2016

PUBLIC ATTITUDES ABOUT AGRICULTURE IN COLORADO

A Study by the Colorado Department of Agriculture

In Cooperation with the CSU Department of Agricultural and Resource Economics Colorado State University

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ACKNOWLEDGEMENTS

The Colorado Department of Agriculture (CDA) and Colorado State University (CSU) wish to thank the Colorado Fruit and Vegetable Growers Association, Colorado Citizens and all other friends of Colorado agriculture whose support helped make this study possible.

INTRODUCTION

BACKGROUND

This research replicates studies conducted in 1996, 2001, 2006 and 2011 by the Colorado Department of Agriculture partnering with different CSU personnel over the years. In 1996, the Colorado Department of Agriculture and Ag Insights worked with Colorado State University's Human Dimensions in Natural Resources Unit to develop a survey of Colorado residents to determine the public's attitudes towards such issues as food prices, food safety, pesticide use, environmental practices, wildlife and agriculture, animal welfare, land use, population growth and agricultural land preservation, among other things. Subsequent reports have then compared the attitudes of Coloradans towards the above-mentioned issues across the years of 1996, 2001, 2006 and 2011.

The 2016 survey is intended to add another year of data and comparisons built on these same objectives, but it also seeks to explore some new issues, including:

1. Attitudes of Coloradans toward GMOs, chemicals and hormones in their food, with a more detailed exploration of what may be needed to supply global food needs as well as what they felt about the safety of those practices.

2. The household economic activity and motivations of Coloradans pertaining to food and agriculture.

3. Assessing Coloradans' knowledge of agricultural products and CDA programs in the state.

Note that this report explores all of the above subjects for the entire survey sample. However, additional research and synthesis may also be conducted on differences in perceptions among Coloradans that may be based on geographic location, length of residence in-state, or other pertinent characteristics.

METHODS

Colorado State University contracted with TNS (www.tns-us.com) to use a panel of Colorado residents and gather data for the 2016 study using an Internet survey. It should be noted that the survey ran several days longer than anticipated due to low feedback rates in the 18-24 year old male category. Final survey results fell just short of a demographically representative sample in this category due to lack of engagement. The final survey represents perceptions about agriculture in Colorado from 1,000 Colorado residents and was obtained completely online. The survey instrument (Appendix D) contained multiple choice and open-ended questions developed for the 1996 study, as well as questions added in more recent versions in 2006, 2011 and (as noted above) 2016. New questions added to the 2016 survey are designated with asterisks (*) in the questionnaire.

HOW TO READ THIS REPORT

Results from the survey are briefly narrated and displayed in graphic form. Captions in the body of the report reference key topics that have been the focus of the survey historically, or in some cases, added in recent versions to further explore emerging issues or to include topics written-in by past survey respondents.

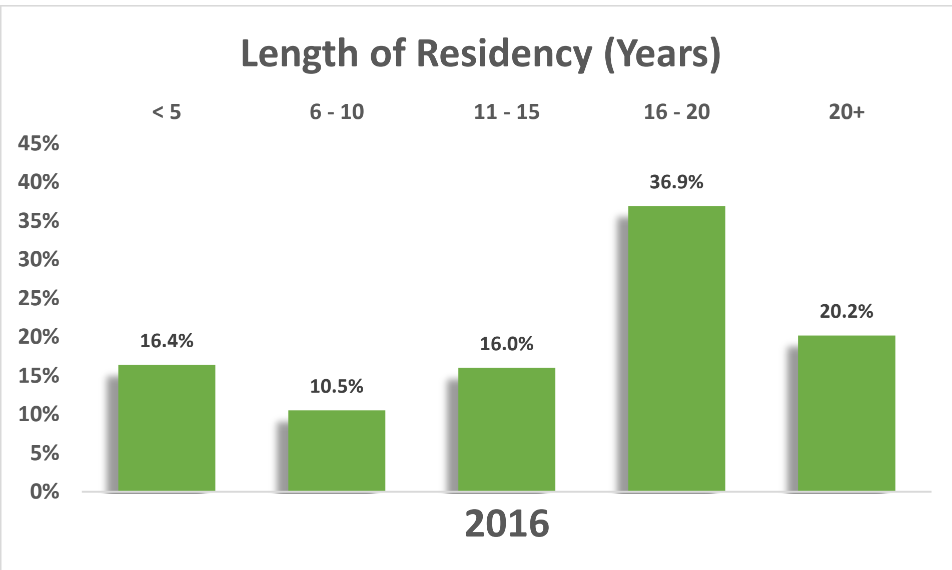
Bar graphs allow the reader to compare results from 2016 with previous studies. Most graphs not only offer a visual representation of survey results but also include the data and statistics for those who want precise response frequencies. In cases where including the graphic would be too visually 'busy' with all relevant numbers, a table of results is also included, allowing the reader to note not only trends, but also the specific patterns. Note also that percentages in some figures may not total 100% due to rounding, or respondents who declined to comment on a particular issue. In other questions, where respondents could choose more than one response, percentages may sum to greater than 100%. The survey instrument and several lists from the questions that resulted in verbatim (write-in) responses are found in the appendices.

RESULTS

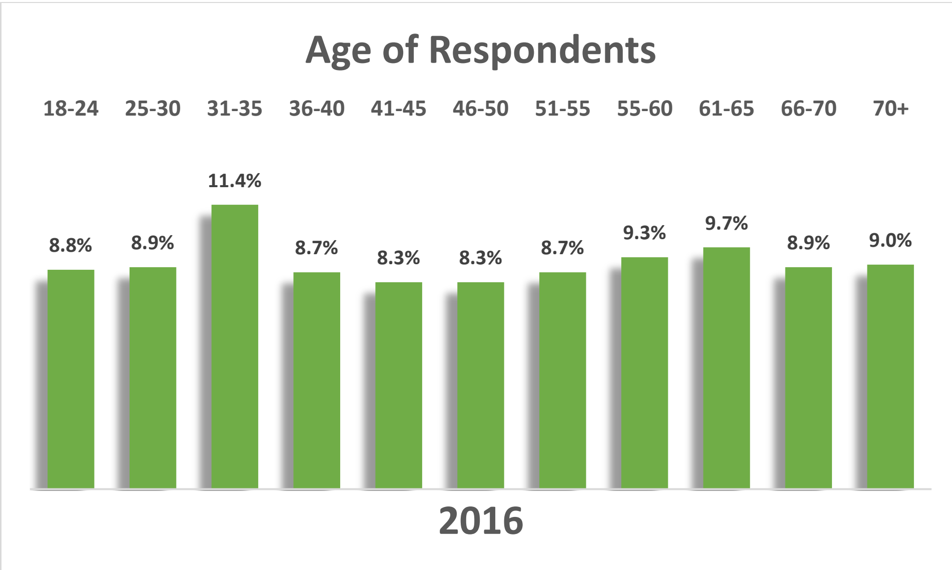
RESPONSE RATE

From August 24 to September 6, 2016, a survey of 1,000 Coloradans was conducted by TNS (a research firm that maintains a panel of potential respondents). The sample was constructed to be balanced with U.S. Census data to reflect a proportion of respondents in our survey whose age, gender, income and race/ethnicity was similar to Colorado's demographic profile for these variables. As stated above, we fell just short of demographic targets for 18-24 year old males due to lack of engagement in surveying activities overall (based on conversations with the market research group's experience in this area).

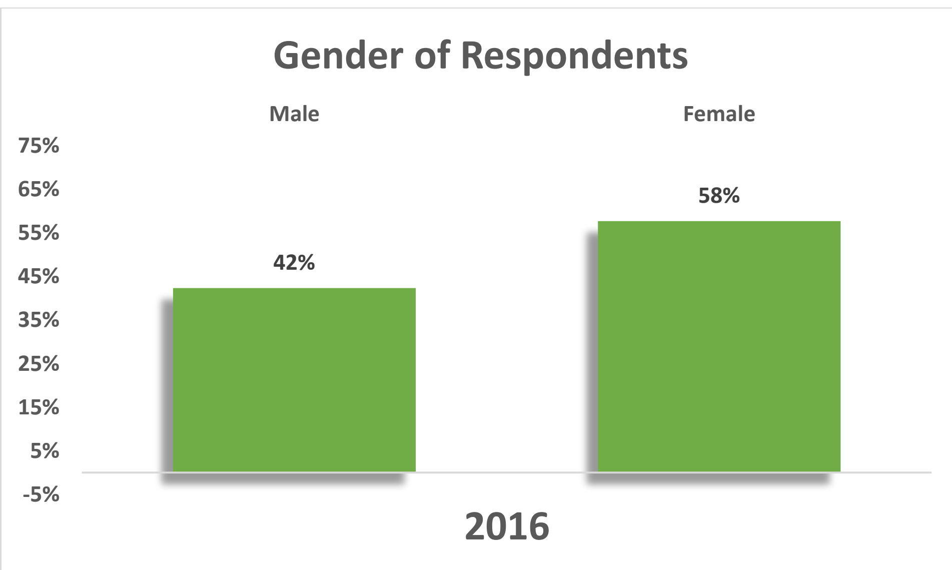
The average length of residence among respondents was just under 16 years, down from over 20 years in the 2011 survey. This is consistent with the fact that Colorado continues to experience an influx of new residents. The distribution of residency length can be seen in the figure below.



The average respondent was just below 50 years in age, which is higher than Colorado's average age of 37 (but consistent given only those 18 and older were eligible to take this survey). Total age distribution is represented in the graph below. It should be noted that females were more likely to respond, but given the focus of the survey on food, and the persistent role women continue to play in food shopping in the US, this is not completely surprising.



Respondents in the sample 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 of $55,000 in 2015. Average household income levels of respondents for 2011 and 2016 are listed below for comparison:

2011

Income Range	Percent
Under $30,000	15.3%
$30,000 - $49,999	20.8%
$50,000 - $74,999	24.8%
$75,000 and Over	39.1%

2016

Income Range	Percent
Under $20,000	8.01%
$20,000 to under $40,000	14.99%
$40,000 to under $50,000	9.03%
$50,000 to under $75,000	22.59%
$75,000 to under $100,000	16.02%
$100,000 to under $125,000	11.70%
$125,000 to under $150,000	6.06%
$150,000 or more	11.60%

Affiliation with Agriculture

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?**

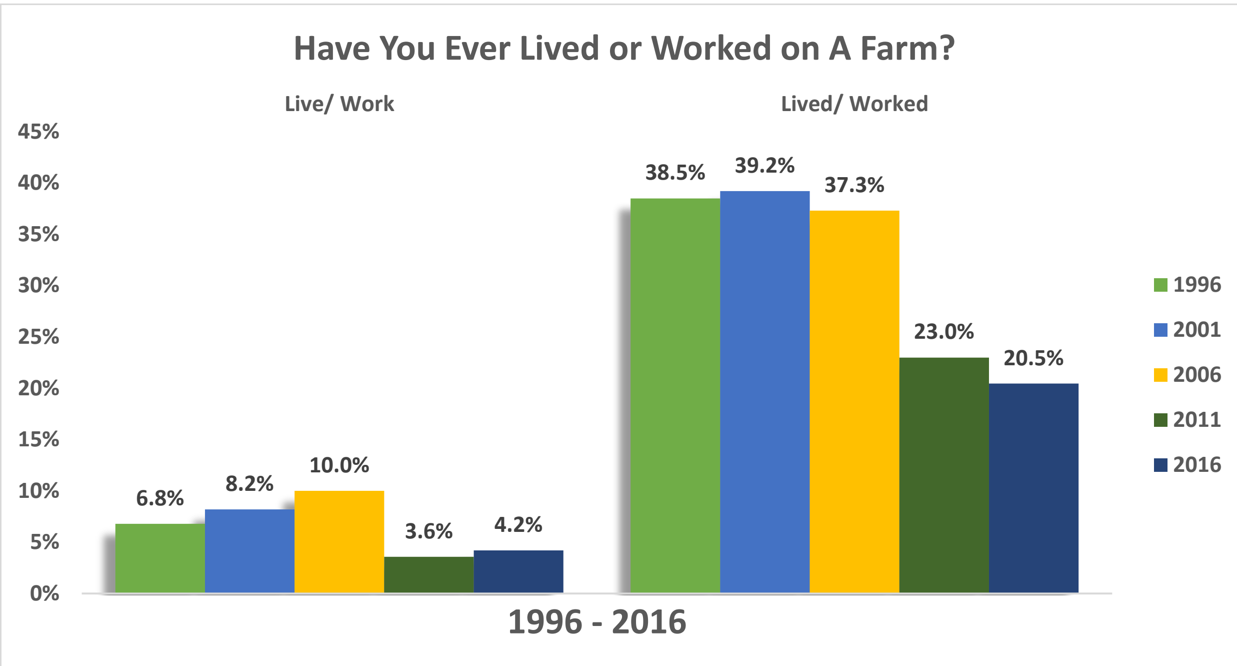


Figure 1

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%) and more reflective of 2011 (23%). Fewer than 5% currently live or work on a farm or ranch, down substantially from early surveys (6.8% in 1996; 8.2% in 2001; 10% in 2006), but up slightly from 2011 (3.6%). It should be noted that no criteria were given to respondents as to what constituted living or working on a farm or ranch and sampling design was different (the 2011 and 2016 surveys were conducted online, while all previous ones were conducted by phone), so this may account for some differences in respondents' interpretation of this question.

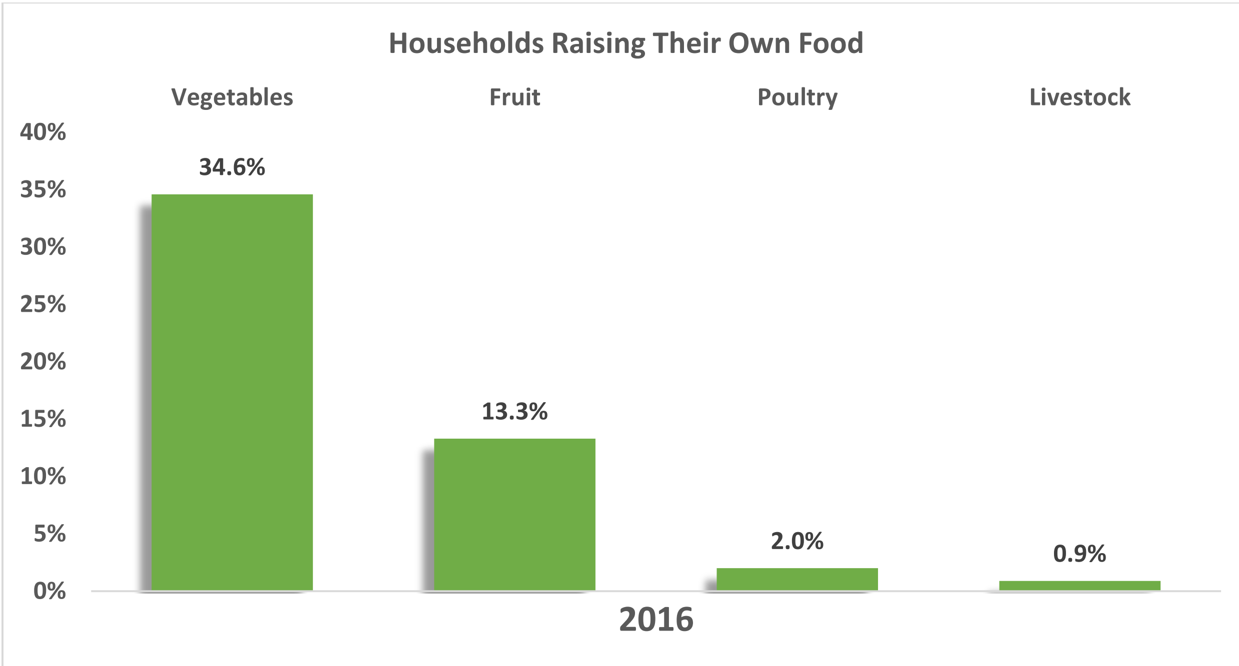


Figure 2

For the first time in 2016, we asked respondents about their own household food production. More than one third (34.6%) of Coloradans raise at least some of their own vegetables. A number of respondents (13.3%) also raise some fruit for their own household. A much smaller percentage raise poultry or livestock.

Impressions and Knowledge about Agriculture

2. a) What is the first thing that comes to your mind when you hear the word agriculture?

	1996	2001	2006	2011	2016
Farms/Farmers/Crops	24%	33%	52%	52%	49%
Cattle/ Ranching	NA	NA	NA	9%	4%
Planting/Growing/Harvesting	7%	7%	13%	6%	4%
Vegetables	4%	3%	5%	2%	8%
Fields	2%	3%	3%	4%	2%
Fruit	2%	3%	2%	1%	2%
Irrigation/Water	1%	1%	3%	1%	1%
Gardens	1%	1%	1%	1%	1%
Food (Local, Organic, Etc.)	NA	NA	NA	17%	18%

Table 1

Respondents were asked to name, as specifically as possible, the first thing that came to their minds when they heard the word agriculture. When all feedback was analyzed, the results were sorted into the categories shown in Table 1. These categories have changed little over time. The one significant trend worth noting is the significant increase in the number of people who associate vegetables with Colorado agriculture, perhaps due to their own participation in gardening or the recent promotional efforts of Colorado Proud and the Colorado Fruit and Vegetable Growers Association (CFVGA). The 2016 results indicated a fourfold increase in this category over 2011.

b) What five products can you name that are grown or raised in Colorado?

	1996	2001	2006	2011	2016
Corn	16%	12%	12%	22%	18%
Peaches	4%	5%	5%	14%	17%
Melons	4%	4%	5%	2%	15%
Vegetables (including tomatoes & sweet corn)	NA	NA	NA	8%	12%
Cattle or Beef	8%	7%	6%	10%	10%
Wheat	16%	11%	10%	10%	7%
Alfalfa Hay	5%	6%	5%	6%	3%
Beets	8%	5%	9%	10%	3%
Potatoes	5%	4%	4%	1%	3%
Chile Peppers	NA	NA	NA	NA	3%
Apples	NA	NA	NA	5%	3%
Beans	4%	4%	5%	5%	2%
Marijuana	NA	NA	NA	NA	2%
Barley	NA	NA	NA	2%	1%

Table 2

People were asked to name, as specifically as possible, five products grown or raised in Colorado (Table 2). In previous surveys, they were asked to name any crops, but were not given a specific number. This may account for some of the differences we see in 2016 results. The products in this table were referred to the most frequently (or included because they were mentioned in past reports and this offers a comparison). The most often mentioned crops in 2016 were corn, peaches, melons, vegetables and cattle/beef. A couple trends are worth noting here. First, corn is the only product to remain at or near the top of the list over time, other commodities have dropped off in recent years. Over time, awareness of fruits and vegetables has grown significantly. Particularly interesting is the spike in melons between 2011 and 2016. The chile pepper and marijuana categories were added in 2016 due to increasing public interest/awareness in these products (as noted by write-in comments on past surveys).

c) What agricultural product would you say has the most economic importance for Colorado?

	1996	2001	2006	2011	2016
Corn	10%	9%	13%	22%	17%
Cattle or Beef	22%	22%	17%	16%	15%
Wheat	29%	18%	15%	13%	10%
Marijuana	NA	NA	NA	NA	8%
Peaches	1%	2%	2%	5%	8%
Vegetables	1%	1%	2%	2%	3%
Melons and Fruit	NA	NA	NA	5%	3%
Alfalfa Hay	2%	2%	2%	2%	2%
Potatoes	3%	3%	3%	3%	2%
Beets	4%	5%	4%	2%	2%

Table 3

People were also asked what agricultural product has the most economic importance for Colorado (Table 3). Similar to Table 2, corn was mentioned most frequently in 2016, followed by beef/cattle. Wheat was next most commonly mentioned followed by peaches and marijuana. Similar to the responses in Table 2, and the increased mentions of vegetables in Table 1, these may suggest that commodities are less visible to the common public while there is a general increase in awareness of fruits and vegetables. What will be interesting to explore further is whether that is due to promotional efforts of Colorado Proud and the CFVGA or because the largest populations live near corridors where produce production is still quite visible (the Front Range corridor).

