

OMG! It's FMD!

Monitoring Twitter Conversations About Foot-and-Mouth Disease

Introduction

- When foot-and-mouth disease (FMD) was detected in Indonesia in early May 2022, the Australian government and agricultural industry went on high alert for the possible incursion of this contagious viral disease (DAFF, 2022).
- Although non-threatening to humans, the presence of FMD in Australia could cause catastrophic losses to livestock numbers and an estimated AUD\$80-billion-dollar cost to the economy (Australian Bureau of Agricultural and Resource Economics and Sciences, 2022).
- Twitter provides a platform for discussion and scientific communications about agricultural issues such as FMD.

Foot-and-mouth disease detected in Indonesia; Australian livestock sector on alert

ABC Rural | By Stephanie Sinclair and John Hetherington
Posted Fri 6 May 2022 at 3:17am, updated Fri 6 May 2022 at 4:02am



How a dirty flip-flop could cause catastrophe in Australia

By Hilary Wetteman, CNN
Published 5:24 PM EDT, Thu July 7, 2022

Foot-and-mouth disease Australia: what is FMD and what happens if it enters the country?

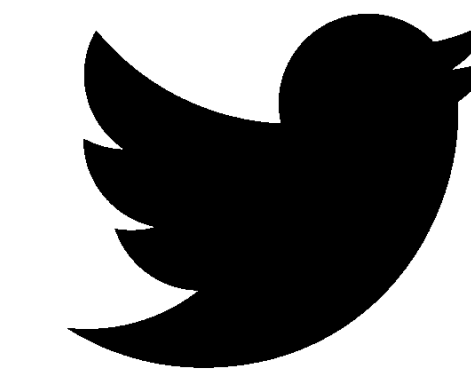
- FMD could force animal slaughters, cripple livestock industries and cost the country \$80bn. Here's what you need to know
- Full Story podcast: Foot-and-mouth - the livestock virus brewing at Australia's borders
- Sign up for the Rural Network email newsletter
- Join the Rural Network group on Facebook to be part of the community



Cattle feeding in far north Queensland. There are concerns that foot-and-mouth disease is close to Australia's border following an FMD outbreak in Indonesia. Photograph: Dave Hunt/AAP

Purpose & Research Objectives

- Purpose:** To explore Twitter content about this issue to identify message sentiment and key influencers.
- Objectives:**
- To determine the percent of positive, negative, and neutral sentiment of Twitter posts regarding this topic
 - To identify the top Twitter accounts posting content about this topic



Conclusions & Implications

- The use of Meltwater for data collection and analysis is a limitation; however, the data demonstrated how the potential of an FMD outbreak in Australia led to news coverage around the world.
- The posts were predominantly neutral or negative in sentiment, which is to be expected with this type of topic.
- The top 10 Twitter accounts based on reach and number of potential viewers were all media outlets indicating attention was given to reporting the potential of an FMD incursion.
- Within the two-step flow model, information from the mass media is shared through opinion leaders to their followers, even on social media (Choi, 2014).
- The involvement of media outlets with large reach demonstrated the messages about FMD were being shared to a wide audience, which demonstrates communication effectiveness.

Methods

Social Media Search Parameters

- Used Meltwater, a social media monitoring platform
- Data collection timeframe: May 1-August 31, 2022
- Content type: Twitter posts in English
- Contained at least one of the following keywords: "foot-and-mouth disease," "foot and mouth disease," or "#FMD"
- Excluded posts with these keywords: "hand, foot and mouth disease" or "hand foot and mouth disease"

