

# Will They Answer the Phone If They Know It's Us? Using Caller ID to Improve Response Rates

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National Agricultural Statistics Service



“ . . . providing timely, accurate, and useful statistics in service to U.S. agriculture.”





# About NASS

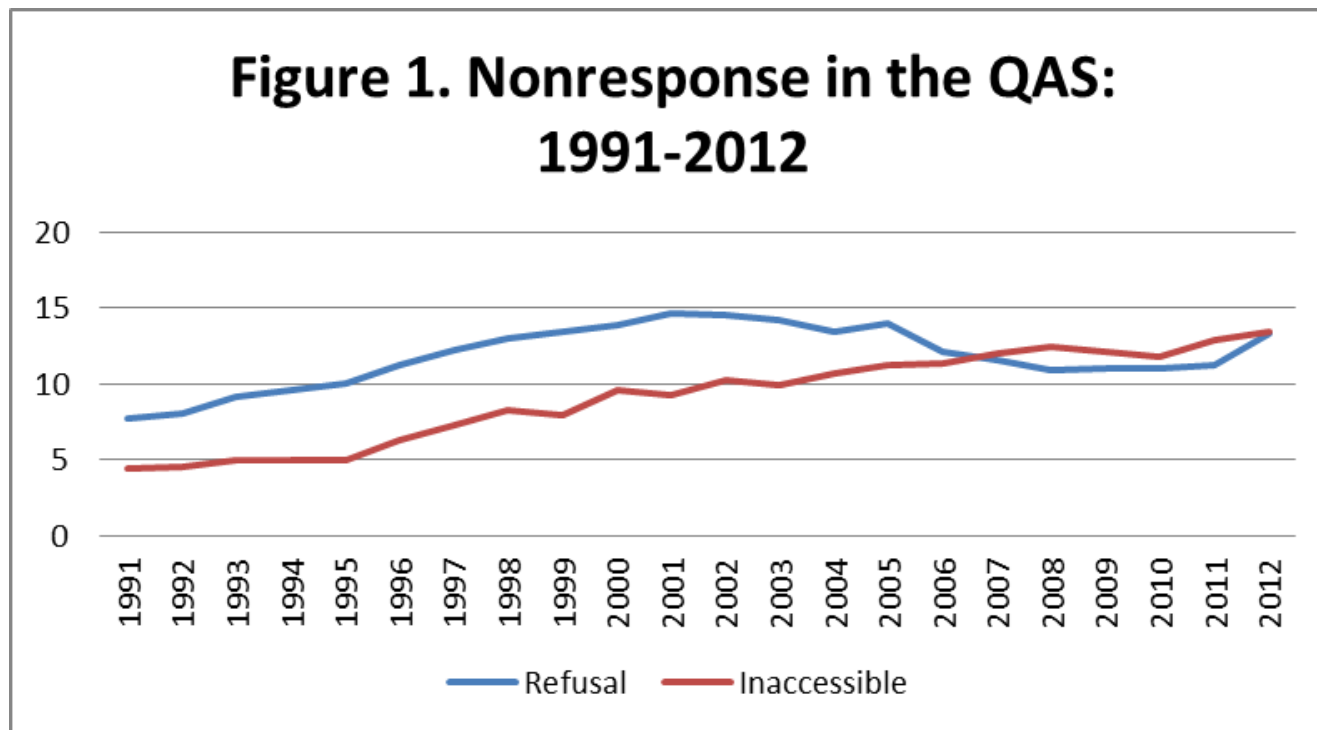
- Collects data from farm & ranch operators on farm production, yields, economics, crop practices, etc.
- Conducts over 400 surveys per year
- Farm & ranch operations are establishments, but many are also households
- Contact the same operations year after year (particularly large operations or those that produce specialty commodities)



# Study Motivation

- Survey response rates have been declining over the last two decades
- Nonresponse = refusals, inaccessibles