Perceived Value of Agricultural Products

3. Do you agree or disagree that agriculture provides food at a reasonable price in Colorado?

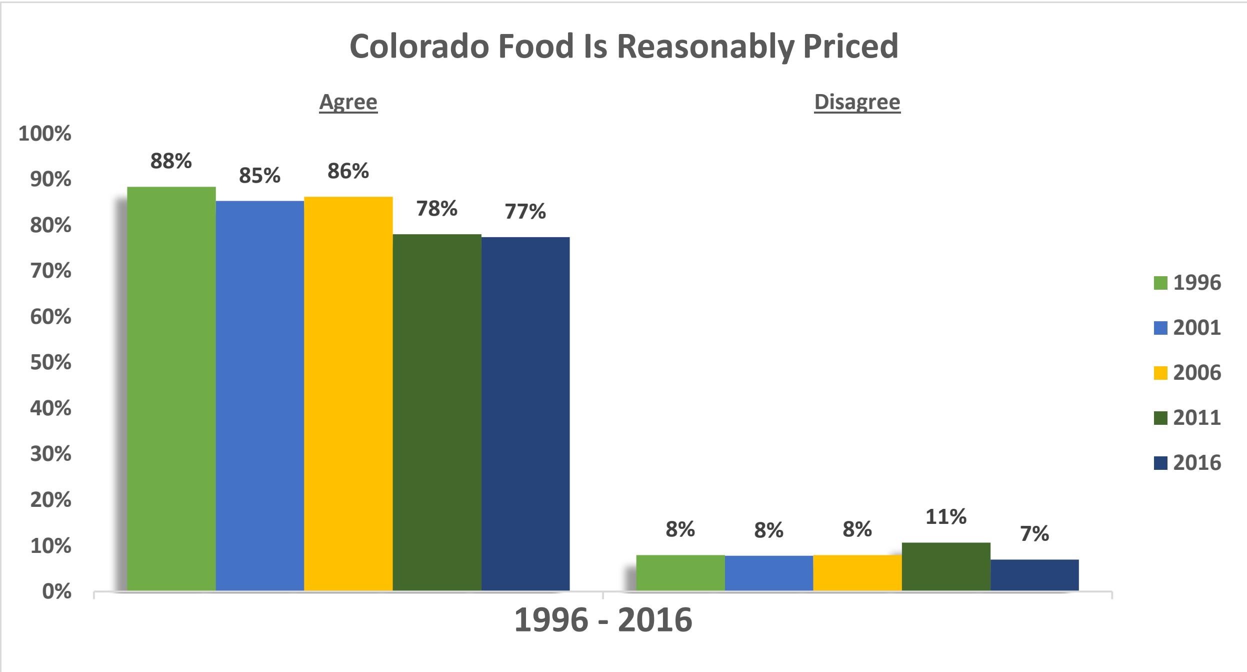


Figure 3

Most agreed (77%) that agriculture provides food at a reasonable price in Colorado. Less than 1 in 10 (7%) did not agree with this statement. These proportions were similar to the 1996, 2001 and 2006 responses, but there may be some rising concerns or lack of awareness surrounding this issue in 2016 compared to previous surveys (about 16% chose do not know to this question).

4. a) When shopping or eating out, how often do you purchase Colorado products or foods over those produced elsewhere?

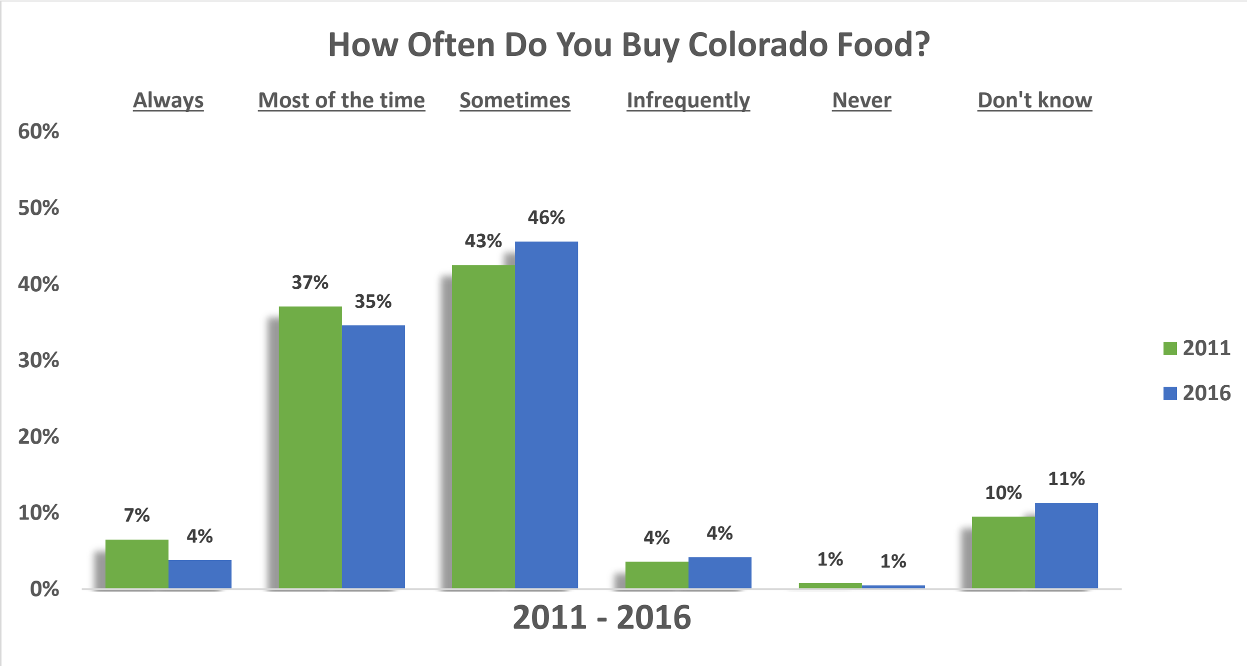


Figure 4

Overall, it appears that a sizable share of Coloradans seek out Colorado products (38.4% purchase Colorado food products Most of the time or Always). This finding suggests that widespread use of Colorado Proud labels and programming are of value to the vast majority of the state's households who seek to purchase Colorado products when they are available and designated as such.

b) **Would you buy more of the following Colorado grown and produced products if they were available and identified as being from Colorado?**

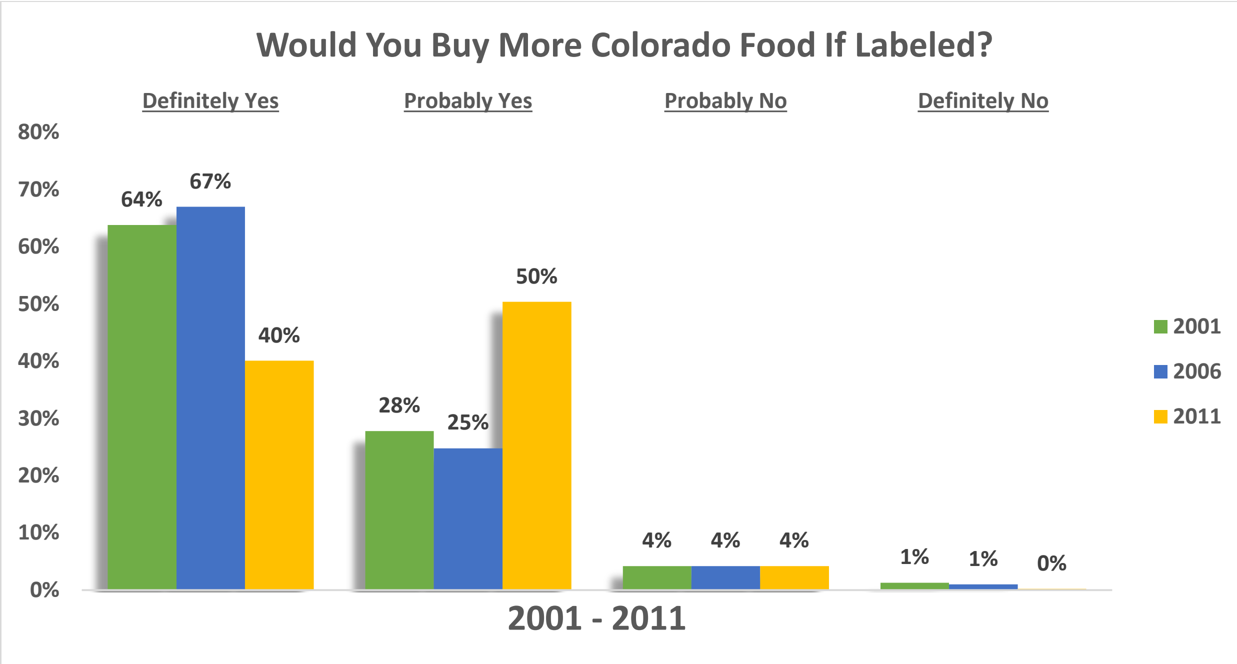


Figure 5

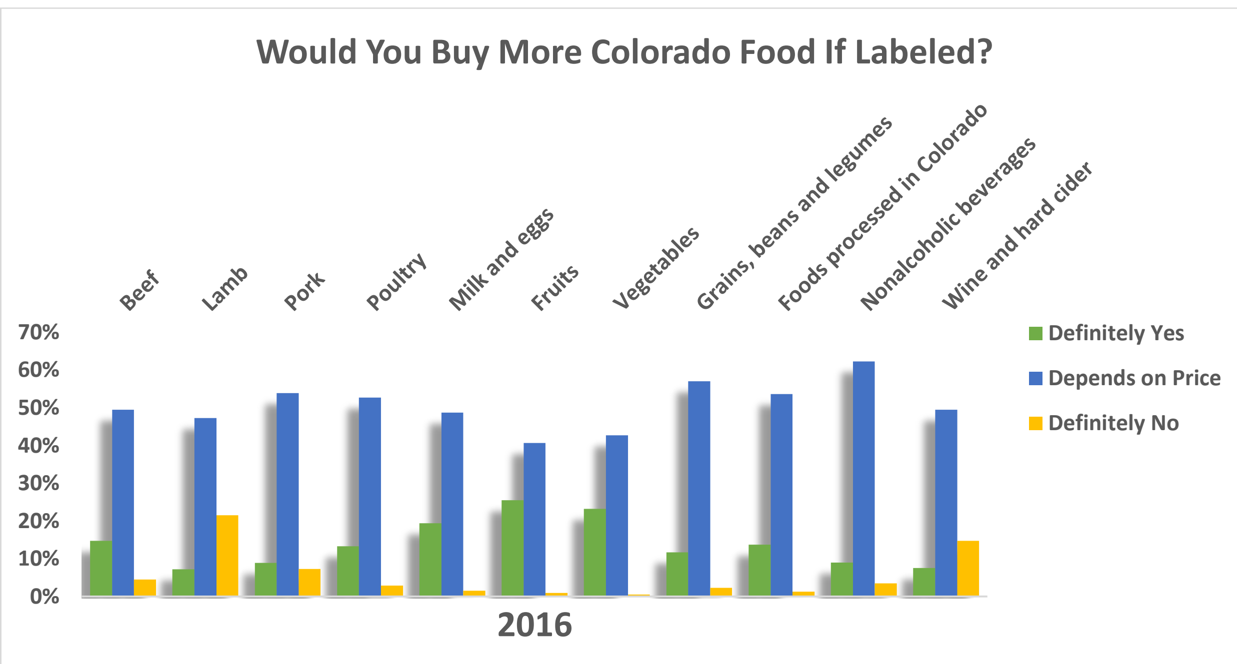


Figure 6

	Beef	Lamb	Pork	Poultry	Milk and eggs	Fruits
Yes	15%	7%	9%	13%	19%	26%
Depends on Price	50%	47%	54%	53%	49%	41%
No	5%	22%	7%	3%	2%	1%
	Vegetables	**Grains, and legumes**	**Processed in Colorado**	**NA beverages**	**Wine/hard cider**	
Yes	23%	12%	14%	9%	8%	
Depends on Price	43%	57%	54%	62%	50%	
No	1%	2%	1%	4%	15%	

Table 4

From 2001-2011, respondents were simply asked if they would buy more Colorado food products if labeled (Figure 5 shows these results). In 2016, we asked about specific products (these results can be seen in Figure 6 and in Table 4). Clearly, price is the deciding factor. However, it is interesting to note the percentage of respondents that chose Yes, especially relating to fruits and vegetables (Fruits – 26%, Vegetables – 23%).

The Relative Economic Importance of Agriculture

5. Among Colorado's economic sectors, how would you rank the following in terms of importance for the long-term future of Colorado?

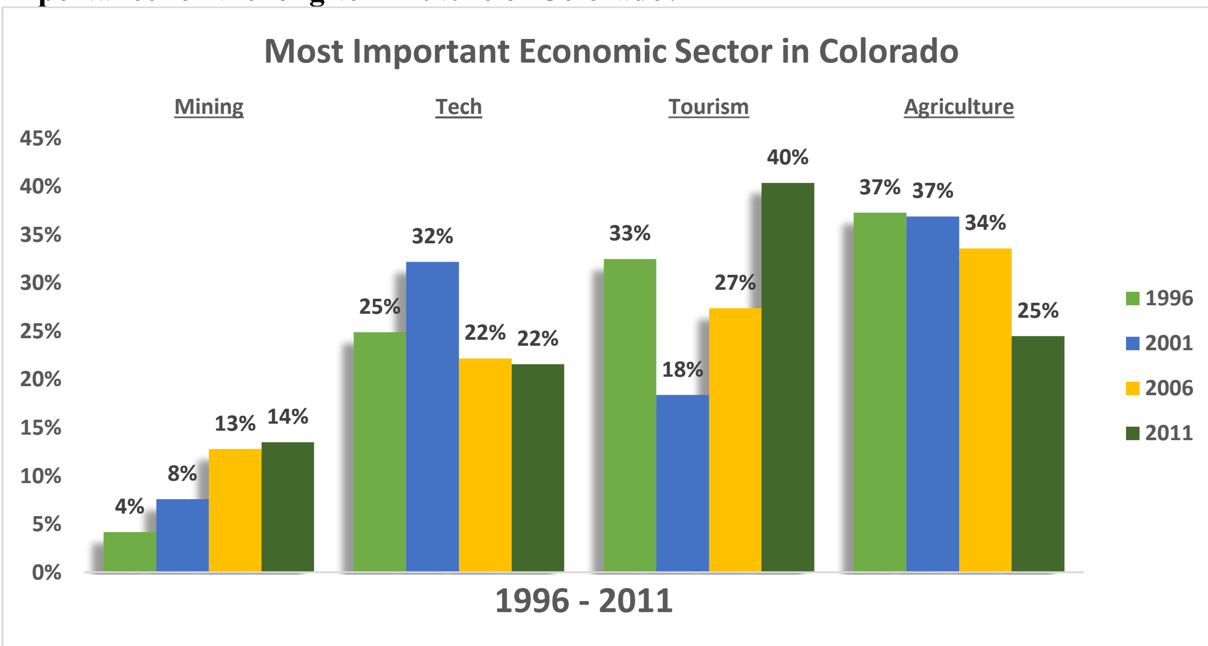
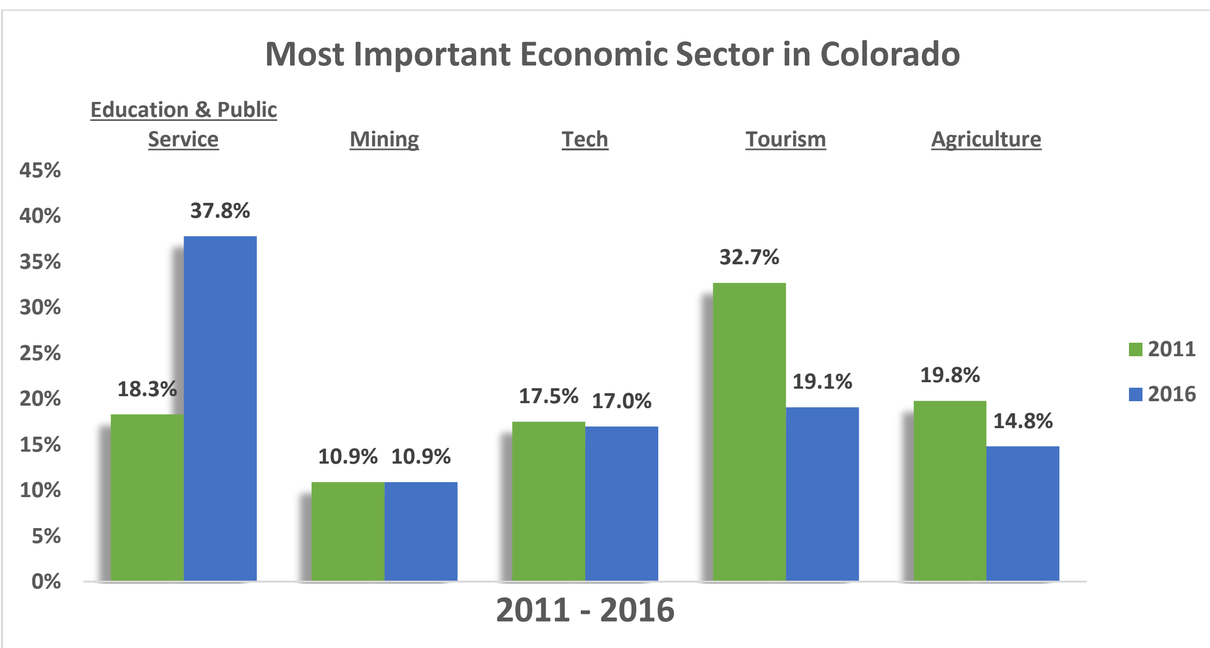


Figure 7



Note: The order in which the questions appeared to respondents was randomized by survey to prevent order bias.

Figure 8

In 2011, Education was added as a potential choice given a number of write-in answers in previous years' surveys. Results from that year were compiled both with and without this category. Figure 7 shows survey results from 1996-2011. Figure 8 shows results for the last two survey cycles with the additional category. While tourism dominated results in 2011, the newly added Education category more than doubled in 2016 and is nearly 20 points higher than any other response in 2016. It is also worth noting the drop in perceived importance of both Tourism and Agriculture in the last 5 years.

To complement this question and what it signals about Coloradan's perceptions about the importance of agriculture, questions on how high a priority it is to maintain important resources for the sector were explored next.

Maintaining and Protecting Agricultural Land and Water

6. In Colorado, considerable agricultural land and water is being converted to non-agricultural uses such as houses, roads and other uses. How important do you think it is to maintain land and water in agricultural production?

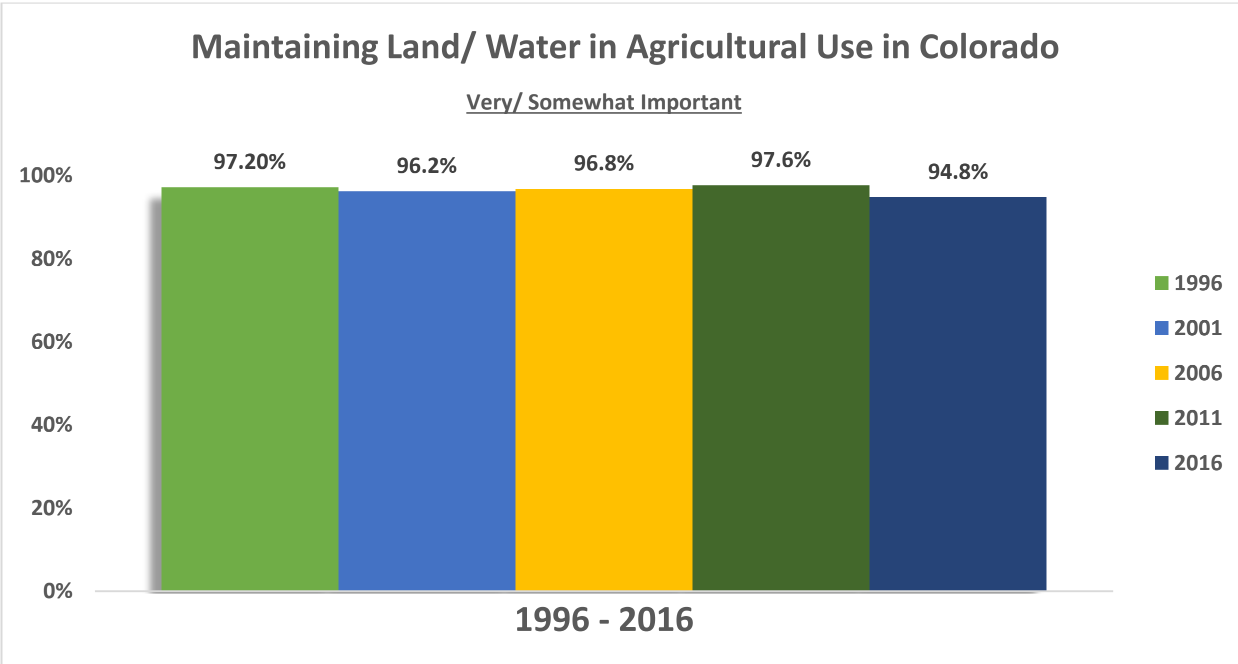


Figure 9

Figure 9 shows that nearly all respondents felt that maintaining land and water in agricultural production was Very or Somewhat important (94.8%). Though very high, this is down somewhat from previous years.

