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Perception of Trust in Sources of Information on Agriculture and Food Issues

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Starting in 1996, the Colorado Department of Agriculture identified the need to better understand how: a) the citizens of Colorado viewed the agricultural industry as a whole; b) the public perceives emerging policies meant to support or influence the role of agriculture in Colorado; and c) the Department's own programs were valued. In 2016, as they have every five years since 1996, they partnered with Colorado State University to frame a survey that would evaluate the public's attitudes about a variety of issues.

A final report of all results was developed. In addition, a set of shorter, focused reports on key topics is also available. This report focuses on how a respondent's history and depth of experience in agriculture may influence their opinions on several key issues.

This overview of Colorado Attitudes about Food and Agriculture has a few key findings.

- 1) There is broad-based agreement that agriculture is an important part of Colorado's economy, and its quality of life and serves the state well in providing safe food at a reasonable cost.
- 2) There are some minor differences in the strength of support and confidence between those who live or were raised on a farm and those without such background.
- 3) Agricultural production practices are generally believed to be usually necessary to feed the population and safe; however, this is one area where there is some level of disagreement among our citizens, particularly related to GMOs.
- 4) There appears to be a role for Colorado Department of Agriculture programs, information relayed through labels, produce calendars and contacts at food retail sites, and agritourism, so perhaps those educational options can be better coordinated in the future.

A Summary of Respondent Characteristics and their Background in Agriculture

Colorado State University contracted with TNS (www.tns-us.com) to disseminate an online survey in August-September of 2016 to 1000 Colorado residents. The respondents were a representative sample of Colorado's demographics in almost every respect. The survey instrument (see Appendix of the full report) contains multiple choice and open-ended questions. The average length of residence among respondents was just under 16 years, down from over 20 years in the 2011 survey. The average respondent was just below 50 years in age and the respondents were 42% male and 58% female. The median income for this survey was between \$50,000 and \$75,000, which is consistent with the state's median income.

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In order to understand respondent's relationship to agriculture, (Figure 1) the first question on the survey consisted of three parts: a) Do you currently live or work on a farm or ranch? b) Have you ever lived or worked on a farm or ranch? c) Does your household raise any of its own food products?

