



AMS
American Meteorological Society

Supplemental Material

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Interview Number _____ Date _____ Time _____

Thank you again for agreeing to let me interview you today. Please say what you think or believe about the following questions. Remember that your name will not be associated with your response in our analyses or reports. There are no right or wrong answers, and your answers will be most helpful to us if they are what you really think. If I ask a question that you've already answered, please feel free to say so and refer to your previous answer. I'll be taking notes while you're talking, and these are to help me follow along with what you're saying.

General prompts:

*You mentioned ____, can you tell me more about that?
Does anything else come to mind?
You've mentioned ____, ____, ..., does anything else come to mind?
Please say whatever comes to mind.
Can you elaborate on ____?*

QUESTIONNAIRE

Before I begin recording, there are a few quick demographic questions I'd like to ask to help us better understand the agricultural history and experiences with hail that our complete sample has had. [Ask questions on questionnaire]

HAIL

1. Tell me about hail storms ...
[Prompt based on concepts mentioned]

2. **[Prompt if Colorado was not specifically mentioned]** Tell me about hail storms in eastern Colorado...

EFFECTS

I'm now going to ask you about some of the effects and risks associated with hail.

3. **[If have mentioned: As you mentioned]** How does hail affect your daily life?
4. How do the effects of hail specifically impact your work/career in agriculture?
5. According to you, what are some of the risks associated with hail storms *in eastern Colorado*?
6. Which of those risks you just mentioned do you think is the most serious?
7. "Severe hail" is defined by the National Weather Service as hail that is 1" or larger. When would you consider a hail event to be "severe?"

8. Which of the following is more worrisome to you as a farmer: (a) A hail storm that produces a lot of small hail that accumulates like snow or (b) A hail storm that produces a few very large stones in excess of 3” (or “baseball-size”)? **Why?**

PERCEPTION OF RISK AND VULNERABILITY

I'm now going to ask you about your perceptions of risk and vulnerability associated with hail storms. There are many different ways to measure how vulnerable someone is to a hail storm. Here, I'm going to focus on a classic definition that takes into account one's exposure and sensitivity.

9. First, thinking about exposure to hail storms, on a scale from 1 to 10, what do you think is the chance of severe hail occurring on your property over a given year? **[Prompt: (If no explanation) You gave a rating of _____. Why?]**
10. Do you think that number has changed over time? In other words, do you think the occurrence of hail storms is changing over time? If so, how?
11. Sensitivity can be defined as the social, economic, or demographic characteristics that affect someone's ability to deal with the impacts of a hazard, in this case hail. With that in mind, on a scale from 1 to 10, how sensitive do you think you are to the impacts of a hail storm, with 1 being the least sensitive and 10 being the most sensitive?

[Prompt: (If struggling) Another way to look at it would be to ask how affected you would be if a hail storm occurs on your property.]

12. **[If not already mentioned]** In your opinion, do you think you have become more or less sensitive (or no change) to hail storms over time?
13. **[If have mentioned: As you mentioned]** What factors contribute to your perceived sensitivity from hail storms?
[Prompt: (If quiet) Think about things like the number or types of crops you farm, your farming practices, the structures and buildings that are on your property, population, insurance, large/small operation, etc.?]
14. **[If not already mentioned]** In your opinion, do you think there has been any changes in either the occurrence of or sensitivity to hail storms across eastern Colorado as a whole?
15. **[If not already mentioned]** In your opinion, has the size of hail stones that you have observed changed over time? If so, how?
16. **[If not already mentioned]** The length of the severe hail season is defined as the number of days between the first hail report of at least 1” in the year and last hail report of at least 1” in the year. Have you experienced any change in the length of the hail season over time?
[Prompt: If yes, would you say that shortening/lengthening is happening at either the beginning or the end of the season or both?]

EVENT-BASED RESPONSE (PADM)

I'm now going to ask a series of questions about how you receive and respond to hail warning information.

17. Do you get weather forecasts and/or warnings when there is a threat of severe hail storms?

18. How regularly do you get warnings from the following sources? (*source/channel*)?

(Show card with 'Always', 'Most of the Time', 'Sometimes', 'Rarely', 'Never' options)

- (a) Television
- (b) Weather Radio
- (c) Phone Alert
- (d) Private Sector (app or private company),
- (e) Online
- (f) Friends and Family

19. [Based on previous answer] What is your preferred source of forecast messages for severe hail (*source*)? Why?

20. To what extent do you feel that the hail forecasts and/or warnings that you get include information about the size of hail stones?

[Prompt] How do you know how large the hail will be (*message*)?

21. To what extent do you consider warning messages for hail effective and accurate (*effect*)?

22. What is the single most important piece of information you want to know about a coming hail storm?

23. How do you feel when you receive a warning message for severe hail in your area?

24. What action steps do you take to respond to a warning message or threat of severe hail?

[Prompt: Seek more information? Alert family or friends? Protect crops/property?]

25. [If not already mentioned] What are some environmental clues that a hail storm is coming?

MITIGATION

****This section can be skipped if pressed for time****

Almost done! I want to ask just a few questions about some mitigation practices.

26. Are there any things that you do to protect yourself or your property from hail before the season begins or further in advance?
What?
27. Are there any changes that you are considering to make in your personal and/or agricultural life to help protect against future hail storms?
28. How does crop insurance affect your perceptions of hail risk?

CLOSING

In closing . . .

29. Was there anything we didn't ask that you think we should have asked?

[Prompt: If yes, allow them to share that issue].

Thank you for your time. We appreciate your participation in our study. I will keep you posted on the results of this study once it is published.

QUESTIONNAIRE

Please answer these short questions to the best of your ability. These answers will help the researchers better understand the agricultural history of the study sample and their experiences with hail.

1. Which Colorado county do you live in? _____
2. What is the town nearest to your residence? _____
3. How many years have you lived in eastern Colorado (*show map*)? _____ years
4. How many years farmed at your current residence? _____ years
5. How many years have you farmed overall? _____ years
6. Approximately how many acres do you currently farm? _____ acres
7. What are the primary crops that you farm / livestock that you raise? _____
8. Are you a CoCoRAHS observer who measures and reports hail stones that fall on your property (circle one)? YES NO
9. Have you ever filed an insurance claim for crop loss due to hail damage (circle one)? YES NO
10. If yes, did you file an insurance claim in 2018 or so far in 2019 (circle one)? YES NO