7. Here are four reasons people give for protecting Colorado's agricultural land and water. Please tell us how important each one is for you, to maintain agricultural land and water.

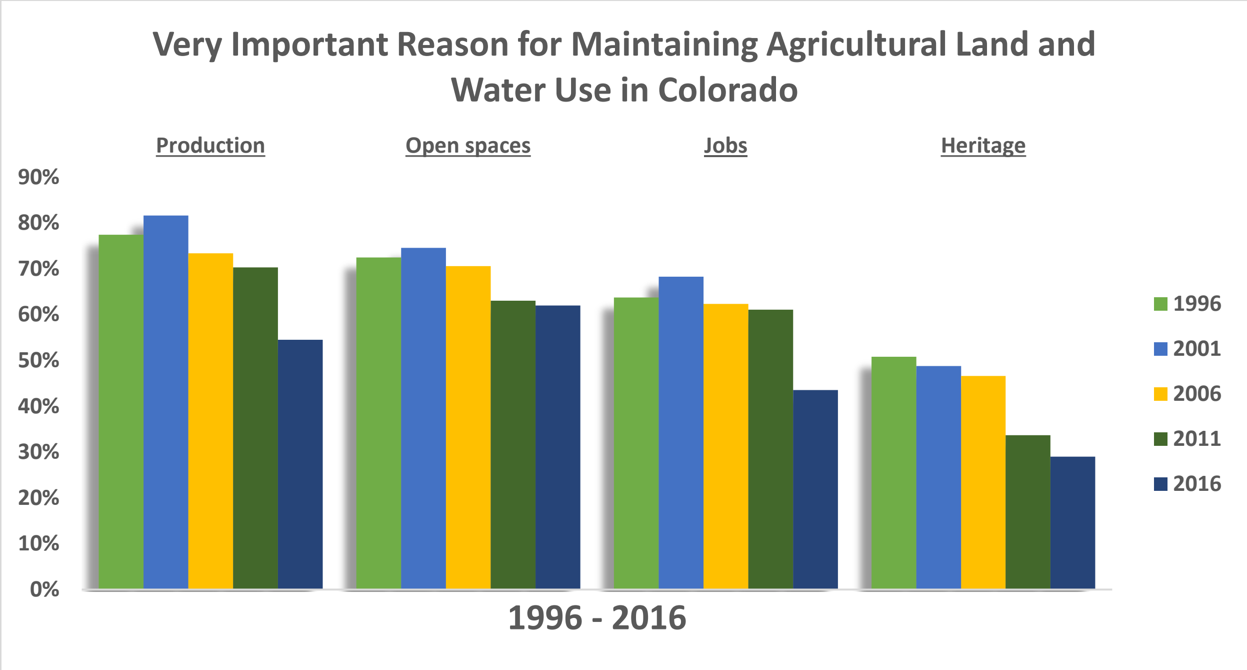


Figure 10

	Food/Fiber Production	Open spaces	Jobs	Heritage
1996	77%	73%	64%	51%
2001	82%	75%	68%	49%
2006	73%	71%	62%	47%
2011	70%	63%	61%	34%
2016	55%	62%	44%	29%

Table 5

A majority of Coloradans felt that two of the four reasons given for protecting Colorado's agricultural land and water were *Very important*. Most important was preservation of Open Spaces and wildlife habitat (62%), followed by Food and Fiber Production (55%). While all categories have dropped since 2011, Food and Fiber Production (down 15%) and Jobs (down 17%) have fallen furthest.

8. Agricultural lands are being converted to non-agricultural uses. We would like to know your thoughts about one way of preventing this. It is possible to use public funds to buy the development rights from farmers and ranchers willing to sell them. The farmer or rancher would still own the land and be able to use it for agriculture, but the land couldn't be developed for housing or industrial purposes. How much do you agree or disagree with this approach for maintaining agricultural land?

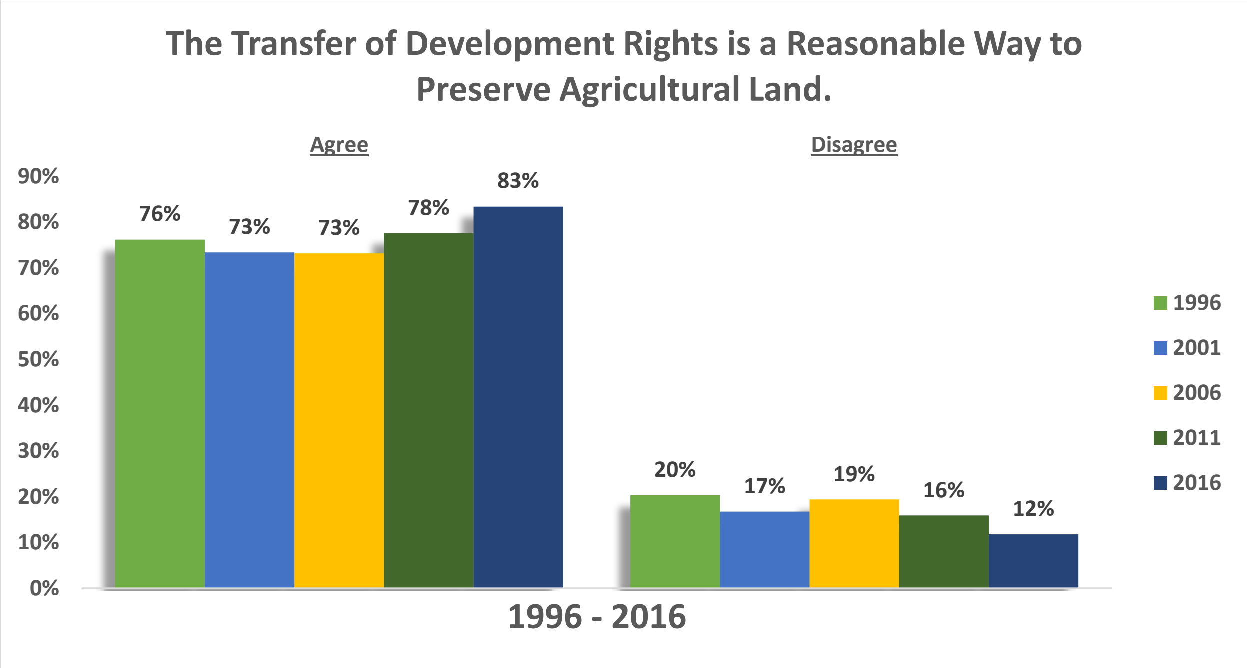


Figure 11

Respondents were given a brief explanation of how the purchase of development rights can be used to protect agricultural land, and then asked to what extent they agreed with this approach to maintaining agricultural land (from Strongly agree to Strongly disagree). Results from their ranking are shown in Figure 11.

Well over three-fourths of the respondents (83%) agreed that public funds should be used to purchase the development rights from farmers and ranchers who were willing to sell them, up by a number of percentage points over previous years. Fewer respondents disagreed with this statement than in previous years (12%).

9. What basic approach should be used to protect agricultural land and water in Colorado? (For a list of responses in the 'Other' category see Appendix A)

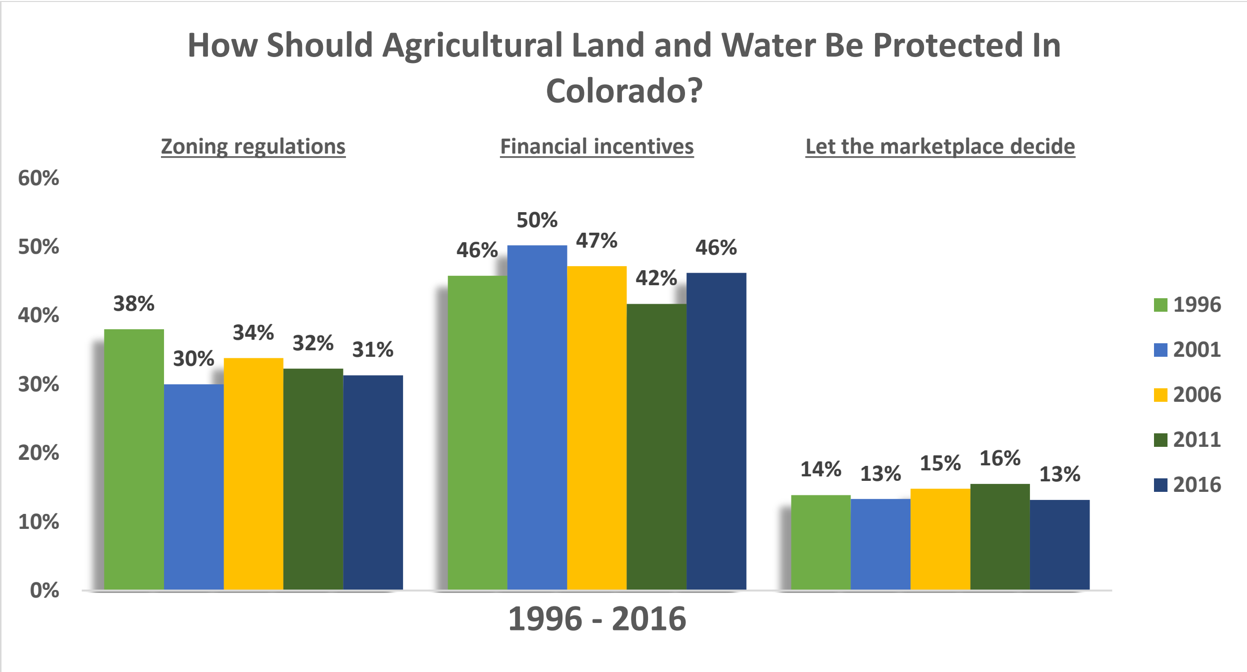


Figure 12

Figure 12 shows that financial incentives to landowners to maintain farmland was the preferred approach (46%), which is approximately what it has averaged over time and up a bit from the 2011 results. About 31% indicated a preference for regulations and zoning in 2016, down slightly from 2011. Allowing the marketplace to determine if land remains in agriculture was the least preferred alternative in 2016, and it has always been the least preferred across all survey years.

10. An increasing number of Colorado cities and counties have open space programs. Such programs typically acquire natural areas and trail corridors and allow public access. Some programs use part of their money to help farms and ranches as well. Do you agree or disagree that more local open space programs should use part of their money to help minimize the loss of farms and ranches?

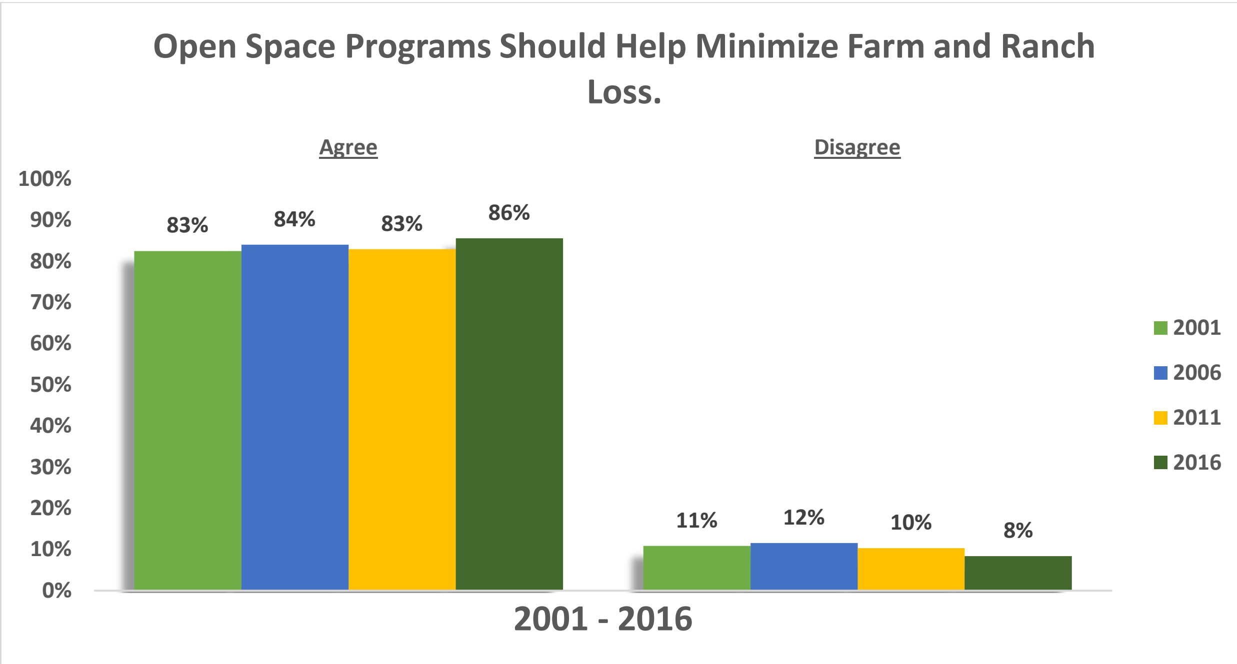


Figure 13

Respondents were asked whether they agreed or disagreed with this approach for minimizing the loss of farms and ranches. Results from their ranking are shown in Figure 13.

A majority (86%) of respondents agreed that more local open space programs should use part of their money to help minimize the loss of farms and ranches. These responses were up slightly from those for 2011 (83%), 2006 (84%) and 2001 (82.8%). Note that this question was not asked in 1996.

Evaluating Agricultural Practices

In 2016, questions about perceptions of production practices were altered a bit, so that we could explore both whether Coloradans thought such practices were safe, and also, whether they felt they may be necessary for food security (needed to produce enough food for people). So, questions from past surveys are intermingled with some new questions throughout this section.

11. How responsible do you believe agriculture in Colorado has been in protecting the environment?

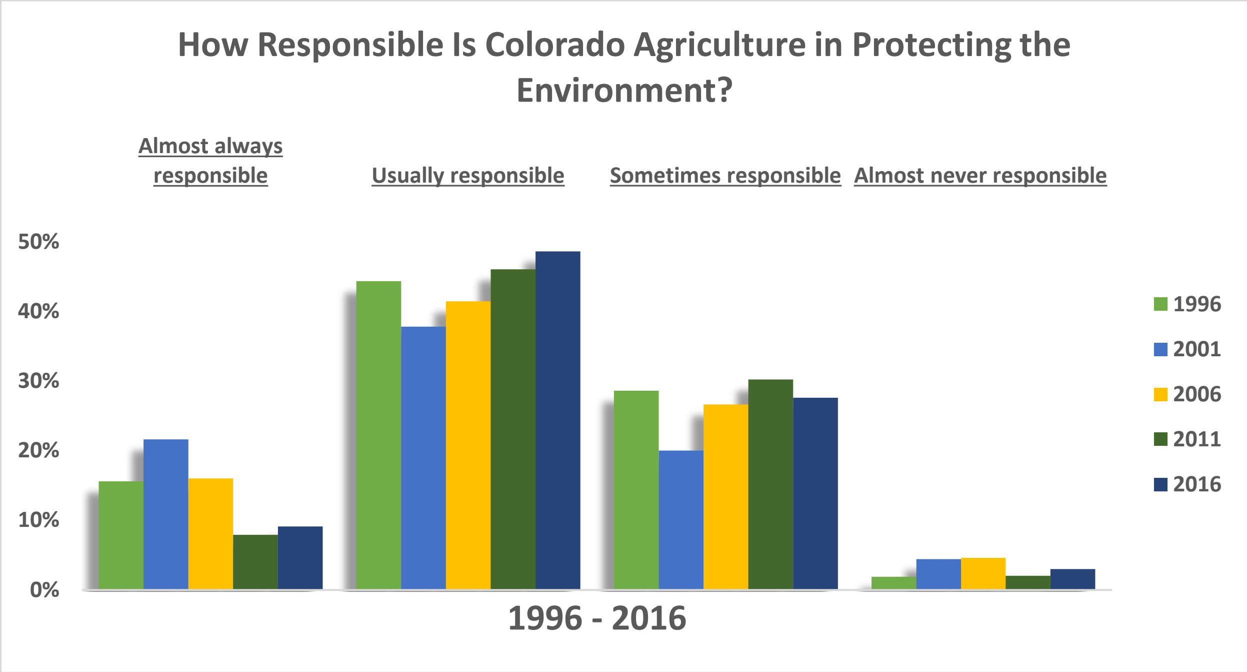


Figure 14

	1996	2001	2006	2011	2016
Almost always responsible	16%	22%	16%	8%	9%
Usually responsible	44%	38%	41%	46%	49%
Sometimes responsible	29%	20%	27%	30%	28%
Almost never responsible	2%	4%	5%	2%	3%

Table 6

Over half of the respondents (58%) felt agriculture was Almost always (9%) or Usually (49%) environmentally responsible. When combined, these answers are back on par with the 1996 (60%), 2001 (59%) and 2006 (57%) responses and up slightly from 2011 (54%). Just over 1 in 4 respondents (28%) felt that agriculture was only Sometimes environmentally responsible, which is just above the average over time.

12. In your opinion, how safe is the food that Colorado farmers and ranchers produce?

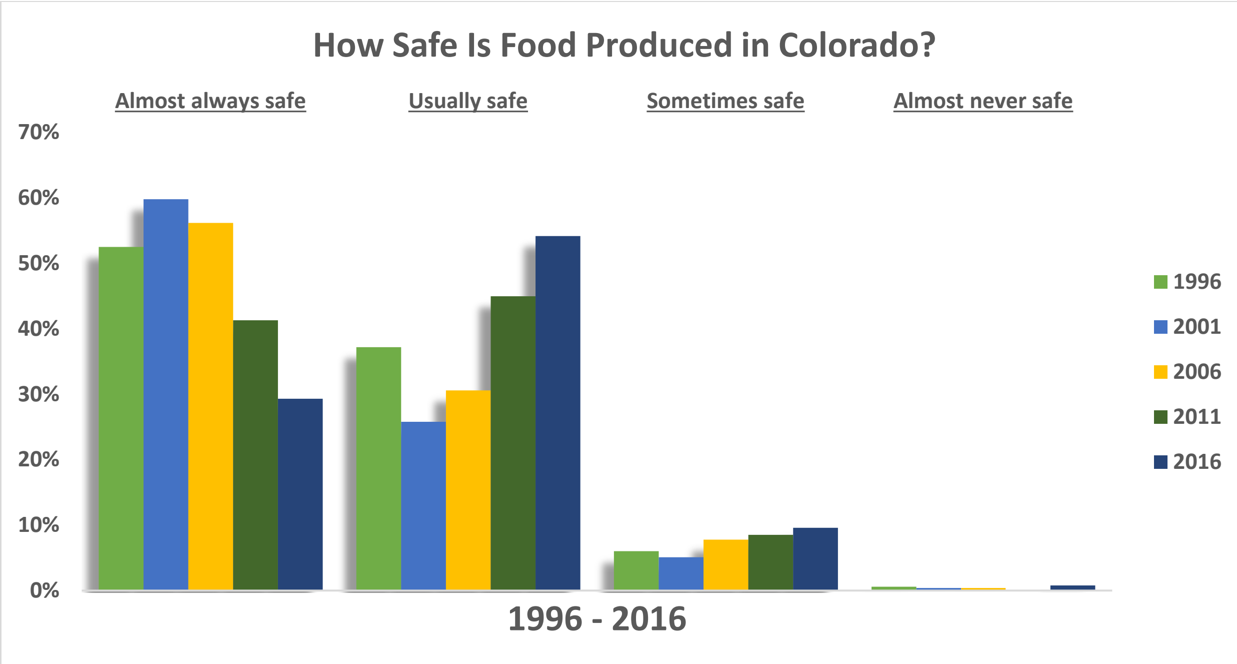


Figure 15

	1996	2001	2006	2011	2016
Almost always safe	53%	60%	56%	41%	29%
Usually safe	37%	26%	31%	45%	54%
Sometimes safe	6%	5%	8%	9%	10%
Almost never safe	1%	0%	0%	0%	1%

Table 7

Figure 15 and Table 7 show that just 29% felt that food produced in Colorado is Always safe, down from 41% in 2011, and nearly 60% in 2006. On the other hand, the proportion that felt food produced in Colorado is Usually safe was 54%, up from 45% in 2011, and 31% in 2006. Overall, the share that is relatively confident (responses designating Almost always safe and Usually safe) remains high (at over 80%).