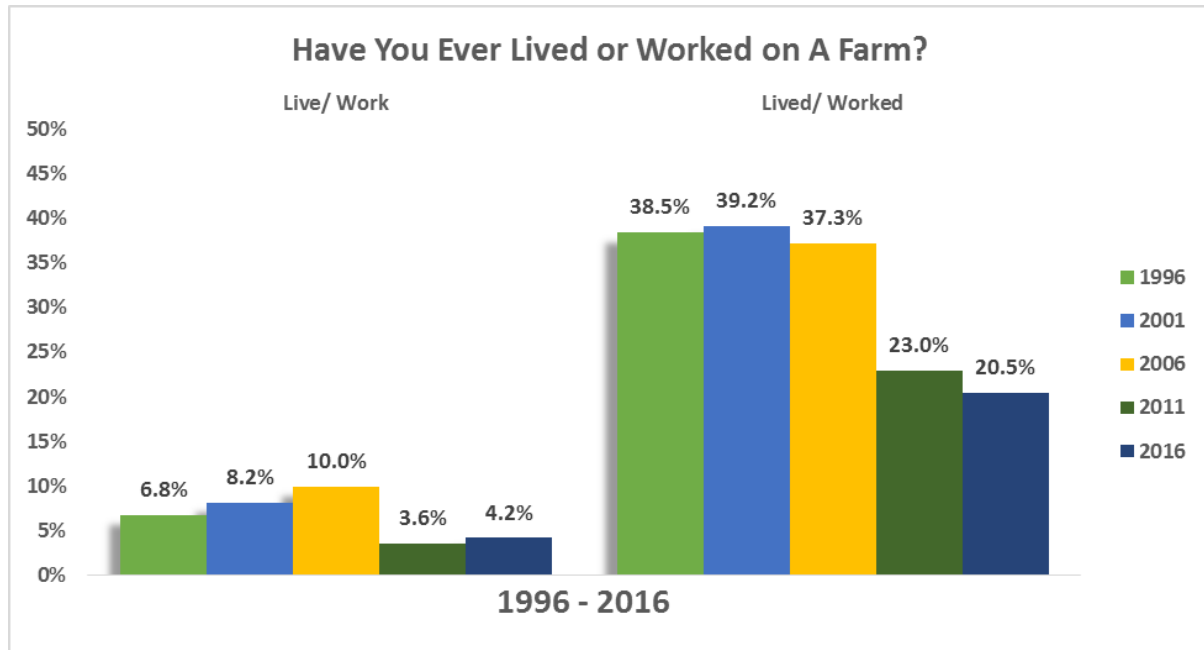


Figure 1

Only about one fifth of all respondents (20.5%) reported having lived or worked on a farm at some point in their lives, a number that is significantly lower than 1996 (38.5%), 2001 (39.2%) and 2006 (37.3%). Less than 5% currently live or work on a farm or ranch, down substantially from early surveys, but up slightly from 2011 (3.6%). No criteria were given to respondents as to what constituted living or working on a farm or ranch and sampling design for each survey was slightly different (the 2011 and 2016 surveys were conducted online as compared to by phone or mail in the earlier surveys of 2006, 2001, and 1996), so changes in results should be interpreted carefully.

For the first time in 2016, we asked respondents about food they grow/raise there is a perception that households are increasingly interested in producing some of their own food (Figure 2). More than one-third

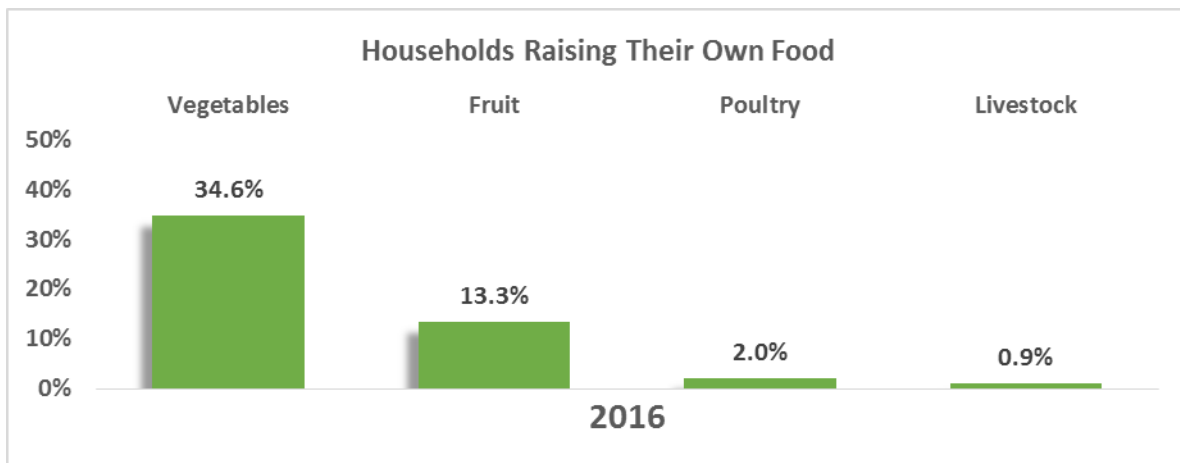


Figure 2

Likely Sources of Information to be Trusted on Agricultural Issues

Colorado consumers have been asked about what sources of agricultural information they trust since the 1996 iteration of the study. The findings from this question have helped guide differing public entities develop strategies and policy for communicating with consumers. The question was slightly altered in 2011 and again in 2016 to include additional sources of agricultural information.

Almost half of all (40%) of respondents indicated that university and research organizations were likely to trust as sources of information on agriculture, followed by the Colorado Department of Agriculture (35%), the United States Department of Agriculture (28%) and farmers and ranchers (27%). The food industry (only 5% cited as most trustworthy), news reports (4%) and social media (2%) to garner less trust from respondents. Figure 3 displays the information graphically.

