

# Covering Climate Change: A Content Analysis of the *Progressive Farmer Magazine*

## Introduction

Climate change manifestations will have an increasing impact on agriculture through both regulatory policy actions and on-farm conditions like drought, increasing temperatures, and more destructive natural disasters.

Despite the resounding scientific consensus that human-produced greenhouse gases have caused a notable increase in Earth's temperatures, **there is widespread skepticism of anthropogenic climate change amongst farmers.**

"Net zero!"



**President Joe Biden has announced his plans to reach net-zero emissions** for the American economy **by 2030** and private companies like Smithfield, General Mills, and Kellogg have already begun to incentivize climate-smart practices like **carbon sequestration**.

(IPCC, 2019; Thornton et al., 2018; Morrison et al., 2017; Easton, 2016; Jemison, 2014)

**Agriculturalists need to take action:**

1. **on the farm** to bolster operations against a changing climate.
2. **in the regulatory arena** to avoid top-down regulation lacking the agricultural perspective.

## Conceptual Framework

Agricultural magazines remain the top resource used on a weekly basis by producers (SIIA, 2018). Their reach posits them as a conduit of influential climate change communication.

## Theoretical Framework

### Erving Goffman: Framing

The study employs the theory of framing, which suggests:

- How stories are told influences how people process that information.
- The frames employed will affect how readers think about issues such as climate change.

(Goffman, 1974)

## Methodology

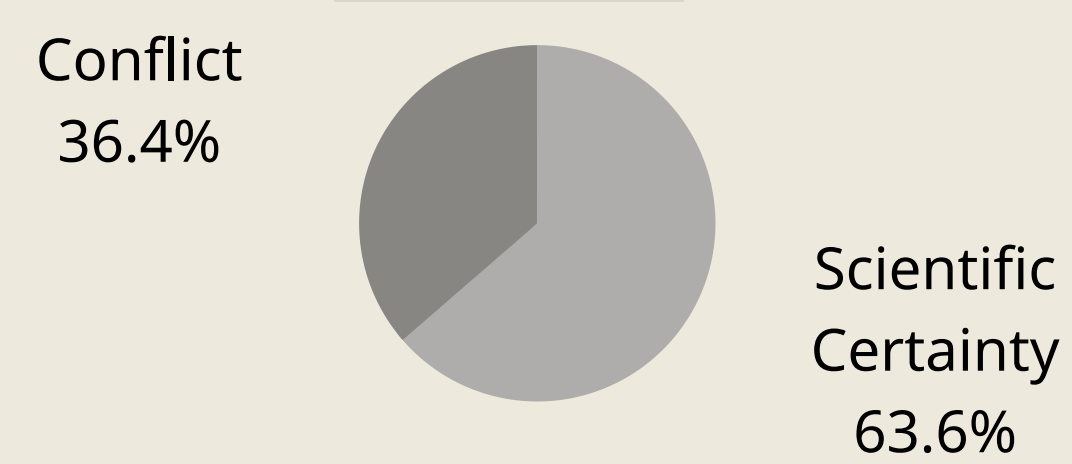
To understand the nature of coverage, I created a codebook to record the following variables of interest in *Progressive Farmer* magazine articles containing "climate change" from 2018-2020:

- Article type
  - News or opinion
- Commodity mentioned
- Frame
  - Conflict
  - Scientific Certainty
  - Scientific Uncertainty
- Economic burdens or opportunities of climate change
- Benefits of climate change
- Dominant logic
  - Convinced/ Skeptical
- Cause of climate change
  - Human activity, natural variations, or inconclusive science
- Recommended action or proposed solution
  - Ex. Carbon sequestration, adaptation, mitigation, cover cropping, reducing emissions

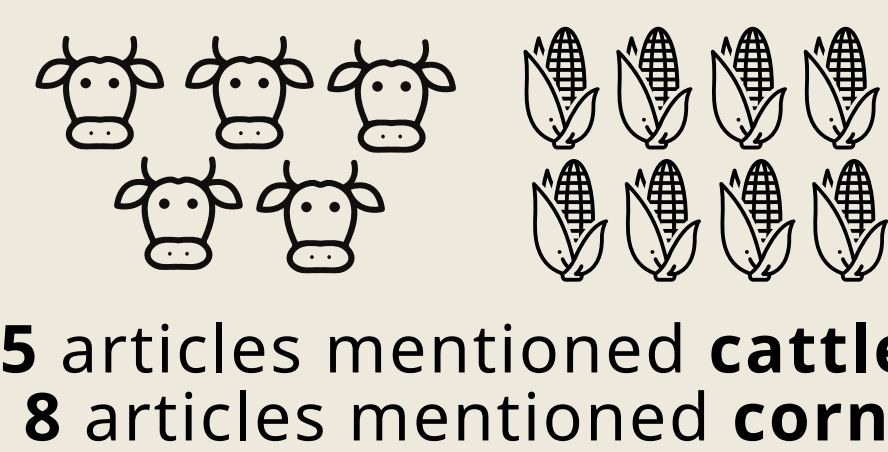
*Face validity was established through rigorous professional review of the codebook and comprehensive coder training. A minimum Krippendorff Alpha of 0.8 was reached for each variable after two coders coded each article.*