13. a) In your opinion, how safe is genetically engineered food to eat?

Figure 16

	2001	2006	2011	2016
Almost always safe	17%	15%	11%	15%
Usually safe	19%	23%	26%	26%
Sometimes safe	15%	40%	25%	23%
Almost never safe	18%	18%	15%	20%

Table 8

As shown in Figure 16 and Table 8, more respondents believe genetically engineered food is Almost always safe to eat (15%) than in 2011 (11%). Yet, the number of Coloradans who believe they are Almost never safe has reached the highest level since we started asking this question (20%). Note that this question was not asked in 1996.

b) *How necessary do you think it is to use genetically modified (GMOs) in order to produce enough food for people?

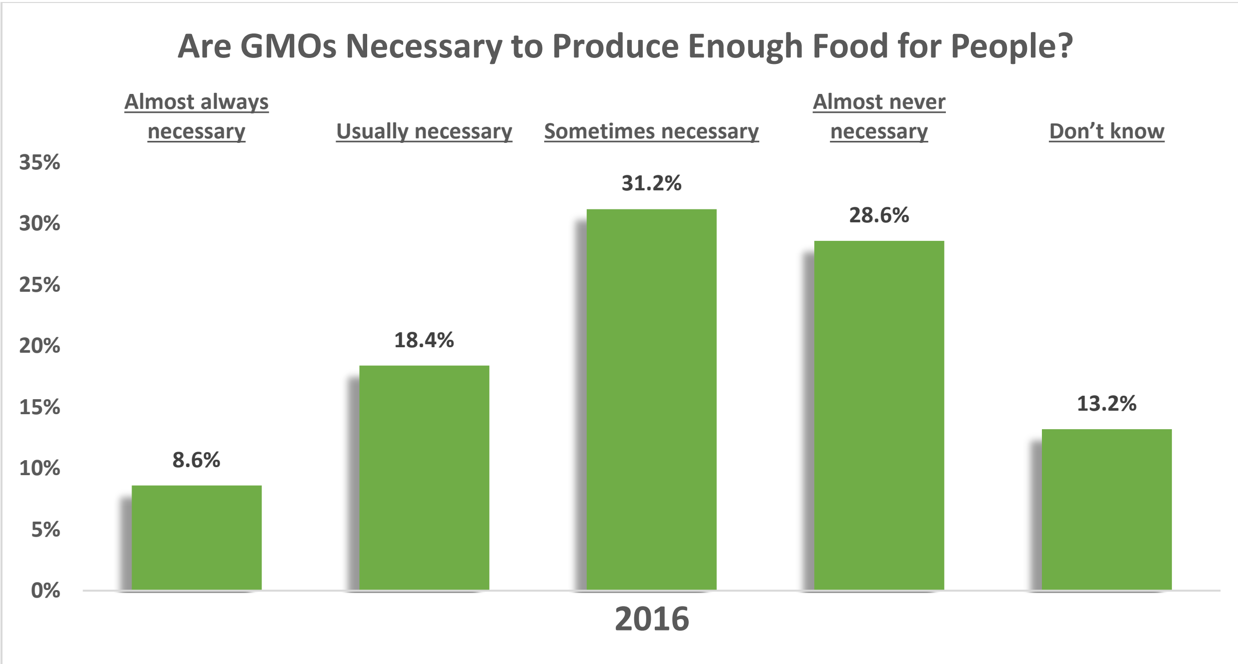


Figure 17

This is one of the new questions meant to explore how perceived safety of GMOs compared to the need for them to produce sufficient food. It is worth noting that more than 1 in 4 Coloradans believe that genetically engineered crops are Almost never necessary in order to produce enough food for people. This is higher than both the Almost always necessary and Usually necessary categories combined, and together with the previous perceptions on safety, may indicate this issue is a point of contention for many Coloradans.

14. a) How necessary do you think it is to use fertilizers and pesticides in order to produce enough food for people?

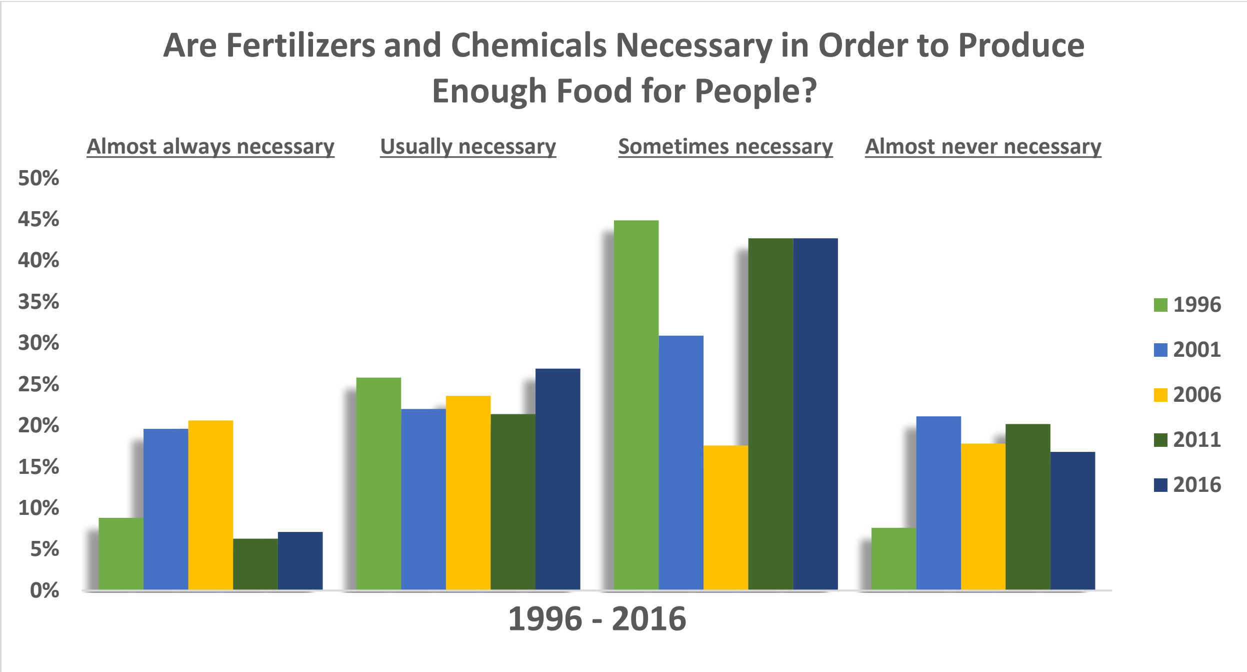


Figure 18

	1996	2001	2006	2011	2016
Almost always necessary	9%	20%	21%	6%	7%
Usually necessary	26%	22%	24%	21%	27%
Sometimes necessary	45%	31%	18%	43%	43%
Almost never necessary	8%	21%	18%	20%	17%

Table 9

In 2016, we continued to see that most Coloradans found fertilizer and chemical inputs at least Somewhat necessary to produce enough food (77% compared to 70% in 2011), but only 7% found it Almost always necessary. It is notable that the category of "Sometimes necessary" was significantly higher in 2011 and 2016 than in 2006, suggesting that the public understands such treatments are needed, but maybe not as frequently as they are currently employed.

b) ***In your opinion, how safe are foods to eat that were grown following agricultural best practices that may include fertilizers and pesticides?**

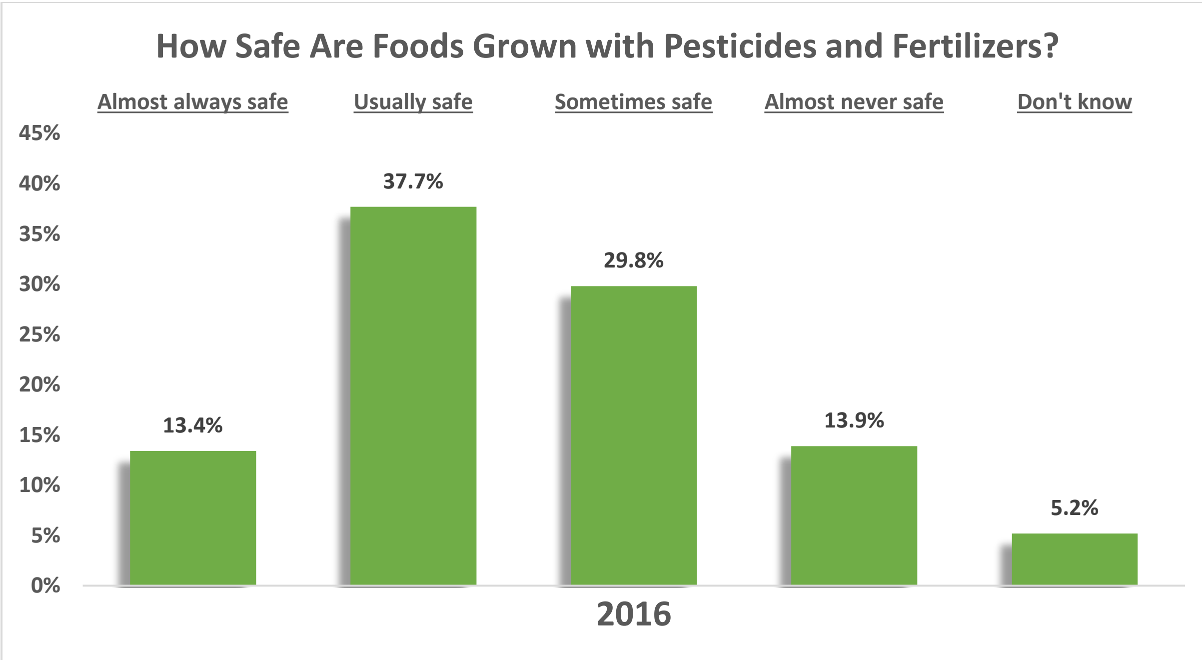


Figure 19

Again, this question was added to evaluate the trade-off between the necessity for pesticides and fertilizers compared to perceived safety among Coloradans. A small, and nearly equal, percentage of respondents believe pesticides and fertilizers are either Always or Never safe to use and represent the different views some of the state's citizens may have about agricultural practices. The majority of Coloradans, however, recognize the place these chemicals have in production and rated them as Usually safe (37.7%).

15. a) Do you believe that farm and ranch animals in Colorado are treated humanely?

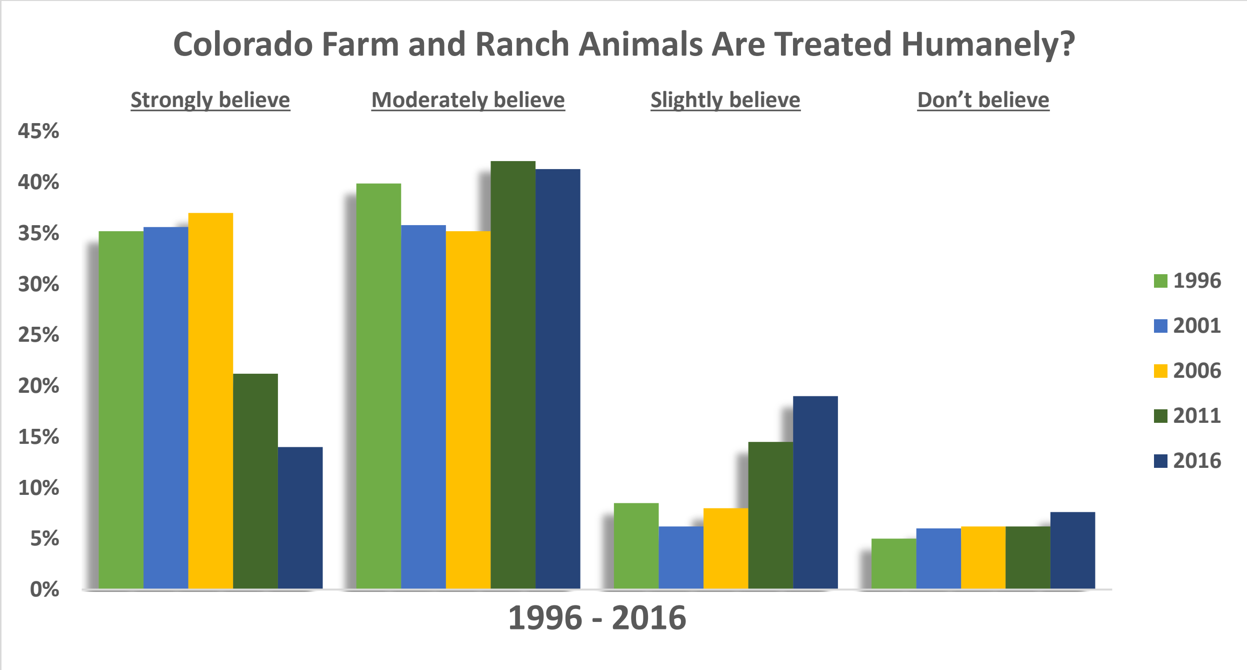


Figure 20

	1996	2001	2006	2011	2016
Strongly believe	35%	36%	37%	21%	14%
Moderately believe	40%	36%	35%	42%	41%
Slightly believe	9%	6%	8%	15%	19%
Don't believe	5%	6%	6%	6%	8%
Don't know	11%	16%	13%	16%	18%

Table 10

Responses regarding the treatment of farm and ranch animals changed from those reported in 1996, 2001, 2006 and 2011 (Figure 20 and Table 10). Those Strongly believing that farm and ranch animals are treated humanely in Colorado dropped by a third from 2011 responses and, although some of that change can be explained by higher numbers among those that Moderately and Slightly believe animals are treated humanely, there also seems to be less certainty, given the higher number who reported they "don't know."

b) ***In your opinion, how safe is meat and milk produced from an animal that received antibiotics and/or hormones?**

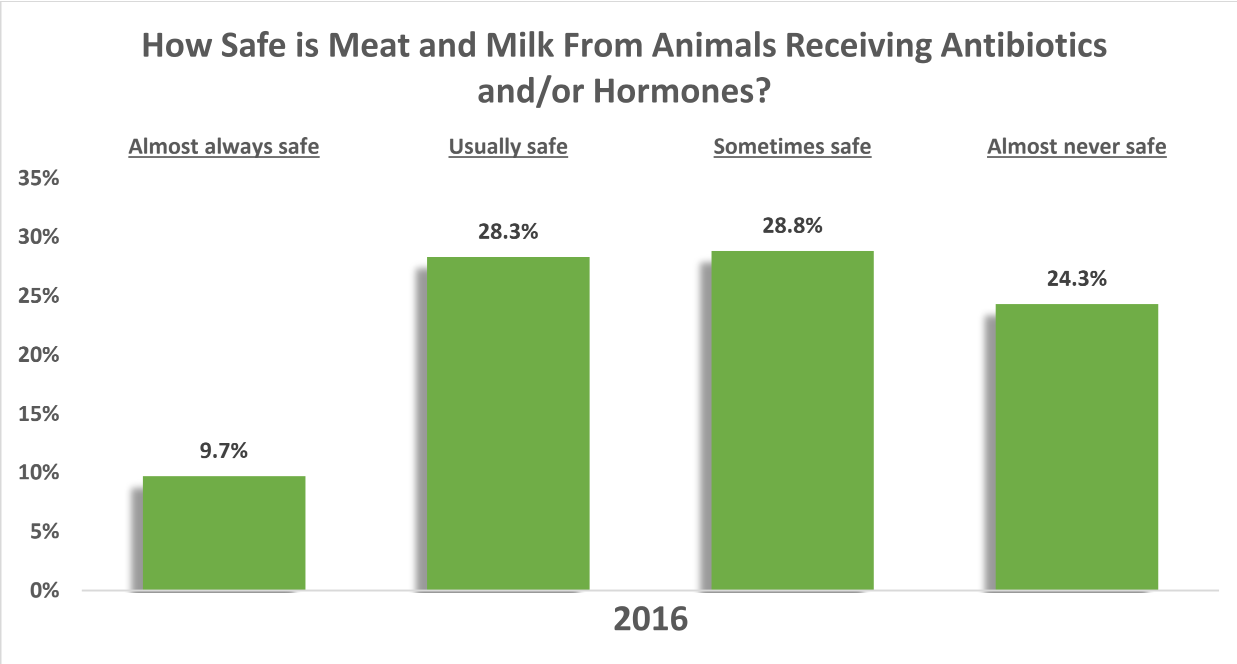


Figure 21

This question is another one that was added to further explore attitudes on specific production practices. Perhaps most interesting is the difference in responses between this and the question regarding the safety of food produced with fertilizers and pesticides. In the former case, the Almost Always Safe and Almost Never Safe categories were nearly identical. Here, there are considerably more respondents who feel using antibiotics and hormones for meat and milk production is Almost Never Safe (24.3%) than those who feel it is Almost Always Safe (9.7%). Again, however, the majority of Coloradans are somewhere in the middle on this issue.

c) ***How necessary do you think it is to use antibiotics and/or hormones in order to produce enough meat and dairy for people?**

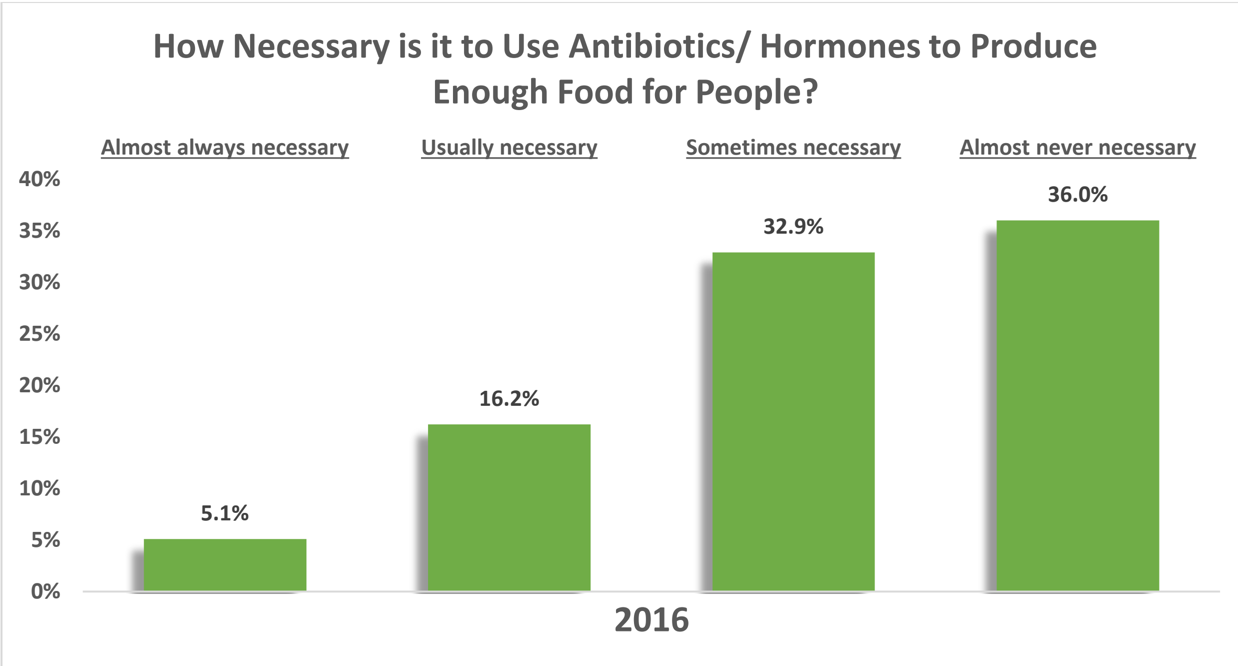


Figure 22

Similar to other production practices, we also asked how necessary antibiotics and hormones may be to sufficient food production. Just over one in five people believe it is Almost Always or Usually Necessary to use antibiotics and hormones to produce enough food for people (21.3%). However, a much larger percentage believe these products are either Sometimes or Almost Never necessary in order to grow enough food for people (68.9%), indicating this is another practice that draws divided public opinion.