Respondents Ratings for Likely to Trust as Sources of Information about Agriculture

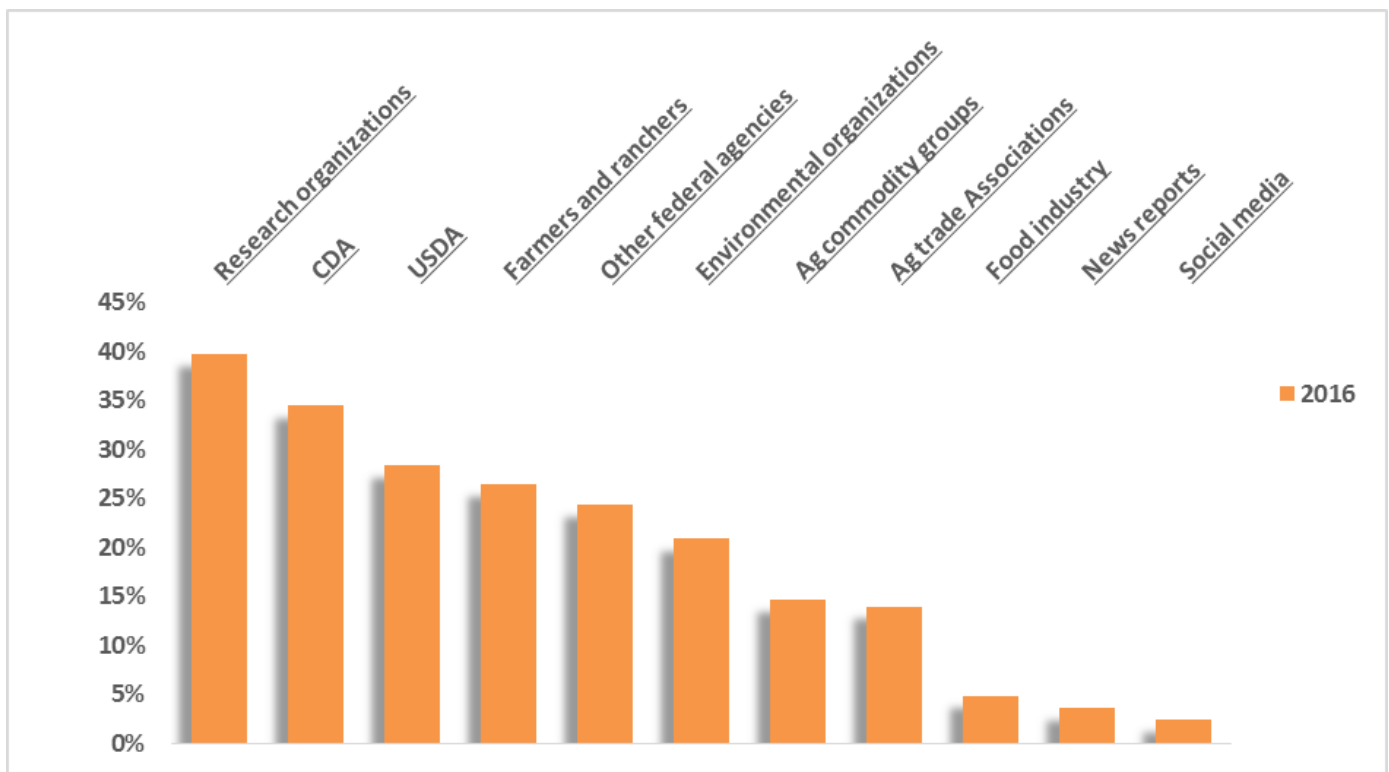


Figure 3

When comparing the results for 2011 and 2016, there were a variety of shifts: university and resource organizations as well as farmers and ranchers dropped the most (5% and 10% respectively) as likely sources of information to trust about agriculture. However, despite the drop these two sources of agricultural information remain quite high on the list overall. The greatest increase in trust was environmental organizations at 6% (see Table 1).

Table 1 - Comparing 2011 & 2016 Scores for Likely to Trust Sources of Agricultural Information

	University and Research Organizations	CDA	USDA	Other Federal Agencies	Farmers and Ranchers	Environmental Organizations
2011	45%	38%	25%	20%	37%	15%
2016	40%	35%	28%	24%	27%	21%
	Ag Commodity Groups	Ag Trade Associations	Food Industry	News Reports	Social media	
2011	Not Asked	Not Asked	5%	4%	3%	
2016	15%	14%	5%	4%	2%	

The same question has been asked since 1996, though the number of source options for respondents to choose from have increased over the years (and they can choose more than one). There are two interesting things to note from these findings. First, the most trusted sources of information percentages for farmers and ranchers have fluctuated greatly through the years. Second, most trusted sources of information for governmental agencies (presuming this included CDA and USDA from 1996-2011) have increased since 1996. For historical reference, Figure 4 highlights the findings for 1996-2011.