# Quarterly Agriculture Survey Nonresponse





# Reasons for Rising NR

- Overburden of respondents
- Call screening technologies
- Rise in cell phone only households
- Changes in social climate
- Attitudes toward privacy & confidentiality
- Agency reorganization (NASS)



# Caller ID and Nonresponse

- Anecdotal evidence at NASS
  - MT field office
  - WY field office
- Research at other organizations has produced mixed findings
  - U of SC
  - Census Bureau
  - NORC
  - Gallup



# Current Study

## Research Questions:

- 1) Are respondents more likely to answer the phone if we contact them using an in-state telephone number?
- 2) Are respondents more likely to participate in a survey if we contact them using an in-state telephone number?

## Method:

- Two experiments on the Sept. and Dec. Quarterly Agriculture Survey

# Quarterly Agriculture Survey (QAS)

- Provides detailed estimates of crop acreage, yields and production, and quantities of grain and oilseeds stored on farms.
- Conducted every quarter in March, June, Sept and Dec in all states
- Targeted sample per quarter ranges from 65k-81k
- More than 75% of data collected over phone





# Experiment 1

- NE September QAS Sample (N=1,452)

Conditions	Area Code	Identifier
Control	MO	Ag Counts
Experiment	NE	Ag Counts

- Twelve enumerators were randomly selected to conduct the experiment.
- Disclosure statement

# Exp 1: Call Attempts

**Table 1. Attempts Leading to an Answer by Area Code For Nebraska September Ag Survey (N=2,884)**

	Area Code			
	Out of State (MO)		In State (NE)	
	Count	Percent	Count	Percent
Answer <sup>1</sup>	631	46.50	676	44.27
No Answer <sup>2</sup>	726	53.50	851	55.73
Total	1357	100	1527	100

<sup>1</sup>Answer = a call that yields an interview (partial or complete), a disconnect, or an appointment

<sup>2</sup>No Answer = a call that yields a no answer, busy signal, or answering machine