29,455 tweets
Analyzed via Meltwater widgets

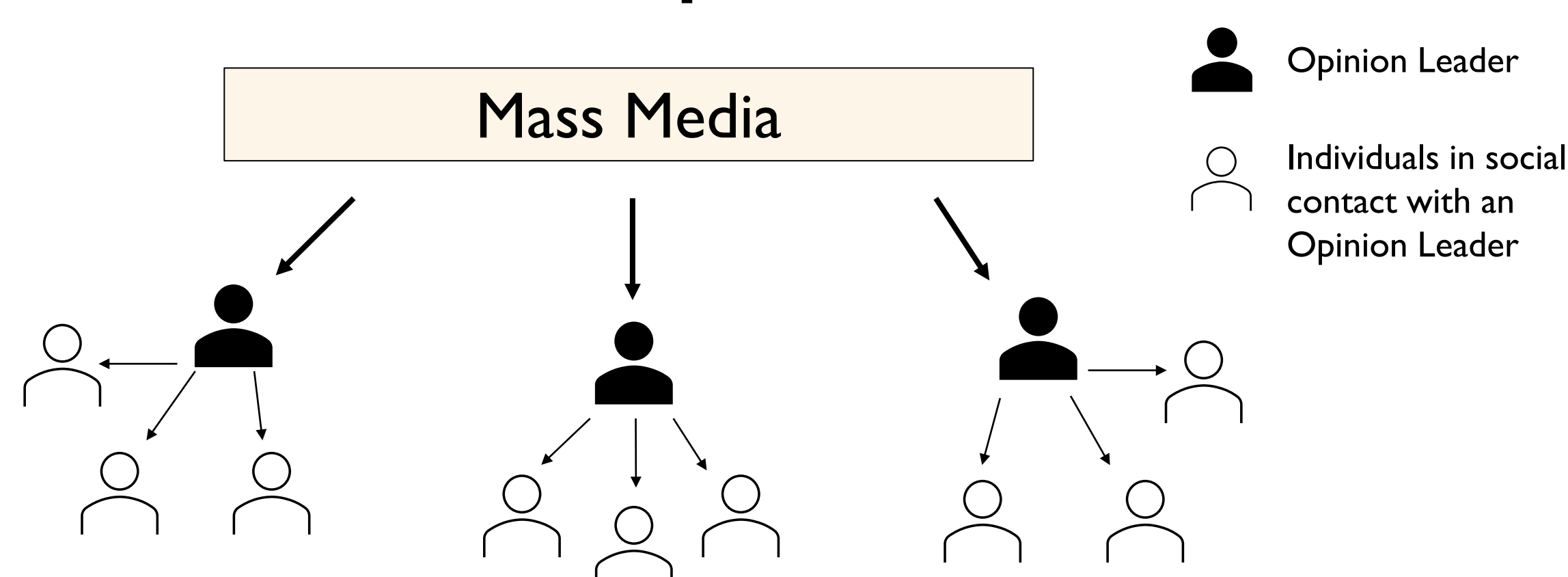
Recommendations

- Creating crisis communications strategies and tactics that leverage social media platforms, such as Twitter, will help increase awareness around FMD and create a sense of ownership to help stop an incursion.
- Additional research should explore how opinion leaders communicated about this issue through traditional media outlets, personal social media accounts, and organizational efforts.