Likely to Trust Sources of Agricultural Information from 1996-2011

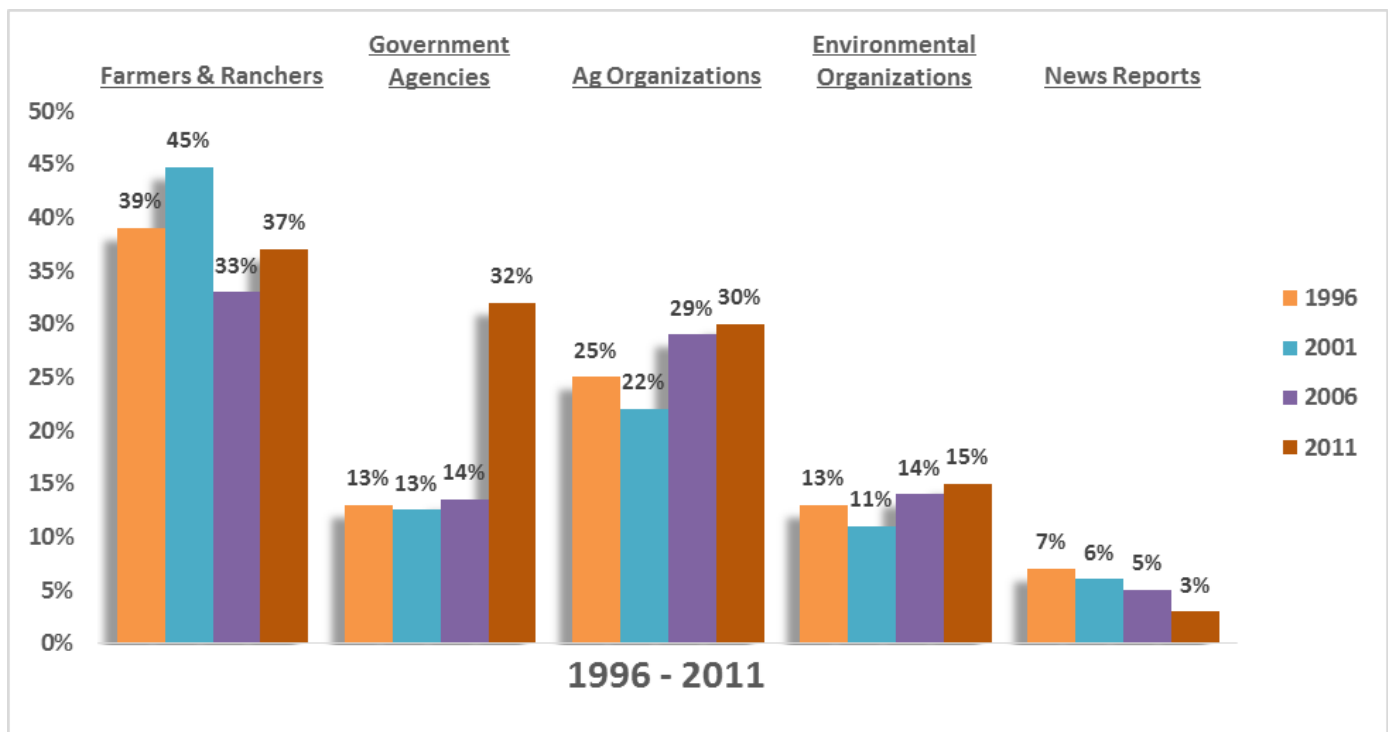


Figure 4

Coloradans were asked if they believed that farmers and ranchers treat their animals humanely. They reported:

- 14% Strongly believe that the animals are treated humanely
- 41% Moderately believe that the animals are treated humanely
- 19% Slightly believe that the animals are treated humanely
- 8% Don't believe that the animals are treated humanely
- 18% Don't know if animals are treated humanely