16. a) *In your opinion, how safe are the following foods in terms of the potential for human, food-borne illness?

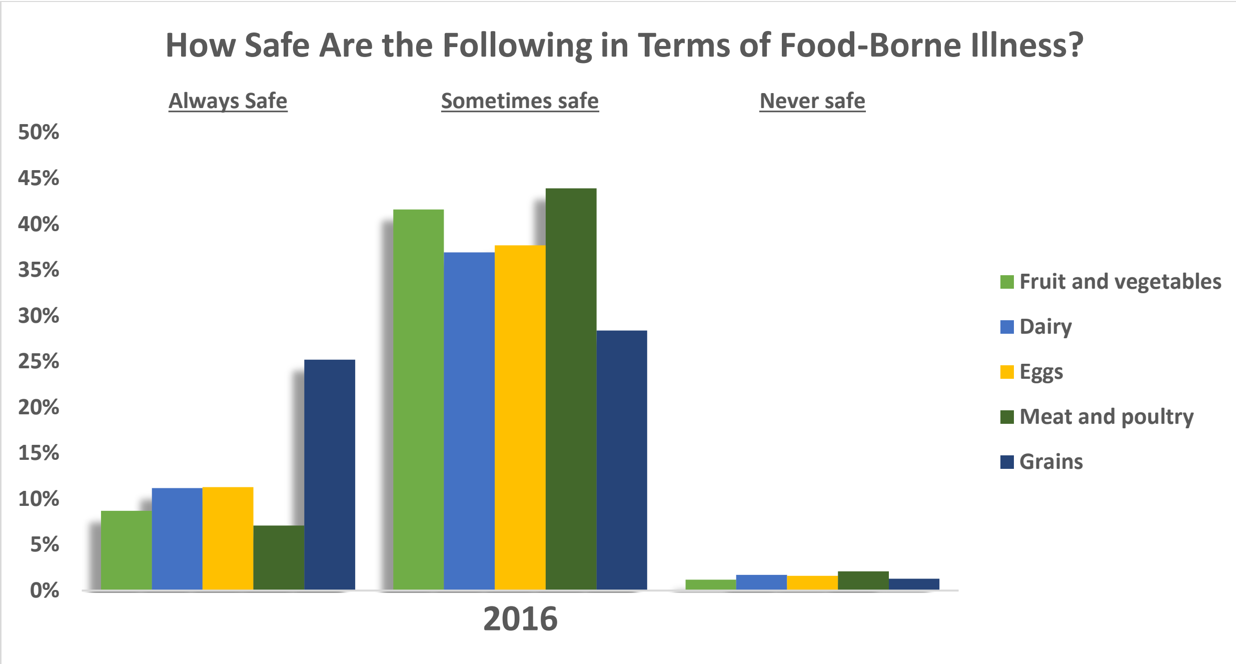


Figure 23

	Fruit and vegetables	Dairy	Eggs	Meat and poultry	Grains
Always Safe	9%	11%	11%	7%	25%
Sometimes safe	42%	37%	38%	44%	28%
Never safe	1%	2%	2%	2%	1%

Table 11

Because of the increased visibility and potential for differing perceptions of food safety across food categories, another question was added to explore these perceptions. There are a couple things worth noting in the responses. First, the majority of Coloradans believe all food categories are either Sometimes or Always safe. But, it is interesting that respondents believe Dairy and Eggs to be Always safe (11%) far more commonly than Meat and poultry (7%), and that Grains are Always safe more than twice as often as any other category.

b) *In your opinion, how safe are the following farming practices in terms of the potential for human, food-borne illness?

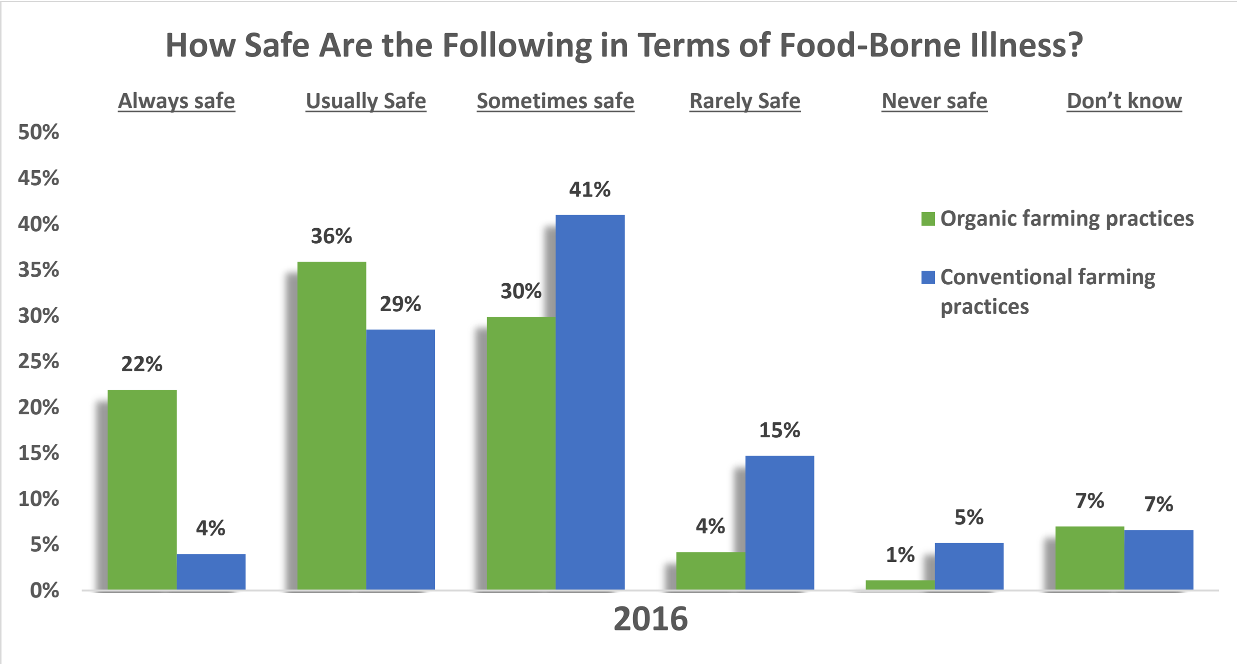
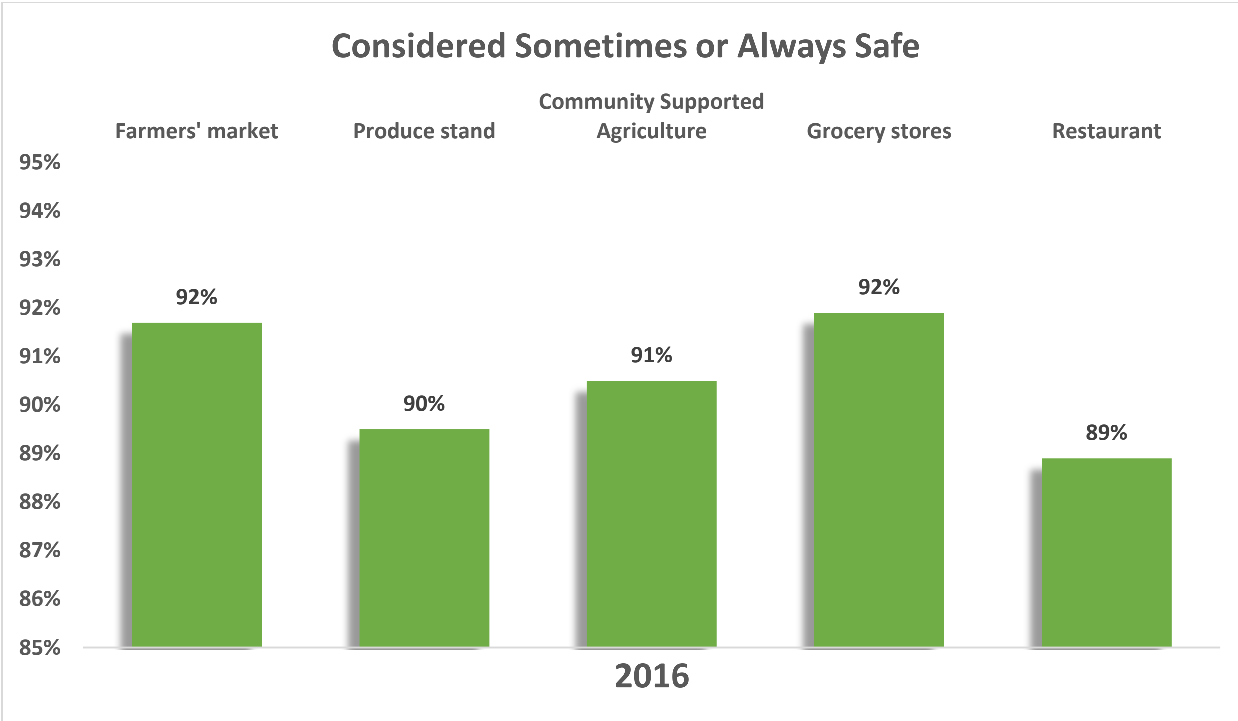


Figure 24

In continuing to explore food safety perceptions, this was another new question on the 2016 survey. Of particular interest is the fact that over five times more respondents believe organic farming is Always safe, compared to conventional farming. Certainly some of this difference is accounted for by conventional farming's higher percentage in the Sometimes safe category. However, summing over both categories, the overall perception is that organic farming results in food products that are generally safer in terms of food-borne illness.

c) ***In your opinion, how safe are the following food establishments in terms of the potential for human, food-borne illness?**



Note: Chart not draw to scale in order to illustrate variance given high agreement among respondents.
Figure 25

Again, because of interest in how perceptions of safety may vary by marketing channel, another new question was added to the 2016 survey. Perhaps the most important takeaway here is that consumers retain strong faith in the safety of all types of food establishments with no real noticeable difference across these choices.

In another section of the survey, respondents were asked to share their level of agreement with a few innovations and directions that the agriculture sector could take in support of other public issues including energy, conservation and natural resource management and food systems. For these questions Strongly agree, Moderately agree, Slightly agree, Moderately disagree, Strongly disagree and Don't know were response choices, but to make interpretation easier, the three agree statements and two disagree statements were combined. One should also remember that the Don't Know option will allow shares to not sum to 100%.

17. Please tell us how you feel about the following statements:

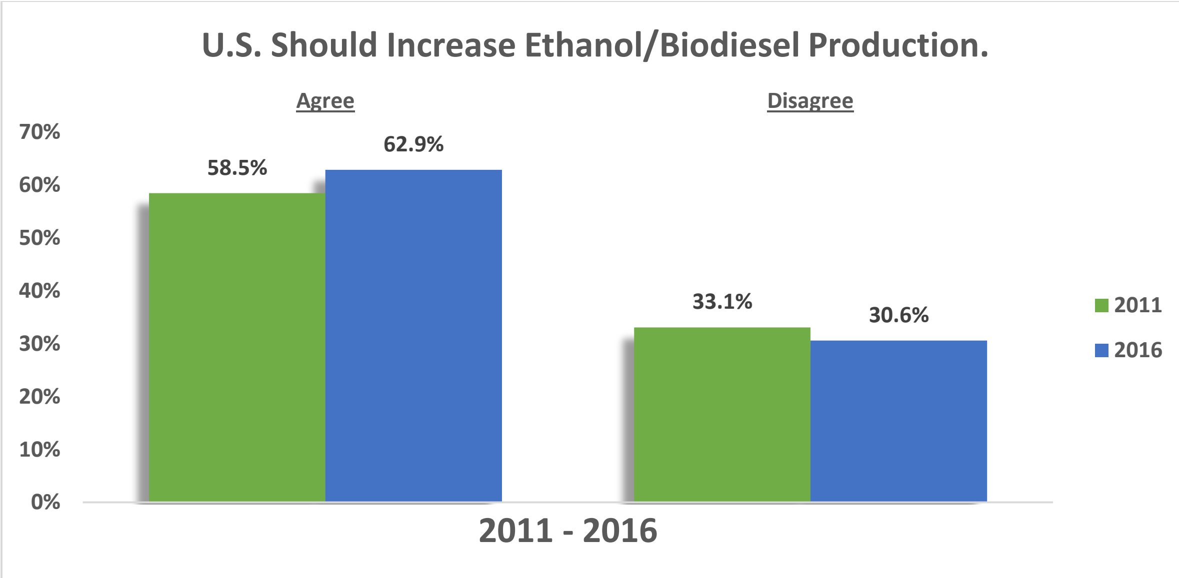


Figure 26

About 63% of respondents agreed that the US should produce more ethanol and bio-based fuels (Figure 26), a slight increase since 2011.

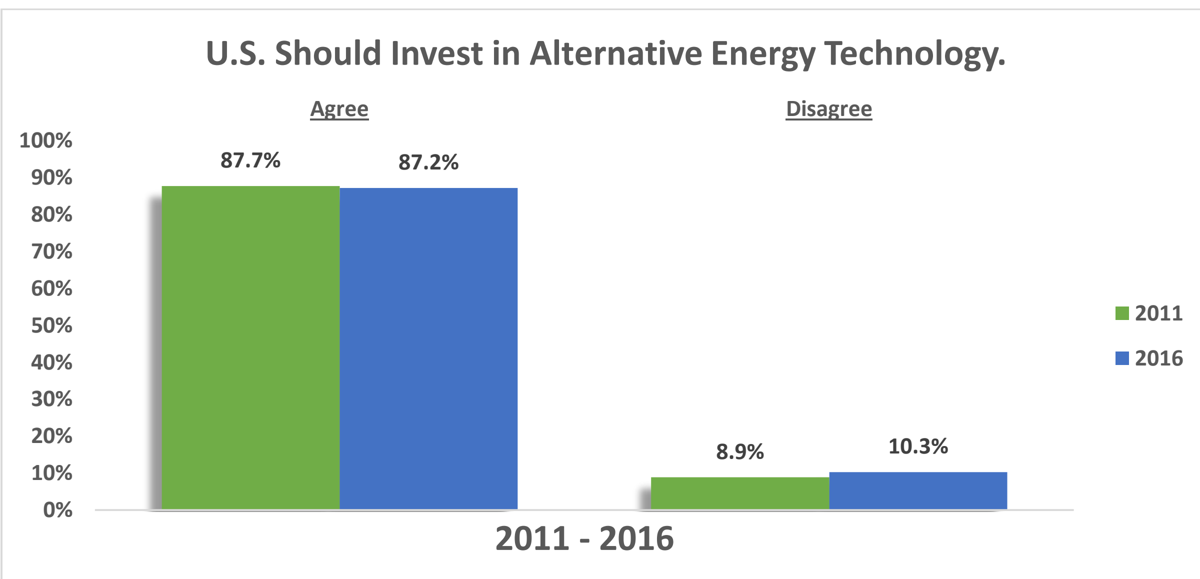


Figure 27

A large majority (87%) agreed that the US should invest in technology that captures wind, solar and water energy (Figure 27) with little change since the 2011 survey.

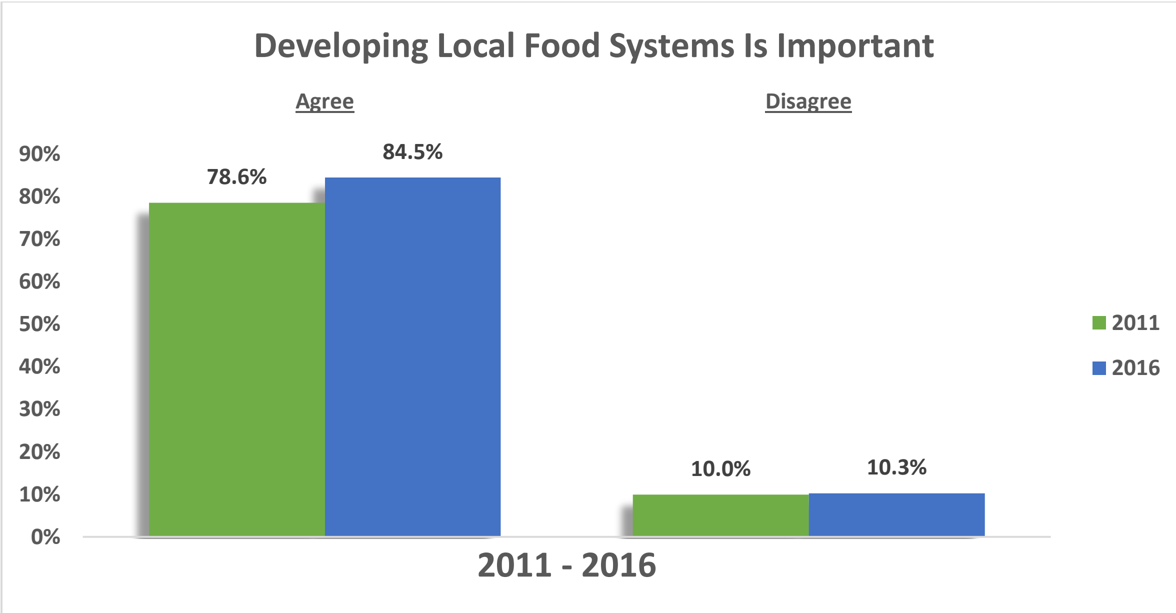


Figure 28

Figure 28 shows that nearly 85% of respondents agreed that developing and supporting local food systems is important, and this share was up somewhat from 78.6% in 2011.

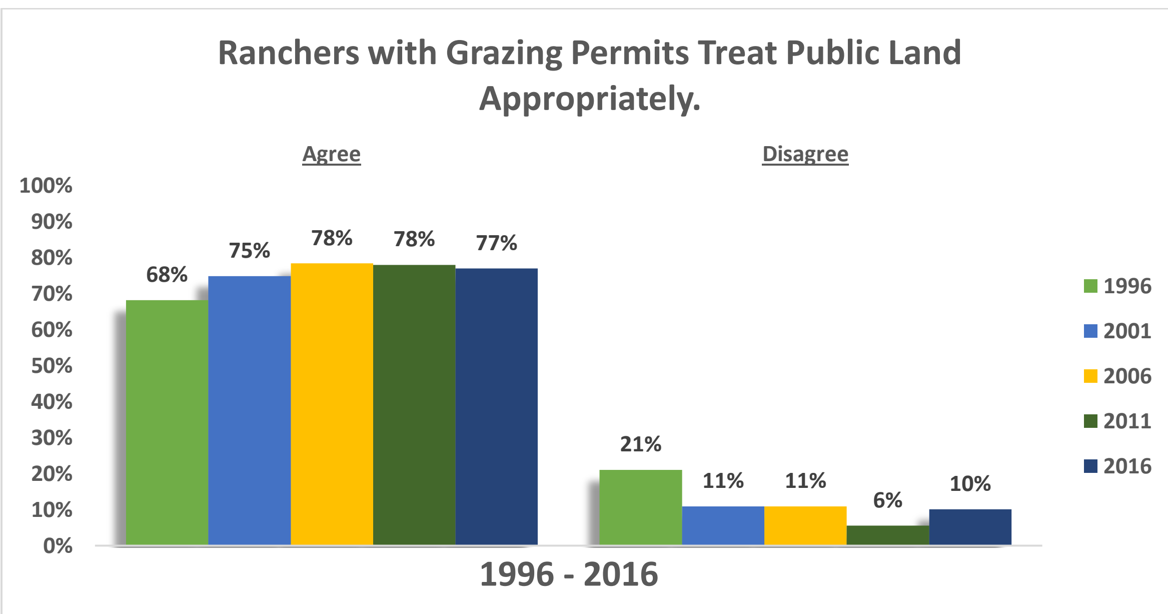


Figure 29

Figure 29 shows that more than three-fourths of the respondents (77%) agreed that ranchers with permits to graze public land treat the land appropriately, similar to responses from the last three surveys. It is interesting to note how many respondents chose the "don't know" response (13%).