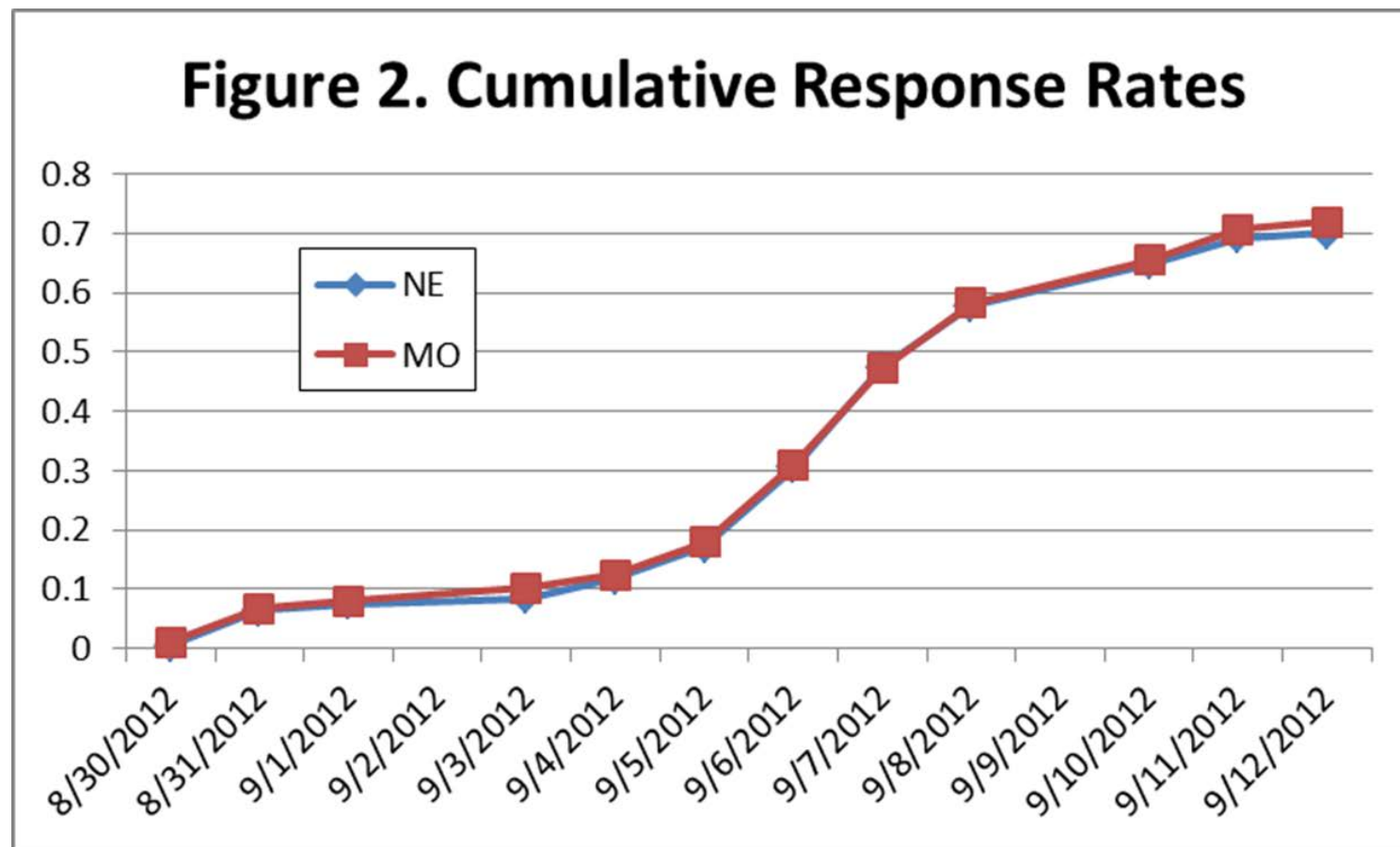
# Exp 1: Response Outcomes

**Table 2. Response Outcome<sup>1</sup> by Area Code For Nebraska September Ag Survey (N=810)**

	Area Code			
	Out of State (MO)		In State (NE)	
	Count	Percent	Count	Percent
Interview	277	70.66	287	68.66
Refusal	108	27.55	123	29.43
Inaccessible	7	1.79	8	1.91
Total	392	100	418	100

<sup>1</sup>Based on completion code 9901

# Exp 1. Cumulative Response Rates





# Exp. 1 Conclusions & Limitations

- No improvement in answered calls or response rates when using in-state area codes

## Limitations:

- Don't know if respondents screen calls
- Couldn't track what appears on caller ID
- Couldn't tracking calling mode



# Experiment 2

- MN & OH December QAS Sample (N=3,148)

	Area Code	Identifier
<b>Control</b>	MO	Ag Counts
<b>Condition 1</b>	MN/OH	Ag Counts
<b>Condition 2</b>	MN/OH	USDA

- 52 enumerators randomly assigned to conduct exp.
- Mode indicator in Blaise
- Disclosure statement
- Surveyed respondents on caller ID use

# Exp 2: Call Attempts

**Table 3. Attempts Leading to an Answer by Area Code for Minnesota and Ohio December Ag Survey (N=5,805)<sup>1</sup>**

	Area Code			
	Out of State (MO)		In State (MN/OH)	
	Count	Percent	Count	Percent
Answer <sup>2</sup>	1174	32.14	827	38.43
No Answer <sup>3</sup>	2479	67.86	1325	61.57
Total	3653	100	2152	100

<sup>1</sup>Table information derived from the dial menu information

<sup>2</sup>Answer = a call that yields an interview (partial or complete), a disconnect, or an appointment

<sup>3</sup>No Answer = a call that yields a no answer, busy signal, or answering machine