Comparing the levels of trust for information on agricultural issues with production practices produces interesting insights. Considering that beliefs about production practices can be benchmarks for defining the values of differing agricultural groups, understanding which sources of information can reach these differing segments of the population can be powerful. The trust scores for sources of agricultural information remained greatest (i.e., lower scores) for those who believe that animals are being treated humanely. For example, Coloradans who strongly believe that animals are treated humanely rated farmers and ranchers as somewhat likely to trust as a source of agricultural information. Those who don't believe that animals are being treated humanely reported lower levels of trust (i.e., higher scores). For example, Coloradans who don't believe that animals are treated humanely rated farmers and ranchers as somewhat likely to trust as a source of agricultural information. In other words, they don't trust the information and don't believe animals are being treated humanely. For one source of agricultural information, however, this trend was reversed. Those who don't believe animals are being treated humanely show a greater level

Table 2 - Analyzing Respondents Likely Sources of Information to Trust on Agricultural Issues and their Beliefs on Farmers and Ranchers Treating their Animals Humanely

	University & Research Orgs	CDA	USDA	Other Federal Agencies	Farmers & Ranchers	Env. Orgs.
Strongly Believe (14%)	1.7	1.6	1.8	2.0	1.6	2.5
Moderately Believe (41%)	1.7	1.7	1.9	2.1	1.9	2.3
Slightly Believe (19%)	1.8	1.9	2.1	2.1	2.1	2.2
Don't Believe (8%)	1.9	2.1	2.2	2.2	2.3	2.2
	Ag Comm. Groups	Ag Trade Associations	Food Industry	News Reports	Social media	
Strongly Believe (14%)	1.8	1.9	2.3	2.8	3.4	
Moderately Believe (41%)	2.1	2.2	2.5	2.7	3.2	
Slightly Believe (19%)	2.3	2.3	2.8	2.8	3.3	
Don't Believe (8%)	2.9	2.9	3.3	2.9	3.5	

* 1=very likely to trust; 2=somewhat likely to trust; 3=not likely to trust; 4=not at all likely to trust

Examining Coloradans Perception of Trust in Sources of Information

of trust in environmental organizations than those who strongly believe animals are being treated humanely (see Table 2). This finding highlights the importance of targeting the message and working with different messengers in outreach campaigns.

Most Likely Source of Information to be Trusted on Food Quality, Nutrition, and Safety Issues

Starting in 2011, Coloradans were asked about sources of information they trust regarding food nutrition, quality, and safety issues. This question examines the other end of the supply chain, the food on their table. The only difference between the 2011 and 2016 question was the addition of two more sources of information: agricultural commodity groups and agricultural trade organizations.

The respondents reported that Universities and research organizations are still the most trusted (36%), followed by the Colorado Department of Agriculture (30%) and the USDA (26%), but farmers and ranchers dropped somewhat. Again, the food industry, news reports and social media ranked very low. Figure 5 graphically displays the responses for this question.

Ratings for Likely to Trust as a Source of Information about Food Nutrition, Quality, and Safety