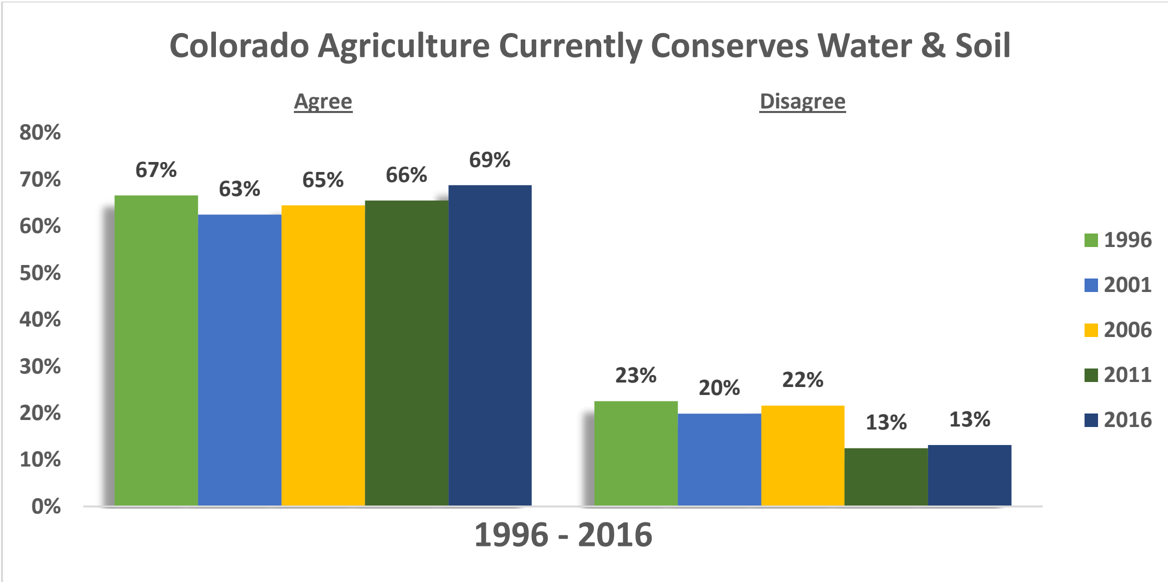


Figure 30

Nearly 70% of respondents agreed that agricultural practices to conserve water and soil are effective, similar to previous years' results (Figure 30), but again, it seems a high share of respondents chose Don't know (18%) suggesting there is some lack of awareness on this issue.

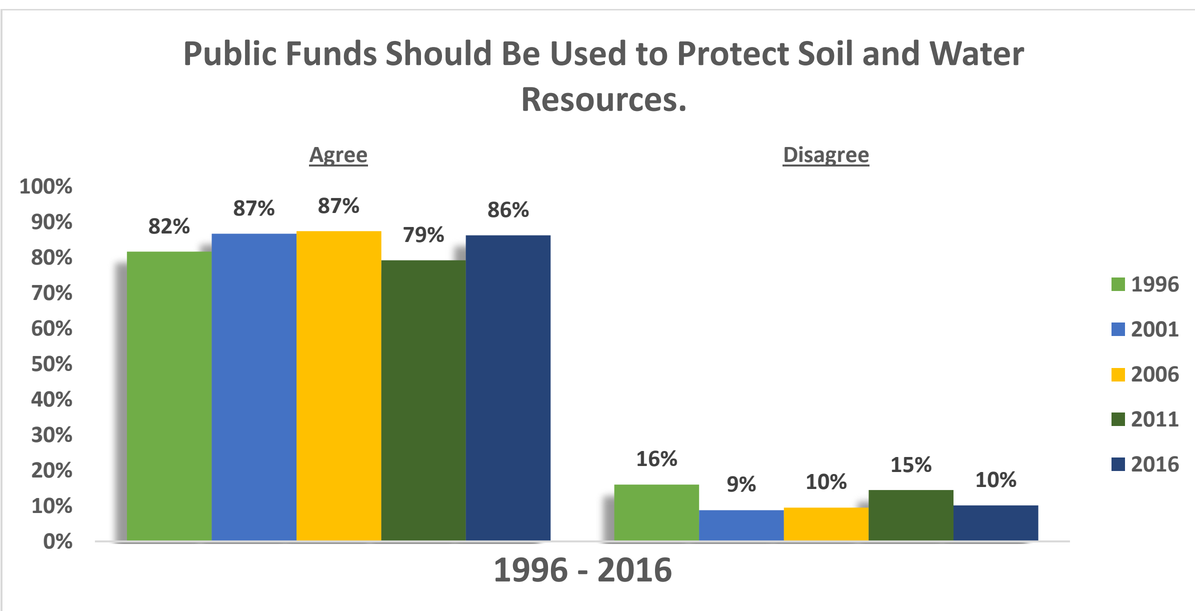


Figure 31

Over 85% of respondents agreed that public funds should be used to help farmers and ranchers improve wildlife habitat and conserve soil and water resources (Figure 31), up slightly from 2011 and back on par with 2001 and 2006 results.

Allocation of Water

18. Water for growth is often transferred from agriculture. Providing water to agriculture can mean constraints on other uses of water. If it were a dry year, please rank your top three uses of water.

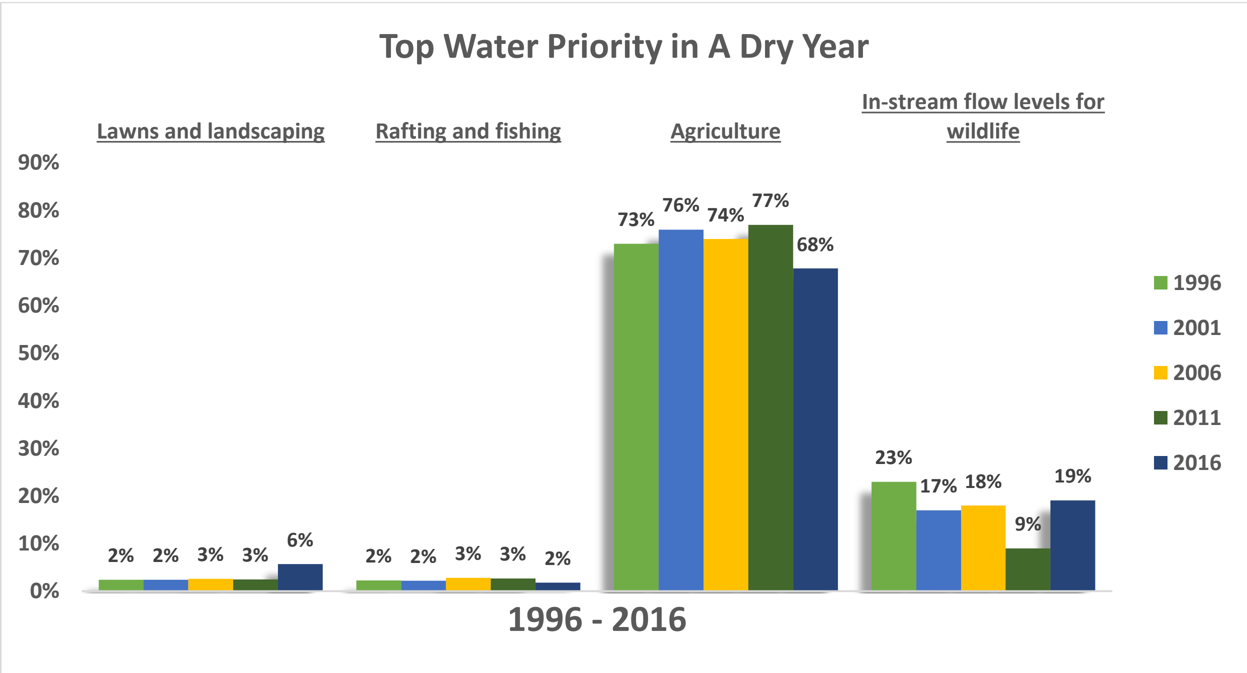


Figure 32

Respondents were asked which uses of water would be their top priority in a dry year (Figure 32)—lawns and landscaping; rafting and fishing; agriculture; and maintaining in-stream flows. Sixty-eight percent indicated that agriculture should be the top priority for water allocation in a dry year (down somewhat from previous years' responses), while 19% said in-stream flow levels should be the top priority (more than 2011, but on par with previous years—18% in 2006; 17% in 2001; 23% in 1996). Both lawn and landscaping uses and rafting and fishing were seen as low priorities for water use (between 2 and 3%, and consistent with previous years).

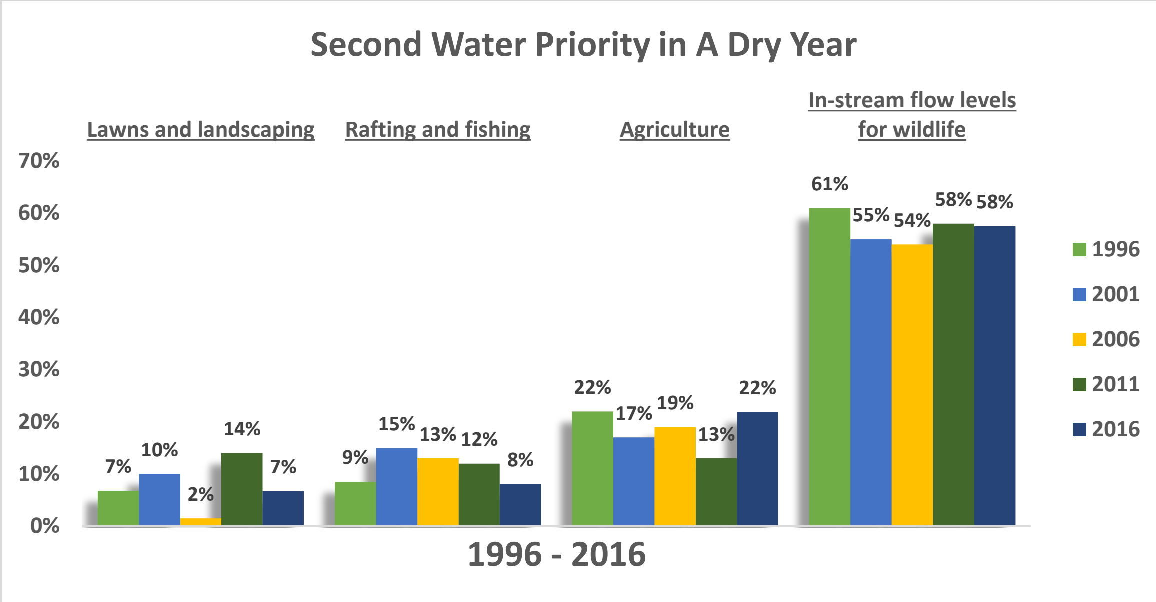


Figure 33

When asked about their second most important priority for water in a dry year (Figure 33), 58% of respondents indicated their priority would be in-streams flows, followed by agriculture (22%), rafting and fishing (8%), and then lawns and landscaping (7%).

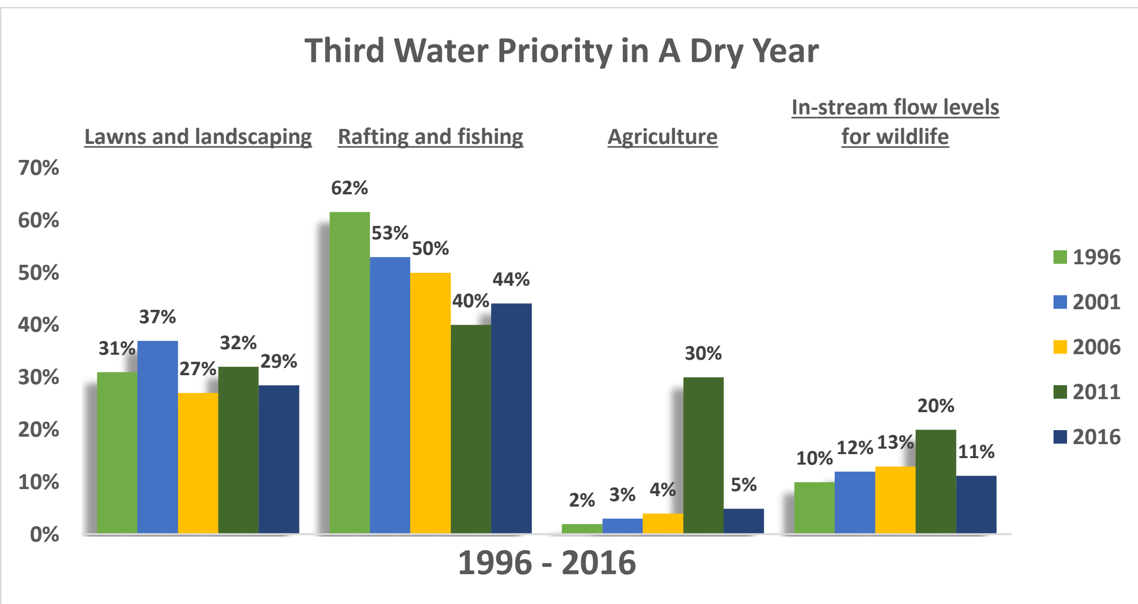


Figure 34

Lastly respondents rated their third top priority for water use in a dry year (Figure 34), which was most commonly rafting and fishing (44%), followed by lawns and landscaping (29%), in-stream flows (11%) and agriculture (5%).

Sources of Information About Agriculture

Trust in sources of information on food and agriculture are interesting to those stakeholders who play those roles, and those who may seek to partner with organizations that do hold a trusted position in the eyes of the public. Given the increased scrutiny of food systems and policy alternatives, this confidence may be an important consideration of the role which these institutions and organizations play in shaping future discussions related to ag literacy, policy and public relations.

The next set of questions explore those perceptions.

19. Here is a list of sources where you might receive information about agriculture. How likely are you to trust information from the following sources?

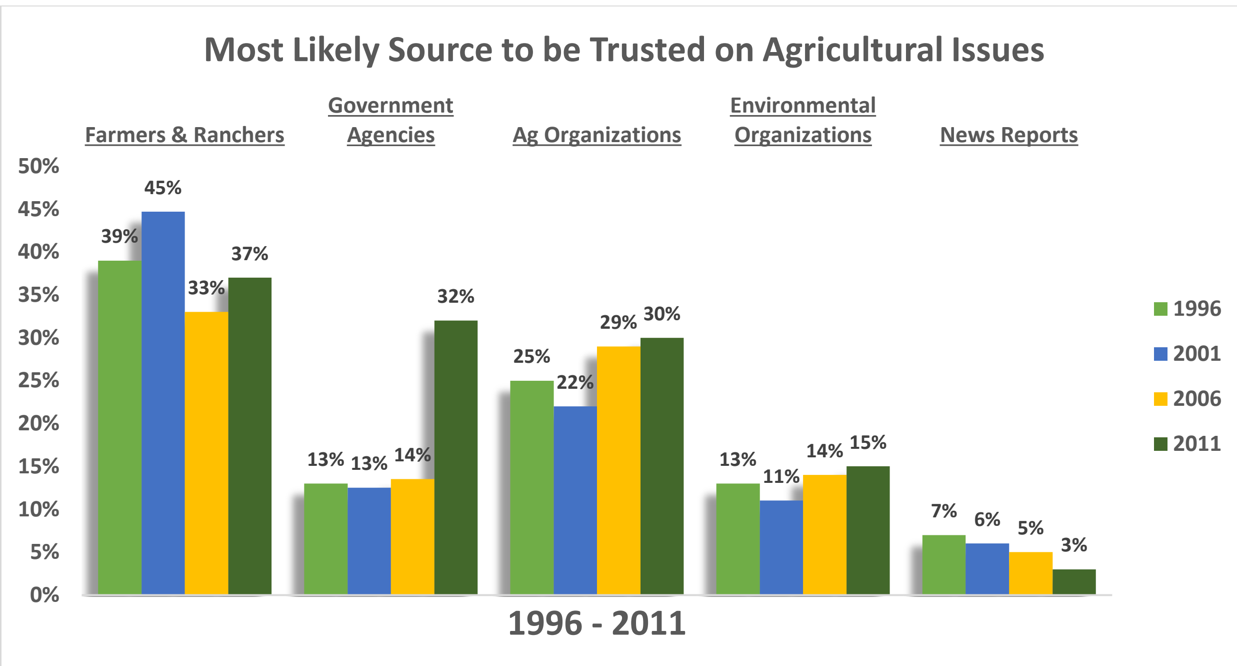


Figure 35

In 2011, a number of new categories were added to this question. Results were analyzed both with and without these categories to offer a history of responses as well as a more complete list of organizations in recent surveys. Figure 35 shows responses from 1996-2011 for comparison.

Figure 36 and Table 12 show results for the previous two surveys. *Note*: two additional categories were added in 2016, Agriculture Trade Groups and Agriculture Commodity Groups.

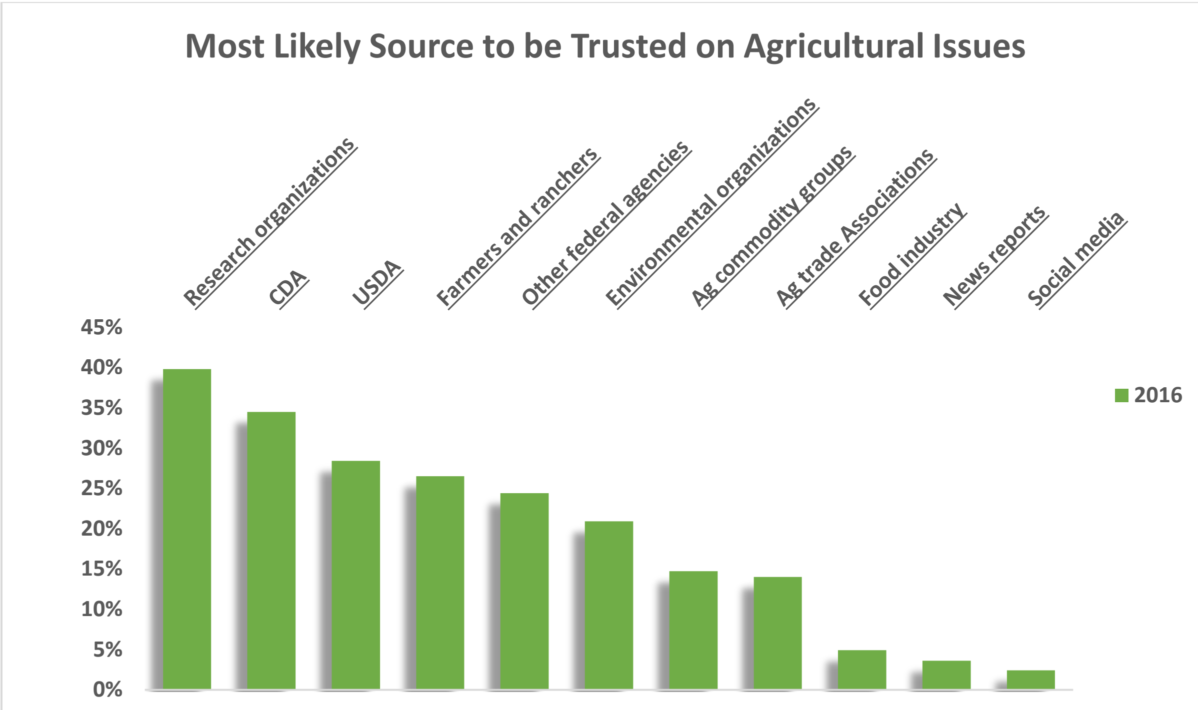


Figure 36

	Universities and Research orgs	CDA	USDA	Farmers and ranchers	Other federal agencies	Environmental organizations
2011	45%	38%	25%	37%	20%	15%
2016	40%	35%	28%	27%	24%	21%
	Ag commodity groups	**Ag trade Associations**	**Food industry**	**News reports**	**Social media**	
2011	NA	NA	5%	4%	3%	
2016	15%	14%	5%	4%	2%	

Table 12

When given a list of sources where they might receive information about agriculture, two in five respondents (40%) indicated that university and research organizations were the most trustworthy sources of information on agriculture, followed by the Colorado Department of Agriculture (35%), the USDA (28%) and farmers and ranchers (27%). The food industry (only 5% cited as most trustworthy), news reports (4%) and social media (2%) do not seem to garner much trust.

