in the U.S. Virgin Islands, based on a pre-made list from interviews. City Government, County Government, and JBS were seen to be the most useful organizations, while FEMA, Iowa Department of Land Stewardship, and Iowa Department of Education were seen to be the least useful. When asked to share their perspectives on recovery on a scale of zero to ten (with 0 being no recovery, and 10 being full recovery), on average, individuals feel they have almost fully recovered from the 2018 tornado (9.17) and are moderately recovered from the derecho (7.88).

² FEMA. (2022). FEMA. Retrieved from Declared Disasters: https://www.fema.gov/disaster/declarations?field_dv2_state_territory_tribal_value=AK&field_year_value%5B%5D=2011&field_dv2_declaration_type_value=All&field_dv2_incident_type_target_id_selective=All

COVID-19 IMPACT

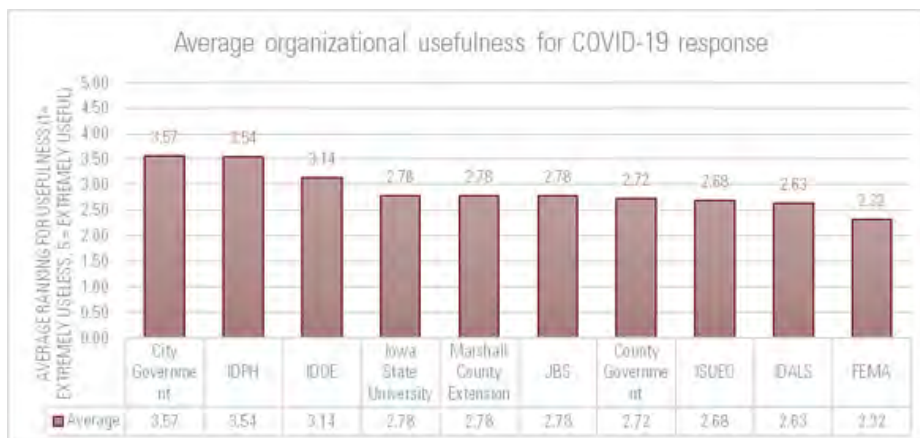
Interview, focus group and survey participants were asked to reflect on their experiences of COVID-19. Thirty-three participants (94%) shared in the survey that they experienced some type of impact from COVID-19. Of those who experienced COVID-19, all also experienced the derecho, which occurred during COVID-19. Experiencing both COVID-19 and disasters influence mental and physical health, including general fatigue from exposure and worry, and stress related to financial and employment constraints that have occurred due to supply-chain and corporate closures.

Participants shared mostly being impacted by increased mental stress and inability to see friend, with each showing over 90% experiencing these indicators.

Regarding food supply and access, individuals reported gaps in availability at the grocery stores. One individual shared, “There was meat shortage in the grocery store that was kind of scary for folks, and the locker in State Center was sold out of everything...there was a quick panic.” A farmer participant shared that their cattle production totally collapsed during COVID-19 and had to sell all their cattle: “The cattle ended up being sold for half of what they’re worth...and having them on feed for a month [was] also not the right quality; other friends with confinements had to kill 1,000 head to 2,400 and just euthanize.” On the other hand, the school districts were said to be supportive by having “meals taken into neighborhood, and children were still able to get lunches.”

Usefulness of organizations when responding to COVID-19

Individuals were asked about usefulness for organizations in Marshall County, based on a pre-made list from interviews. No organizations were seen to be, on average, somewhat useful. City Government, Iowa Department of Public Health and Iowa Department of Education ranks highest, and FEMA, Iowa Department of Agriculture and Natural Resources and Iowa State University Extension and Outreach ranked lowest.



“There have been inconsistent partnerships and communication between city, county, and state, etc. . . [people are] still unaware of the response or joint response needed to address the issue.”

Figure 3: Average usefulness of organizations for responding to COVID-19; see Snapshot Table 12 for participation numbers (n value).

While it is difficult to know the extent of recovery that has been able to occur from COVID-19 since it is an ongoing pandemic, individuals were still asked to share their perceived level of recovery from COVID-19 based on the moment in time they were participating in the research study. Most individuals felt that they are moderately recovered, with a 7.83 on average out of 10.

PRIORITY AREAS

01. Improve Iowa State University Extension and Outreach's ability to support and respond to disasters, including preparedness and recovery.

- 1.1 - Develop a plan for how Extension responds, both internally and with community, to disaster.
 - 1.1.1 - Create a plan for preparedness, response, and recovery.
 - 1.1.1.1 - Phone call trees; point of contact for staff.
 - 1.1.1.2 - Process for outreach for help.
 - 1.1.2 - Understand role for community in response to disaster.
 - 1.1.2.1 - Determine lane and role for preparedness, response, and recovery.
 - 1.1.2.2 - Create consistent messaging and awareness for the areas.
 - 1.1.2.3 - Provide space for coordination.
 - 1.1.3 - Support access to food through little free libraries across the county and convene group meetings to understand usefulness.
- 1.2 - Coming together as a state to support counties that have been impacted.
 - 1.2.1 - Network of communication and outreach to county agents impacted by storm to understand needs (related to Suggested Priority #2).
 - 1.2.2 - Determine best communication practices for supporting county agents post-disaster.
 - 1.2.3 - Identify a point of contact who is always aware of disaster preparedness, response, and recovery.
 - 1.1.4 - Social Media/ press releases/ website support to get information out – campus providing information when county is unable.
 - 1.1.5 - Increase information on other disasters (in addition to drought and floods) on ISUEO.
- 1.3 - Create disaster preparedness courses for agriculture (related to Suggested Priority #3).
 - 1.3.1 - Potential connection to farm safety and rural health (natural disaster/ preparedness training).
 - 1.3.2 - Teach people how to develop their own on-farm safety and on-farm disaster plans.
 - 1.3.3 - Connect to programming like Annie's – include in regular programming.
 - 1.3.3.1 - Learn from other programs, like Foreign Animal Disease, on how to develop a plan on the farm; develop table-top scenarios for response to disaster.
 - 1.3.4 - Connect to programming for Local Food Leader and Community Food Systems certifications.
 - 1.3.5 - Convenor/ facilitator to support groups develop a plan – Community Economic Development support to create the response plan (see Suggested Priority #1).