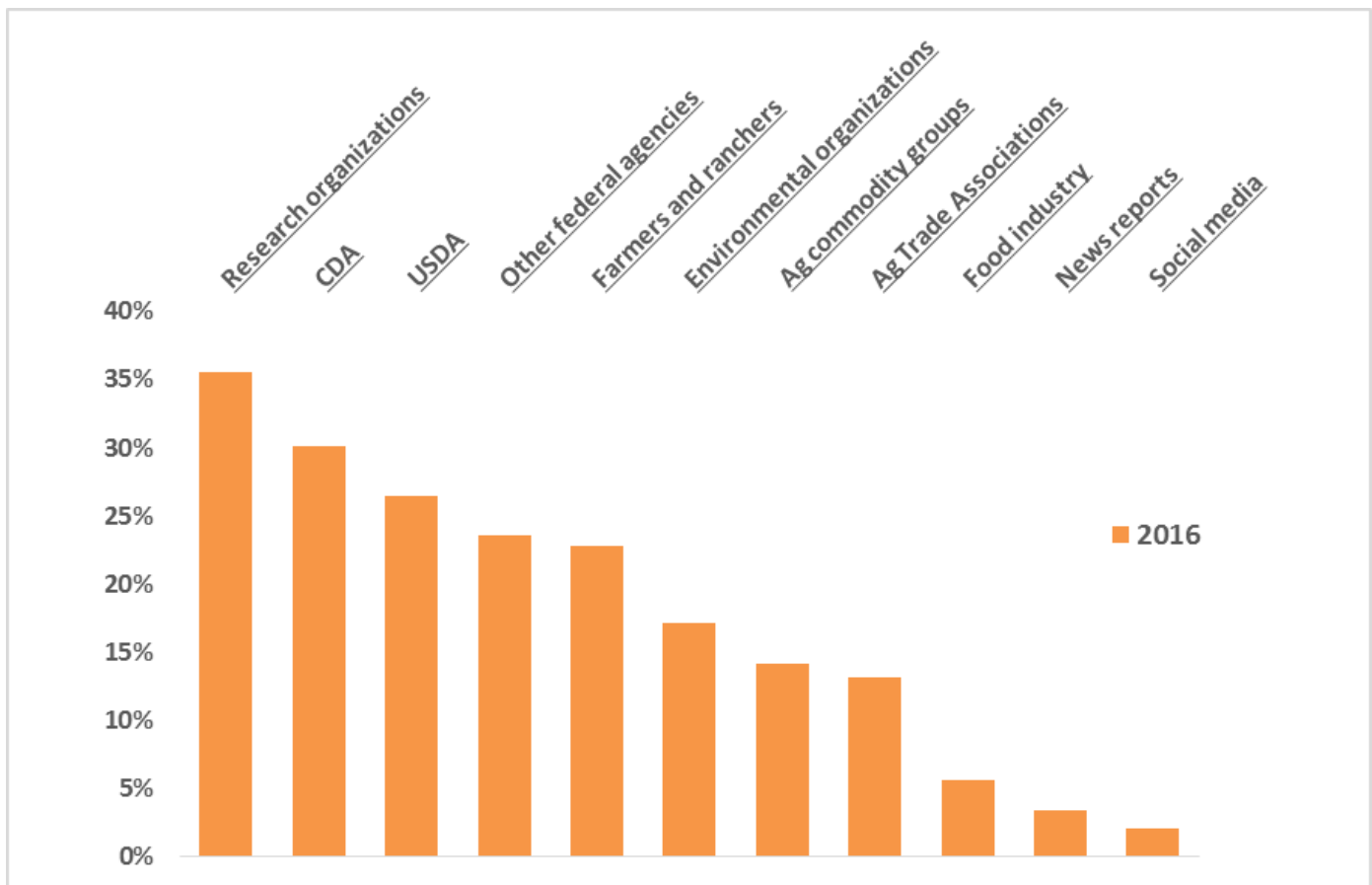


Figure 5

The question about trust in information on food quality, nutrition, and safety issues was asked only once before in 2011. Generally, the findings remained constant, though there was an increase in trust for other federal agencies and environmental organizations and decrease in trust for farmers and ranchers. Table 3 compares the share of respondents from 2011 and 2016 who noted each of these sources as trusted.

Examining Coloradans Perception of Trust in Sources of Information

Table 3 - Comparing 2011 & 2016 Scores for Likely to Trust Sources of Food Nutrition, Quality, and Safety Information

	University and Research Organizations	CDA	USDA	Other Federal Agencies	Farmers and Ranchers	Environmental Organizations
2011	35%	32%	24%	15%	30%	10%
2016	36%	30%	26%	24%	23%	17%
	Ag Commodity Groups	Ag Trade Associations	Food Industry	News Reports	Social media	
2011	Not Asked	Not Asked	6%	6%	2%	
2016	14%	13%	6%	3%	2%	

We also compared responses regarding level of trust with Coloradans' opinion of agricultural practices. This analysis shows a trend similar to the results in Table 2. This type of analysis is informative if you are trying to differentiate your outreach strategies to groups of people with wide-ranging beliefs on agricultural practices. The results from this analysis revealed similar trends to the trust in agricultural issue question (see Table 2). Coloradans were asked how necessary do you think it is to use fertilizers and pesticides in order to produce enough food for people. Results show:

- 7% Almost always necessary
- 27% Usually necessary
- 43% Sometimes necessary
- 17% Almost never necessary
- 6% Don't know

Looking at the levels of trust for information on food nutrition, quality, and safety issues for these revealed the general trend from the agricultural issues question. The trust scores for sources of information on food quality, nutrition, and safety issues remained greatest (i.e., lower scores) for those who believe that fertilizers and pesticides are necessary to feed people. Those who believe that fertilizers and pesticides are almost never necessary to feed people indicated lower levels of trust (i.e., higher scores). Once again, environmental organizations were the only source of information on food quality, nutrition, and safety issues that was the opposite. For people who believe that fertilizers and pesticides are almost never necessary to feed people, their level of trust for food quality, nutrition, and safety information from environmental organizations was greater than those who almost always believed that fertilizers and pesticides are necessary (see Table 4). This general trend was consistent for all questions centered on production practices. The implications of this finding for outreach and marketing initiatives is the need to strategically think about the outlet of the message in order to impact the largest audience possible.