20. How likely are you to trust information from the following sources about food quality, nutrition and safety?

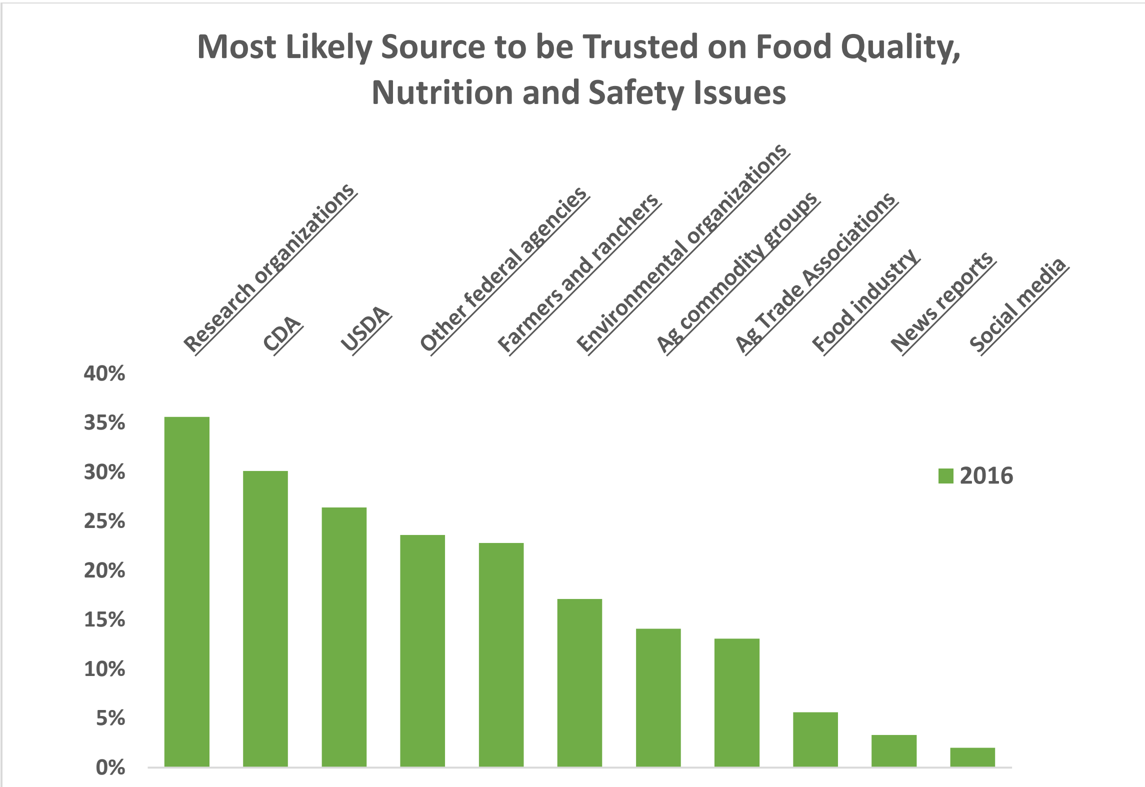


Figure 37

	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	NA	NA	6%	6%	2%	
2016	14%	13%	6%	3%	2%	

Table 13

This new question (as of 2011) illustrates that trust varied when asking about Agriculture vs. Food issues. 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.

Familiarity with the Colorado Department of Agriculture

21. a) *How do you value the activities/programs of the Colorado Department of Agriculture?

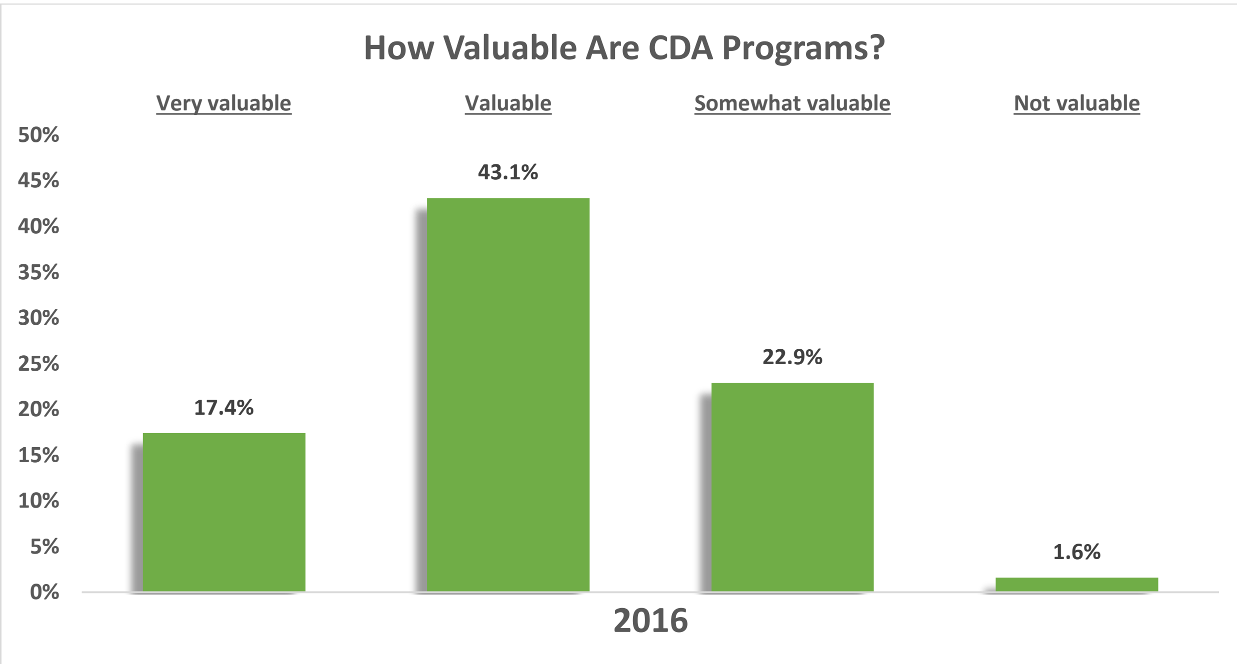


Figure 38

In the past, respondents have been asked about their familiarity with Colorado Department of Agriculture (CDA) programs. However, they have not been asked how they value such programs. Follow-ups to this question (see below) highlight an interesting trend. While only 9% of respondents said they were able to name any specific CDA programs, well over half believe they are valuable or very valuable (60.5%).

b) *Can you list any specific programs that the Colorado Department of Agriculture operates?

9% - Yes, 73% - No, 18% - Don't know

c) ***List the names of three programs that come to mind. (For an unabridged list of responses to this question see Appendix B)**

4-H, Colorado Proud, Farmer's Markets, State Fair, Water Conservation, etc.

Direct Markets in Agriculture

To see how access to Colorado food products influenced attitudes, this survey explored the popularity of different food markets among Coloradans, including how commonly they are visited, what share of food dollars are spent in each market and a bit more about perceptions of local foods.

22. Please indicate all markets and sources you visited for food purchases for your home in the last year.

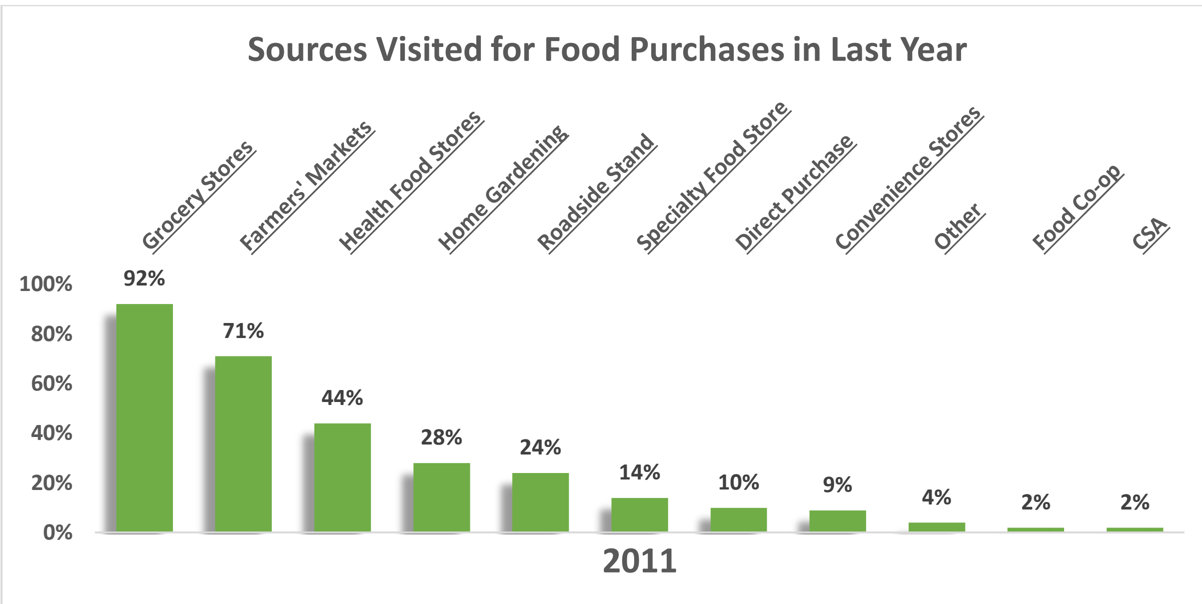


Figure 39

This question was introduced in 2011. However, a number of the categories were changed in 2016. Thus, a graph from each year has been provided for comparison (2011 – Figure 39, 2016 – Figure 40). Arguably, the most important piece of information to note here is the apparent drop in farmers' market participation from 71% in 2011 to 50.8% in 2016. Though still a tiny share of the market, it is also interesting to note that CSA involvement has increased since 2011.

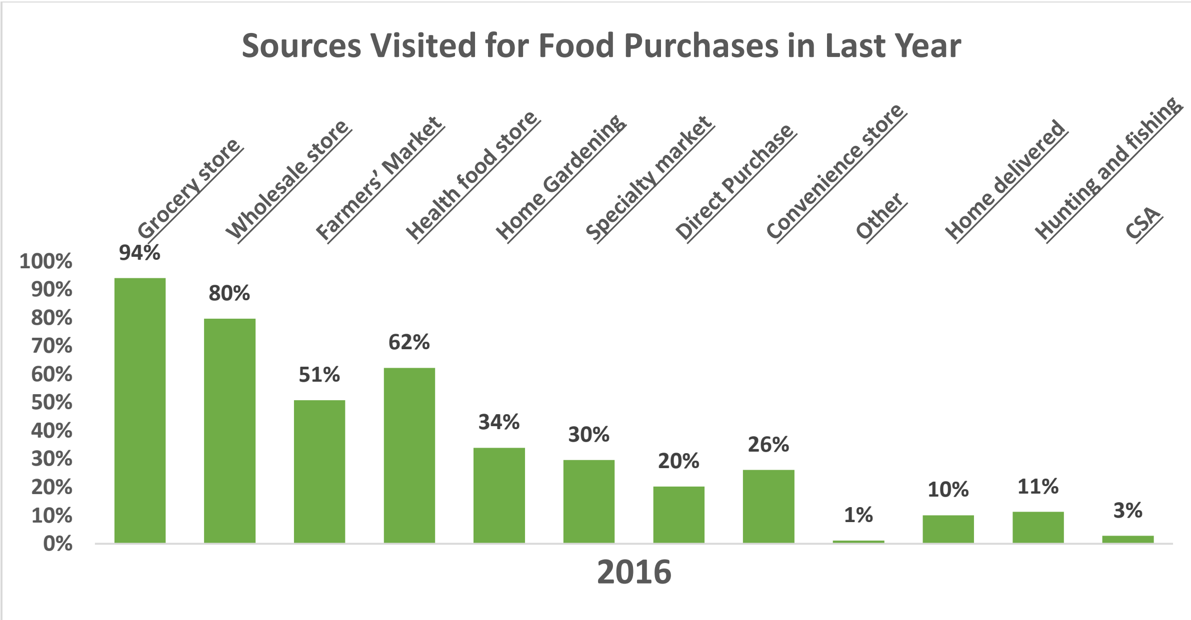


Figure 40

It should be noted that grocery and wholesale stores are still the dominant source of food purchases, but specialty markets, health food stores and home deliveries are making inroads. Plus, many survey respondents are engaging in a wide array of direct market food markets. For example, 51% have purchased food from a farmers' market, 23% have made food purchases directly from a farm or ranch (direct purchase and CSA shares). Another interesting change the survey began to track in 2016 is the share of Colorado households gardening (34%) and/or hunting/fishing (11%) for some of their own food.

23. *Approximately what share of your household food dollars is spent at the following establishments?

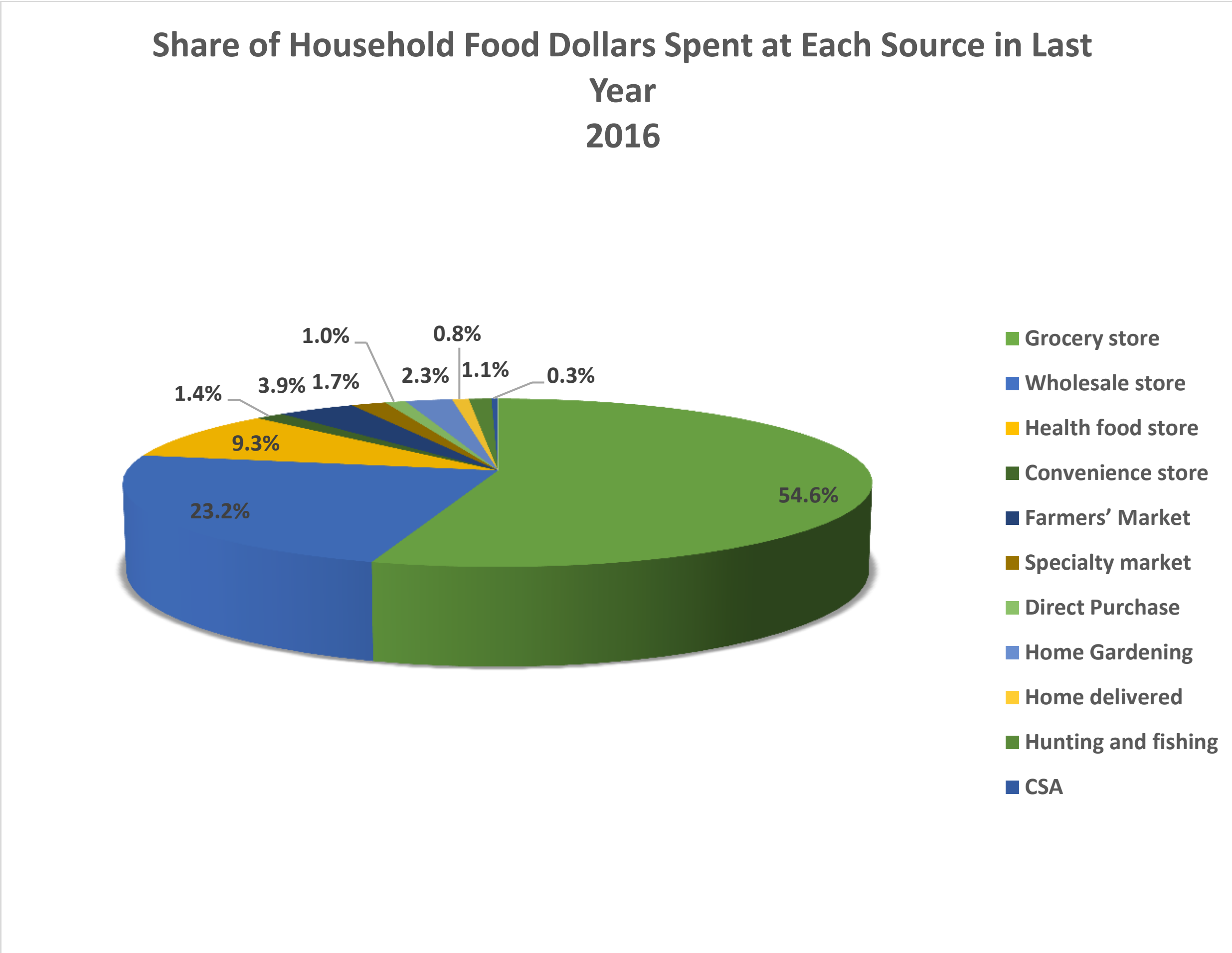


Figure 41

In an attempt to better understand household food consumption, a new question asking respondents to estimate the share of their food dollars spent in different markets was added in 2016. As should be expected, grocery and wholesale stores also dominate in this area, accounting for more than 75% of household spending on food. It should be noted how much smaller the food dollar shares are than participation shares, so many are participating in alternative markets, but far less of the state's food dollars go to markets outside mainstream retail food stores.

24. a) When you shop for fruits, vegetables, meat, dairy and other food products, what does local mean to you?

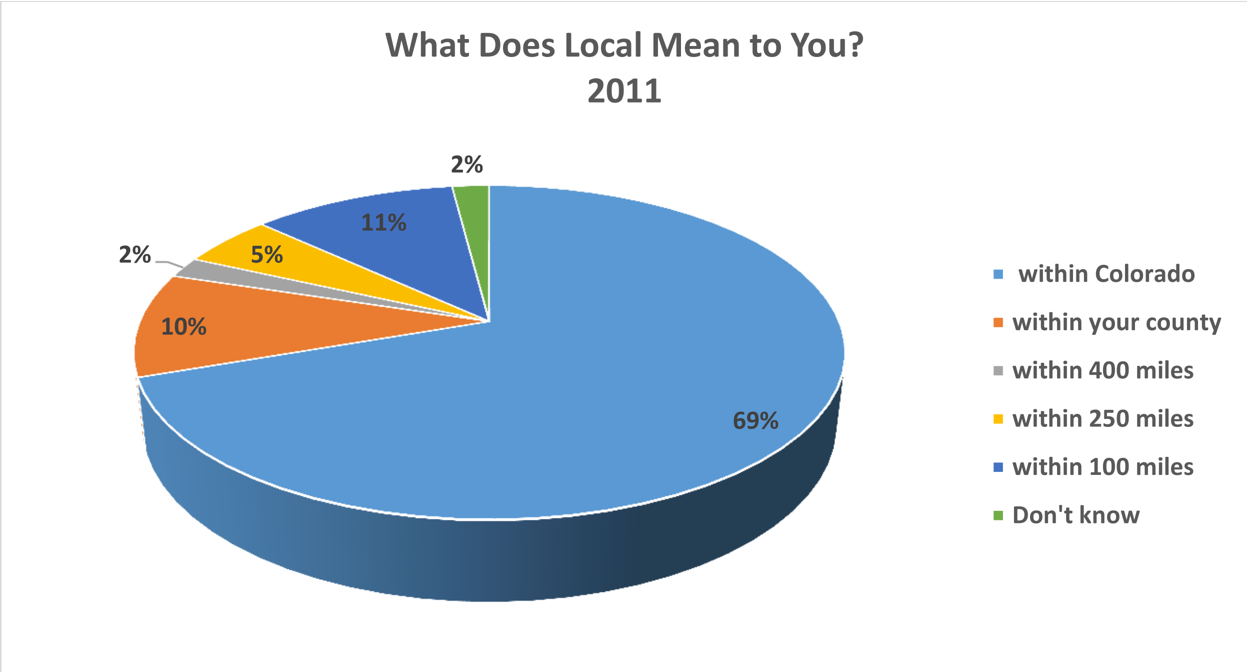


Figure 42a

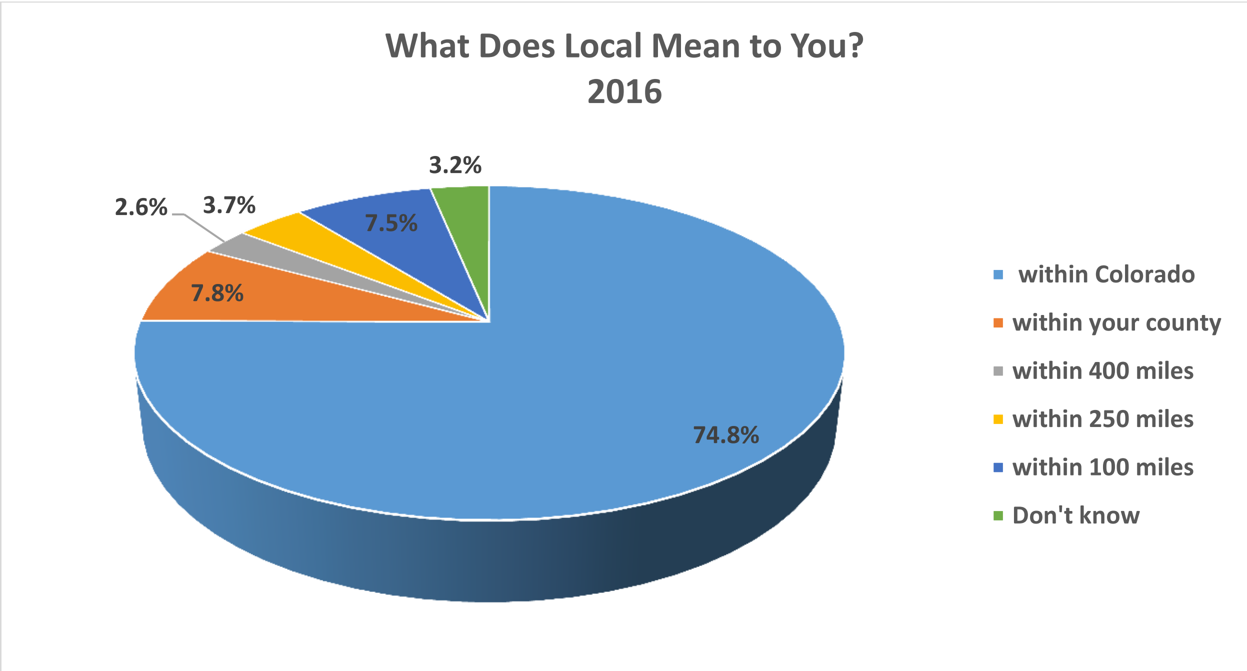


Figure 42b

Because there are so many different working definitions of "local food," starting in 2011 we asked survey respondents to indicate how they defined local in terms of their food purchases, when given the options listed in Figures 42 a and b.