## Findings

### Frames



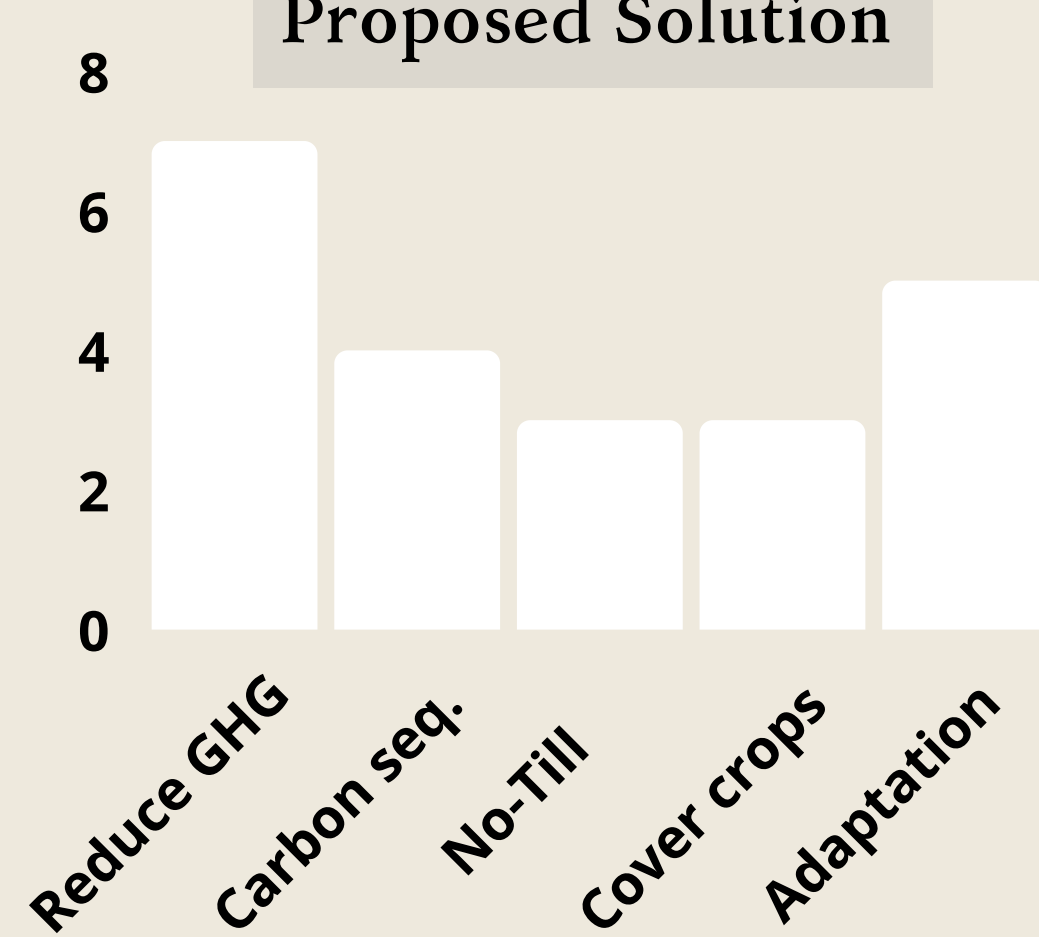
### Commodities



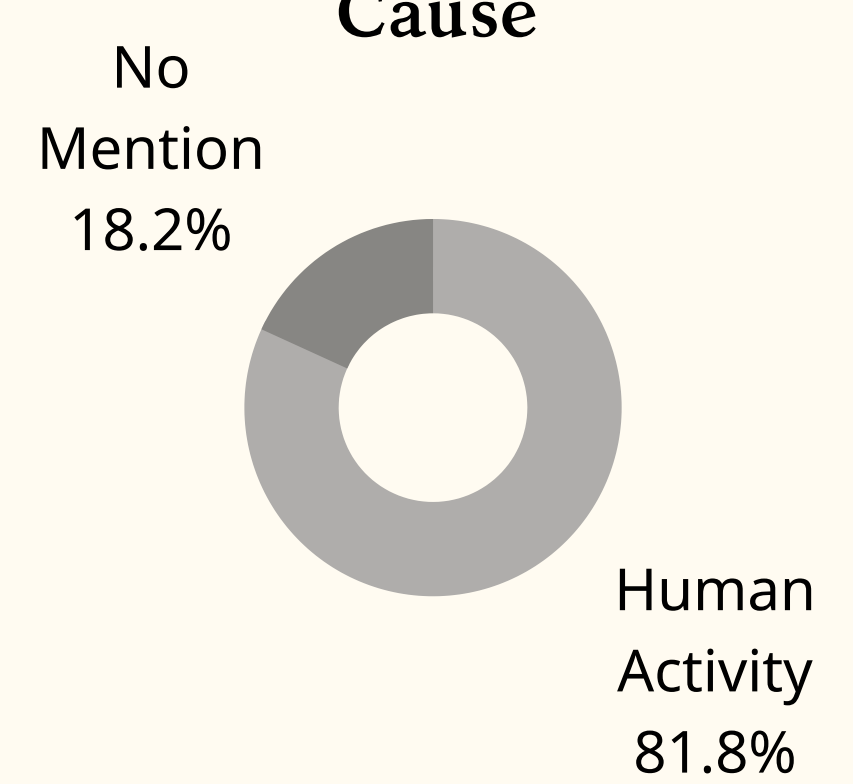
### Dominant Logic

All shared the dominant "convinced" logic

### Recommended Action/ Proposed Solution



### Cause



### Economic Impact

Six of the eleven articles included **economic opportunities** from climate change.

## Conclusions/ Recommendations

The *Progressive Farmer* prides itself on "delivering data driven information," which explains why they adhered to frames of scientific certainty, news articles, and a convinced logic (DTN, 2021).

To contribute to the culture of climate change acceptance, **research suggests articles should continue to be framed in scientific certainty** (Arbuckle et al., 2015).

Budding discipline research indicates that **farmers are more likely to adopt climate-smart practices when messages forgo mentioning climate change**, thus bypassing their skepticism, and instead highlight economic benefits, improvement in soil quality, and other benefits of adaptation and mitigation practices (Davidson et al., 2019). This technique was employed in many of the sample articles, as seen in the inclusion of economic benefits of practices like **carbon sequestration** and other benefits of **no-till** and **cover cropping** as solutions.

I recommend **additional content analysis research** on modern and historic coverage of climate change in other influential agricultural publications. Other research should investigate **how messages that focus less on convincing producers of climate change and more on the benefits of climate-smart agricultural practices influence producer perception and behavior.**