Conceptual Framework

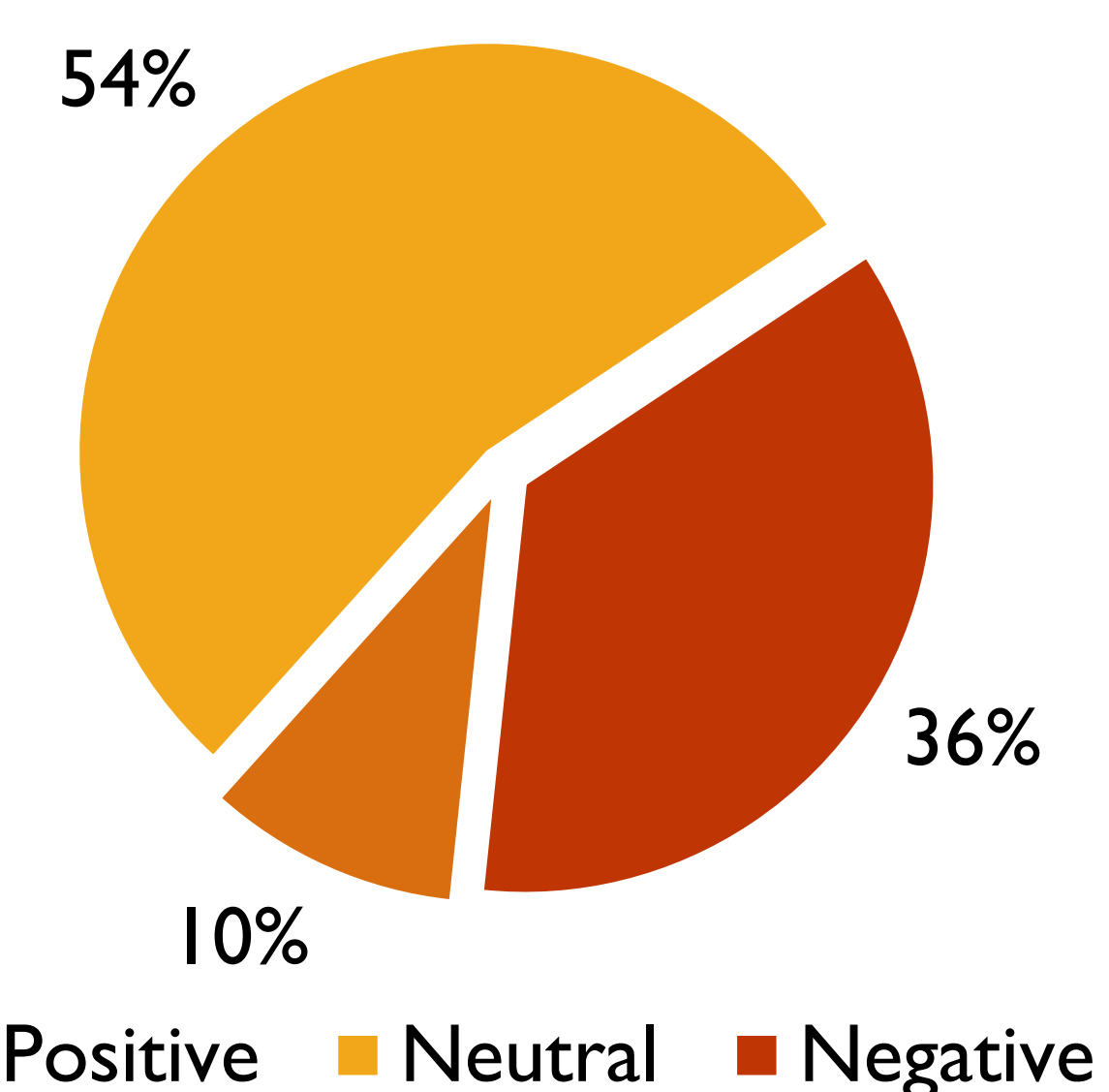
- When the two-step flow of communication (Katz & Lazarsfeld, 1955) is applied to Twitter-based conversations, opinion leaders provide an intermediary step between content creators and the public (Choi, 2014).
- Twitter content allows conversations and engagement among these stakeholder groups that can be analyzed to determine communication effectiveness, metrics, and sentiment (Specht & Buck, 2019).

Two-Step Flow Model



Findings

Tweet Sentiment



Top 10 Twitter Accounts Based on Potential Reach

Twitter Account	Number of Tweets	Sum of Potential Reach
CNN	1	58.8 million
Reuters	3	25.4 million
Fox News	1	22.2 million
ABC News (U.S.)	1	17.6 million
Associated Press	2	15.9 million
CNN International	1	13.9 million
Guardian	3	10.6 million
Bloomberg	9	8.6 million
Hindustan Times	3	8.6 million
Al Jazeera English	2	8.0 million

References

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