02. Create a community disaster plan and communication strategy.

- 2.1 - Establish pre-disaster and post-disaster contacts.
 - 2.1.1 - Partner with organizations and support systems, including public-private partnerships
 - 2.1.2 - Consider networks both internal and external to disaster zone; address needs and innovative ways to respond.
 - 2.1.2.1 - Internal networks may be organized through school district regions.
 - 2.1.2.2 - Develop regional, state, and external collaborations; organizations and support systems out of the disaster zone, which may help with receiving support from non-impacted areas.

PRIORITY AREAS

Priority 2 continued

- 2.1.3 - Engage more Marshall County Emergency Management and determine potential collaboration.
- 2.1.4 - Identify the lead (or co-lead); identify roles for different aspects of response.
 - 2.1.4.1 - Know the gatekeepers and connectors in the community that understand community needs across all populations and geographic parts of the county. These individuals can share the word and can inform where to go get information and resources.
 - 2.1.4.2 - Include multilingual communication materials, and text and phone platforms.
- 2.2 - Create a regional communication network for prevention, response, and recovery that includes various partner organizations, farmers, and businesses.
 - 2.2.1 - Encourage collaborative discussion and co-creation of ideas; foster trust with gatekeepers of community populations and all parts of county.
 - 2.2.2 - Engage with individuals that want to volunteer, both internal and external to disaster zone; have a way for people to get engaged immediately.
 - 2.2.3 - Develop a campaign for people to keep an eye on your neighbor and make relationships.
 - 2.2.4 - Include multilingual communication materials, and text and phone platforms.
- 2.3 - Develop drills and activities that can help organizations, businesses, and the community respond to disasters in the future.

03. Develop a hazard mitigation and food management plan.

- 3.1 - Response checklist for farms, food businesses, pantries and food banks, schools and additional organizations that impact food access, including access to farms during a severe weather event, water, and power protocols (having water storage, generator access and usability, tool sharing, etc.), food access and shelter locations, etc.
 - 3.1.1 - Create plans for each type of disaster and ability to respond.
- 3.2 - Identify existing food supply pre-storm that farmers, grocers, etc. have on hand and develop strategy for storm mitigation, including policies for pre- and post-storm.
 - 3.2.1 - Identify where generators exist within the community.
 - 3.2.2 - Create a “how-to” for use.
- 3.3 - Research if any food businesses are contractors with FEMA for providing food through FEMA’s Industry Liaison program during disaster response.
- 3.4 - Research and identify amount of food currently available within Marshall County, and where to go for donation/ buying/ etc.
 - 3.4.1 - Identify amount of food and locations of grocery, schools, food bank, pantries, feeding areas, and retailers.
 - 3.4.1.1 - Create transferable models for food access locations.
 - 3.4.2 - Identify options for gleaning and food donation; may include ChowBank or MEANS Database.
 - 3.4.3 - Create a plan for aggregation and safe distribution of food post disaster, specifically around food preservation, food safe storage, and food distribution.
- 3.5 - Create or identify existing insurance programs for farm and food businesses.

PRIORITY AREAS

04. Educate about impacts from farms, food businesses, grocers, and consumers related to disaster and COVID-19.

- 4.1 - Develop awareness campaign about the impact that natural disasters have had on food and farm businesses and the reason for supporting local businesses and organizations – sharing narratives and stories; economic impact indicators; etc.
- 4.2 - Enhance outreach to underserved, marginalized individuals and organizations, including developing materials in multiple languages.
- 4.3 - Transferable programs for creating educational programs.

05. Restore the natural environment, soil, and water quality.

- 5.1 - Increase use of environment protection, and other government, programs.
- 5.2 - Increase cover crops in county.
- 5.3 - Investigate third crop for rotation, potentially small grain.
- 5.4 - Season extension opportunities.

06. Scale up local agriculture through increased meat and specialty crop processing, gardening, and land access.

- 6.1 - Increase capacity for meat processing.
 - 6.1.1 - Expand meat processing options, including storage, slaughter, and processing.
 - 6.1.2 - Identify options for fruit and vegetable storage and processing capacity (brick and mortar or mobile).
 - 6.1.2.1 - Identify existing shared-kitchen spaces and policies for at home processing
- 6.2 - Increase gardening and subsistence farming.
 - 6.2.1 - Create a network of gardeners, producers, etc. and understand the desired communication platform for getting in touch.
 - 6.2.2 - Develop, or partner with existing gardening networks (like Master Gardeners) for seed sharing and gardening techniques.
 - 6.2.2.1 - Offer seed-saving courses.
- 6.3 - Land Access and Production.
 - 6.3.1 - Increasing land access for small-scale production.

ACKNOWLEDGEMENTS

A special thank you to all the farmers, businesses, organizations, staff, and individuals that met and shared their stories with us throughout the last two years. Thank you for your work and dedication to resilient food systems. We are humbled and grateful for your time.



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To read the full Marshall County, Iowa Food System Resilience Snapshot, visit



bit.ly/agmrc_ResilientFoodSystems

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