Table 4 - Analyzing Respondents Likely Sources of Information to Trust on Food Nutrition, Quality, and Safety Issues and their Beliefs on the Necessity of Fertilizers and Pesticides in order to Produce enough Food for People

	University & Research Orgs	CDA	USDA	Other Federal Agencies	Farmers & Ranchers	Env. Orgs.
Almost always Necessary (7%)	1.8	1.8	2.0	2.2	1.9	2.7
Usually Necessary (27%)	1.8	1.8	2.0	2.1	2.0	2.5
Sometimes Necessary (43%)	1.8	1.9	2.0	2.1	2.1	2.2
Almost never Necessary (17%)	2.0	2.1	2.3	2.5	2.1	2.1
	Ag Comm. Groups	Ag Trade Associations	Food Industry	News Reports	Social media	
Almost always Necessary (7%)	2.1	2.0	2.2	2.9	3.4	
Usually Necessary (27%)	2.2	2.2	2.5	2.8	3.4	
Sometimes Necessary (43%)	2.3	2.3	2.7	2.8	3.4	
Almost never Necessary (17%)	2.4	2.5	3.0	3.0	3.4	

* 1=very likely to trust; 2=somewhat likely to trust; 3=not likely to trust; 4=not at all likely to trust

Comparing Ratings for Trust of Sources in Information on Agriculture and Food Issues

When comparing the respondents’ ratings for trust in sources of information on agricultural issues as well as trust on sources of information on food quality, nutrition, and safety issues the ratings are quite similar. Every source was no more than two-tenths of a rating point between issues on agriculture and food quality, nutrition, and safety issues. For example, respondents reported they were somewhat likely to trust the USDA on information about agricultural issues as well as food quality, nutrition, and safety issues. In comparison, respondents were not likely to trust social media sources of food information for both agricultural issues or food issues. Trust of sources of information on agricultural issues scored slightly higher with every source than trust of sources of information on food quality, nutrition, and safety. Table 5 highlights these findings.

Table 5 - Comparing Ratings for Trust of Sources in Information on Agriculture and Food Issues

	University and Research Organizations	CDA	USDA	Other Federal Agencies	Farmers and Ranchers	
Ag Issues	1.8	1.8	2.0	2.1	2.0	
Food Issues	1.9	2.0	2.1	2.2	2.1	
	Environmental Organizations	Ag Commodity Groups	Ag Trade Associations	Food Industry	News Reports	Social Media
Ag Issues	2.3	2.2	2.3	2.7	2.8	3.3
Food Issues	2.4	2.3	2.4	2.7	2.9	3.4

* 1=very likely to trust; 2=somewhat likely to trust; 3=not likely to trust; 4=not at all likely to trust

Overview

This factsheet presents some important takeaways from the 2016 Coloradan’s Attitudes about Agriculture and Food survey. Colorado consumers have trust in the information from a variety of groups for information on both agriculture and food quality, nutrition, and safety issues. These groups include university and research organizations, Colorado Department of Agriculture, United States Department of Agriculture, and farmers and ranchers. When looking at Coloradan’s opinions on particular agricultural practices, their levels of trust for information generally decreased as their approval for certain agricultural practices decreased. The only exception was the level of trust in information from environmental organizations on both agricultural and food issues from people who did not approve of particular agricultural practices. This might indicate that environmental organizations are appealing to different type of person in regards to their agricultural beliefs. This finding suggests that outreach and market specialists might want to collaborate with a variety of different groups in order to maximize the effectiveness of their message, especially if the message centers on potentially controversial agricultural topic. Trust for information from social media was lowest for both agricultural and food quality, nutrition, and safety issues. Finally, consumers did not indicate a significant difference overall between their trust on agriculture and food quality, nutrition, and safety issues for each source of information.

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