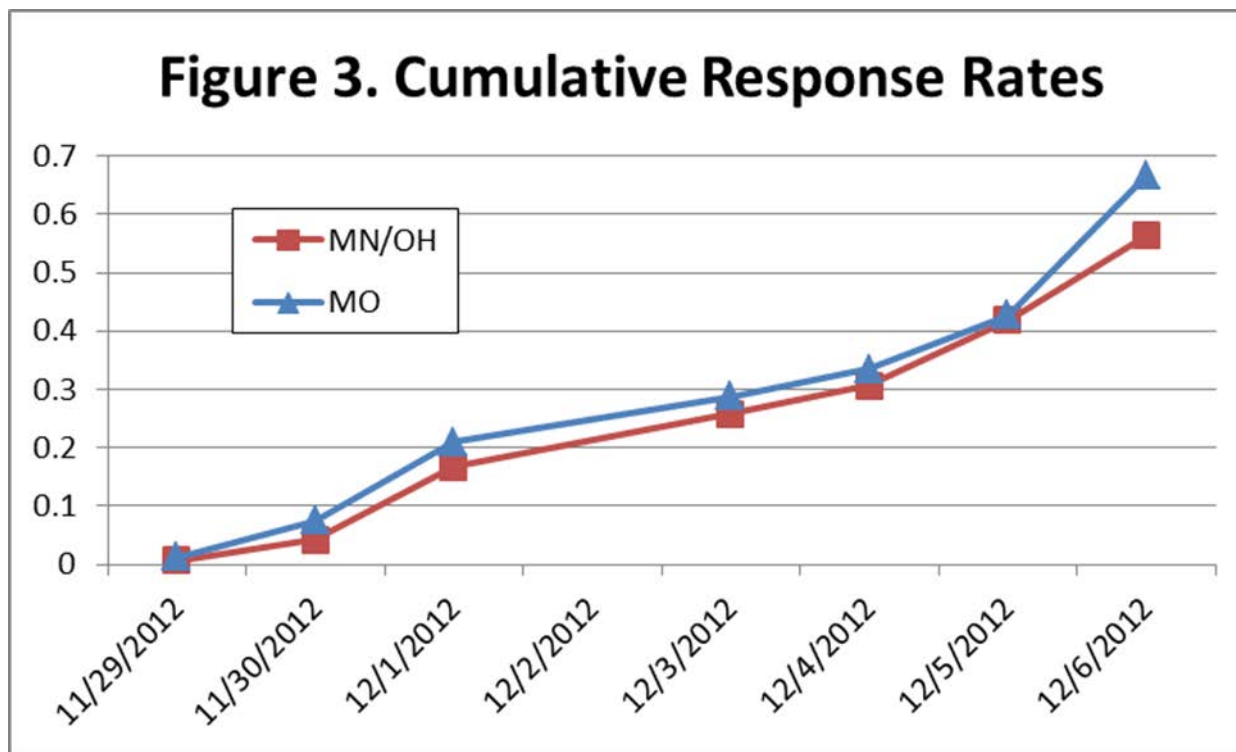
# Exp 2: Response Outcomes

**Table 4. Response Outcome<sup>1</sup> by Area Code for Minnesota and Ohio December Ag Survey (N=1937)**

	Area Code			
	Out of State (MO)		In State (MN/OH)	
	Count	Percent	Count	Percent
Interview	868	66.56	357	56.40
Refusal	436	33.44	276	43.60
Total	1304	100	633	100



# Exp 2: Cumulative Response Rates





# Caller ID Survey Questions

- 1,005 respondents answered the survey question on caller ID
- 55% of these respondents had caller ID
  - Of those 57% looked at caller ID before answering (N=313)

# Information Reported on Caller ID

**Table 5. Distribution of Information Reported on Respondents' Caller ID (N=226)**

	Area Code	
	Out-of-State (MO)	In-State (MN/OH)
MO number	44	8
MN/OH number	14	45
"Ag Counts"	22	0
"USDA"	2	3
"Ag Counts" & MO number	16	2
"Ag Counts" & MN/OH number	9	2
"USDA" & MO number	2	1
Unavailable number	7	0
Unknown cell phone caller	10	4
Out of area number	10	0
Other	12	10
Refused/Don't know	2	1
Total	150	76