## References

- Arbuckle, J. G., Morton, L. W., & Hobbs, J. (2015). Understanding farmer perspectives on climate change adaptation and mitigation: The roles of trust in sources of climate information, climate change beliefs, and perceived risk. *Environment and Behavior, 47*(2), 205–234. <https://doi.org/10.1177/0013916513503832>
- Davidson, D. J., Rollins, C., Lefsrud, L., Anders, S., & Hamann, A. (2019). Just don't call it climate change: climate-skeptic farmer adoption of climate-mitigative practices. *Environmental Research Letters, 14*(3), 034015. <https://doi.org/10.1088/1748-9326/aafa30>
- DTN. (2021). *About progressive farmer*. DTN: Progressive Farmer. <https://www.dtnpf.com/agriculture/web/ag/home>
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Cambridge, Mass: Harvard University Press.
- IPCC. (2019). *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. <https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/>
- Morrison, M., Hine, D. W., & D'Alessandro, S. (2017). Communicating about climate change with farmers. *Oxford Research Encyclopedia of Climate Science*. <https://doi.org/10.1093/acrefore/9780190228620.013.415>
- SIIA Connectiv. (2018). *Agri Media Council Media Channel Study*. SIIA Connectiv. <https://history.sii.net/Divisions/Connectiv-Business-Information-Association/Resources/Publications>
- Smithfield Foods Inc. (2020). *Smithfield foods to become carbon negative by 2030*. PR News Wire. <https://www.prnewswire.com/news-releases/smithfield-foods-to-become-carbon-negative-by-2030-301124087.html>
- Thornton, P., Dinesh, D., Cramer, L., Loboguerrero, A. M., & Campbell, B. (2018). Agriculture in a changing climate: Keeping our cool in the face of the hothouse. *Outlook on Agriculture, 47*(4), 283–290. <https://doi.org/10.1177/0030727018815332>