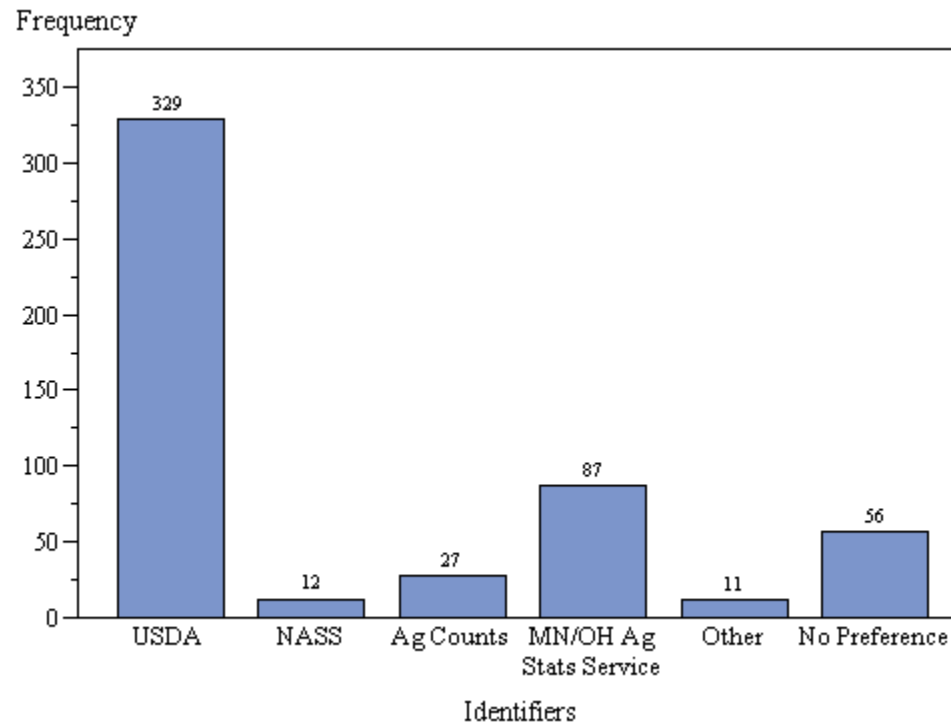
Note: No respondents reported seeing USDA & MN/OH number on caller ID.

# Influence of Caller ID

**Table 6. Information Displayed on Caller ID and Willingness to Answer**

	More Hesitant	More Willing	No Influence	Number
Overall	44 20.37%	62 28.70%	109 50.93%	215
<b>Specific Display</b>				
MO Number	7 14.29%	7 14.29%	35 71.43%	49
MN/OH Number	6 10.34%	19 32.76%	33 56.90%	58
Ag Counts	9 19.15%	22 46.81%	16 34.04%	47
USDA	0 0.00%	6 66.67%	3 33.33%	9
Listing Unknown	13 41.94%	6 19.35%	12 38.71%	31
Other	9 42.86%	2 9.52%	10 47.62%	21

# Identifiers Preferred by Respondents





# Exp 2: Conclusions

- Small improvement in answered calls
- No improvement in response rates
- Many respondents did not have caller ID or did not look at before answering
- Overall, costs outweigh benefits

## Limitations:

- Condition assignment not always adhered to
- Information not displaying on caller ID



# Logistical Challenges to Manipulating Caller ID

- Selecting area codes
- Limited to cell phones
- Caller ID directories/controlling what appeared on caller ID
- Disclosure statement
- Tracking calling modes



# Discussion/Implications

- Small improvement in answered calls
- Inclined to answer calls from in-state area codes and USDA
- No improvement in response rates
- Very few respondents utilize caller ID
- Inconsistencies in caller ID displays
- Not a cost-effective way to improve response rates



# Questions...

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Thank you!