Overwhelmingly, 74% of respondents in 2016 (Figure 42b) said that local meant that the food was produced in Colorado, up from 69% in 2011 (Figure 42a). Only small percentages indicated any specific distance from their residence as criteria. When distances were chosen, the most commonly chosen distance was that the food was produced within 100 miles of where the respondent purchased it.

b) *When purchasing food products labeled as local, how confident are you that they are actually local?

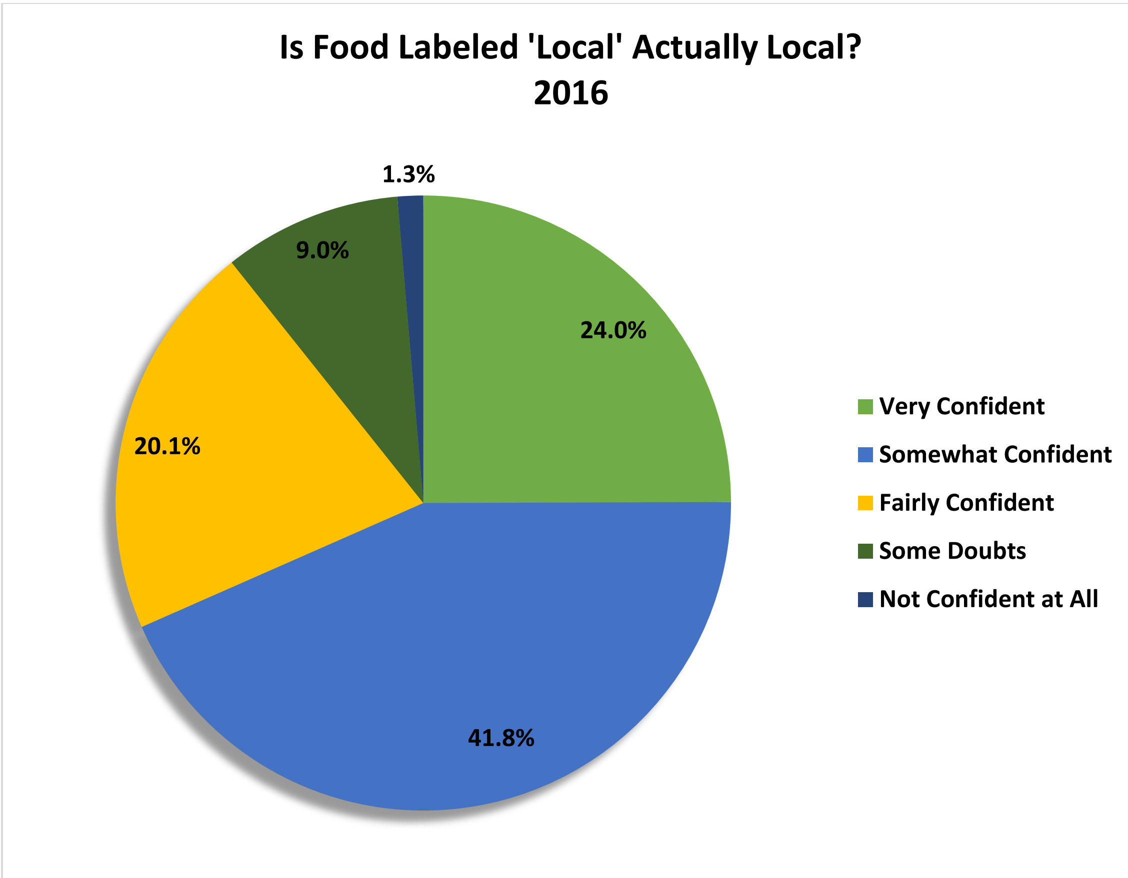


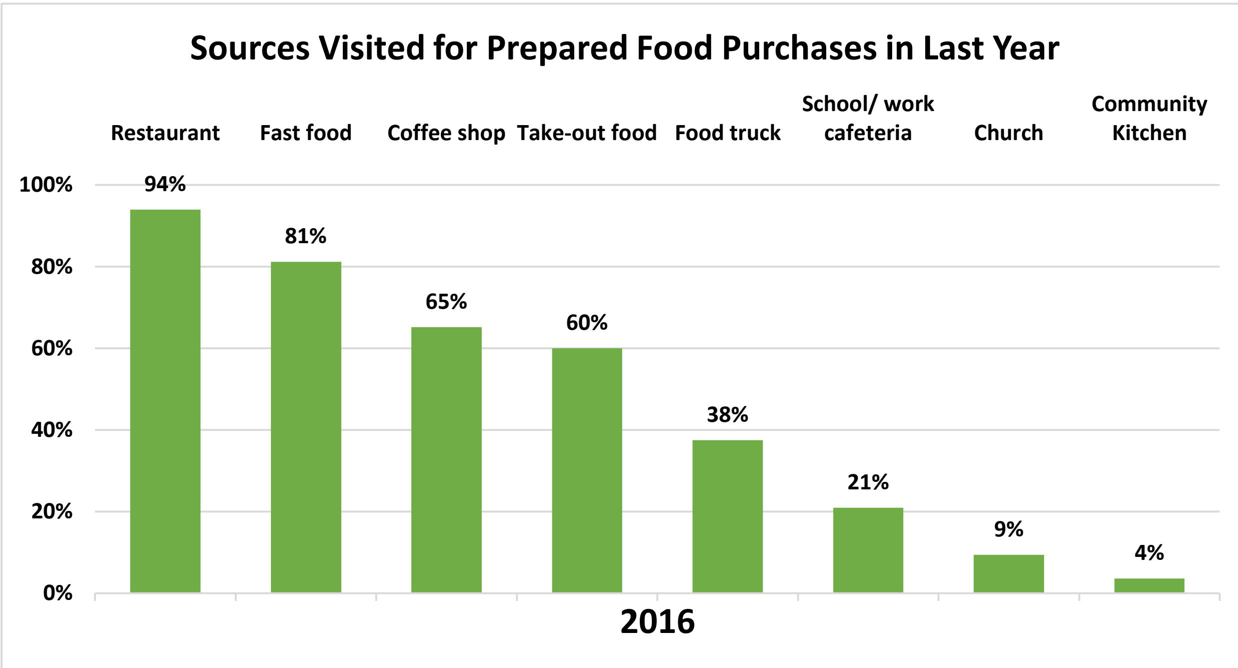
Figure 43

Another question to explore the confidence consumers have in local labels was added in 2016. Just over 65% of respondents are Somewhat or Very confident that locally labeled products are, in fact, local. Only about 10% have Some doubts or are Not at all confident.

Factors Influencing Purchase Behavior

Beyond exploring the popularity of different food markets, there is also interest in understanding food purchases away from home given that is where Coloradans now spend over half of their food dollars.

25. a) *Please indicate all markets and sources (away from home) that your family visited for food purchases in the last year (choose all that apply).



*Note that frequencies sum to greater than 100% because respondents chose all that applied.

Figure 44

Because food away from home has become a larger share of food purchases, this question was asked for the first time in 2016. It is very similar to an earlier question about household food purchases, but this one focuses on household food spending outside the home. It is interesting to note that nearly 95% of households visited restaurants in the last year. Likewise, just over 80% visited fast food establishments, 65% visited coffee shops and 60% bought take-out food. Most other venues were visited by far fewer people.

b) ***Approximately what share of your household food dollars (spent away from home) are at the following establishments?**

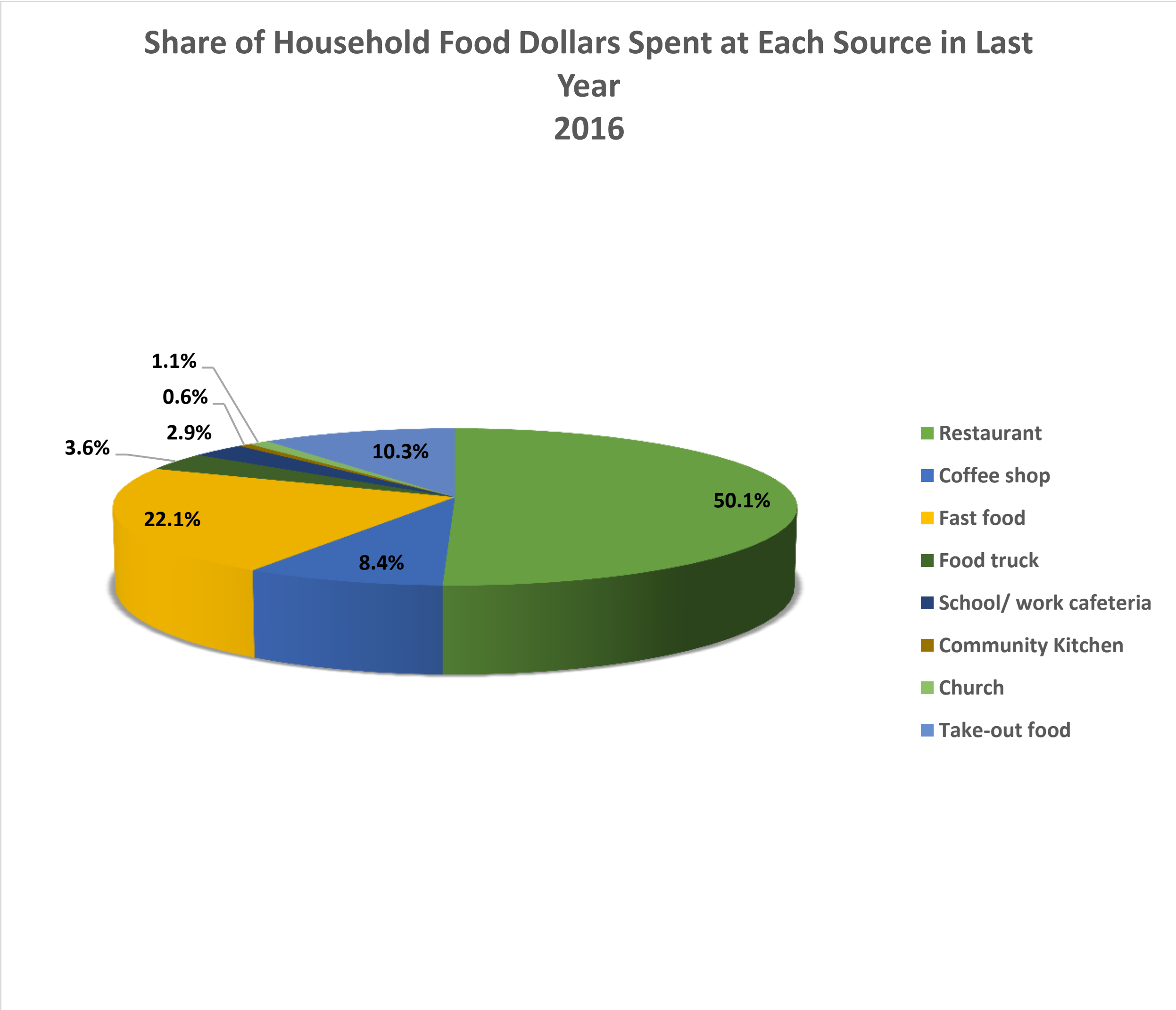


Figure 45

Another question added in 2016 relates to food dollars spent away from home (which by US Bureau of Labor Statistics estimates is hovering at one-half of food expenditures). The most noteworthy piece of information here is that Coloradans are spending just more than half of their annual away-from-home food dollars at restaurants (or about 25% of all food dollars). Once one takes fast food and take-out into consideration, the sum of all restaurant expenditures totals more than 80% (or 40% of all food dollars) with only a small portion spent at institutional food service channels.

26. When you shop for fruits, vegetables, meat and dairy products, how important are the following factors in your decision?

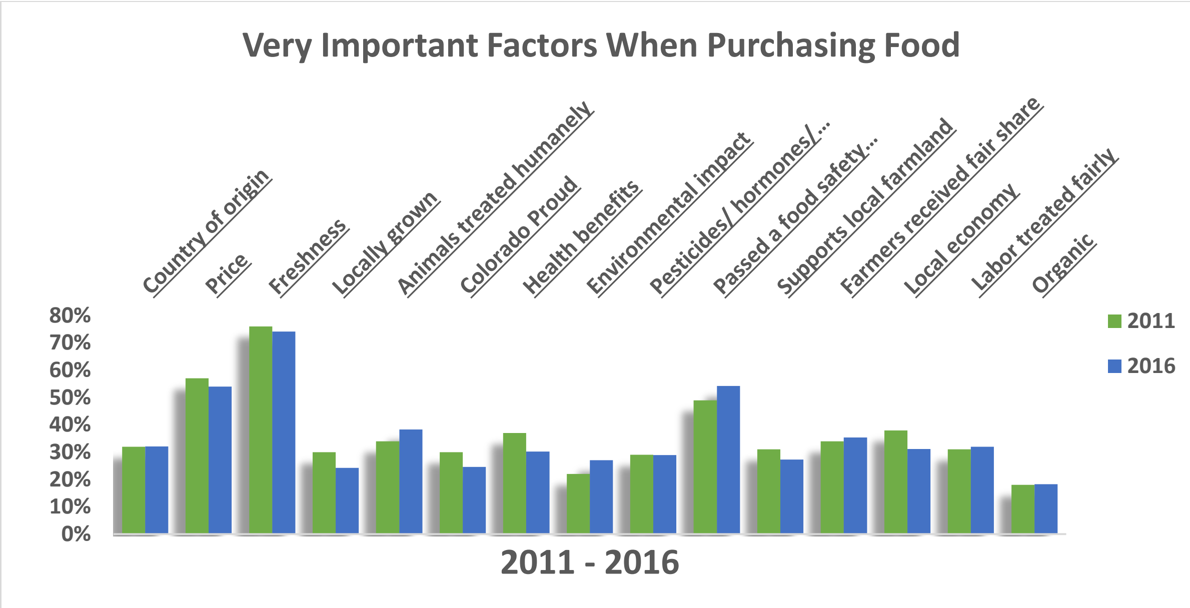


Figure 46

	Origin	Price	Freshness	Local	Animal treatment
2011	32%	57%	76%	30%	34%
2016	32%	54%	74%	24%	38%
	CO Proud	**Health**	**Environmental impact**	**Chemical usage**	**Safety inspection**
2011	30%	37%	22%	29%	49%
2016	25%	30%	27%	29%	54%
	Local farmland	**Farmer's fair share**	**Local economy**	**Employee treatment**	**Organic**
2011	31%	34%	38%	31%	18%
2016	27%	35%	31%	32%	18%

Table 14

Figure 46 and Table 14 show that nearly three-quarters of respondents make their purchases based on product freshness (74%), followed by price (54%) and food safety assurances (54%). Supporting the local economy was a priority for 31%, surpassing the product’s health benefits (30%). Locally grown products and Colorado Proud product were priorities for 25% of all respondents (which may reinforce the interest in supporting the local economy), while organic production was an important factor to less than one in 5 respondents (18%).

27. *What is your level of awareness about each of the following products?

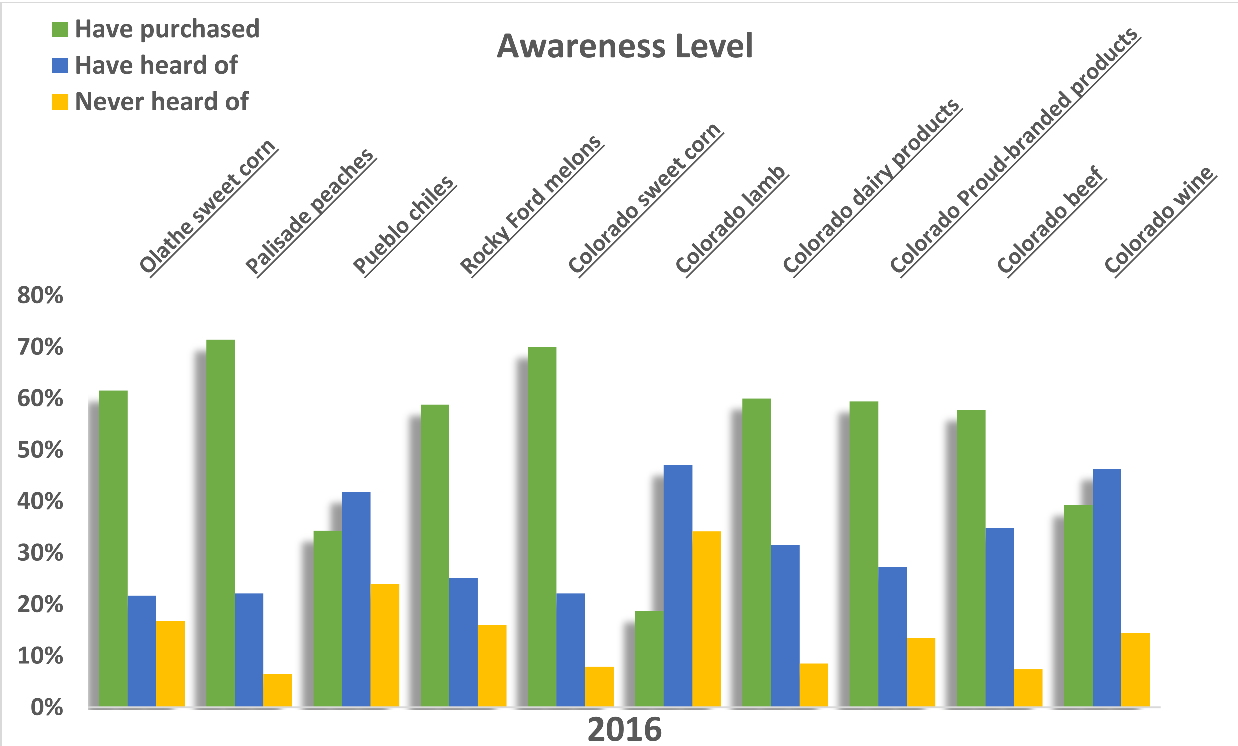


Figure 47

	Olathe sweet corn	Palisade peaches	Pueblo chiles	Rocky Ford melons	CO sweet corn
Have purchased	62%	71%	34%	59%	70%
Have heard of	22%	22%	42%	25%	22%
Never heard of	17%	7%	24%	16%	8%
	CO lamb	CO dairy	CO Proud	CO beef	CO wine
Have purchased	19%	60%	59%	58%	39%
Have heard of	47%	32%	27%	35%	46%
Never heard of	34%	9%	13%	7%	14%

Table 15

In recent years, agricultural producer groups have sought to increase brand awareness and sales of a wide range of Colorado products. These efforts appear to be successful as awareness and trial of branded products are high among Coloradans. It is of value to note that only three products may have the challenge of poor perceptions, as the number of people who had heard about a product exceeded the number who had purchased it: Pueblo Chiles, Colorado Lamb and

Colorado Wine. These products must move beyond raising awareness to changing perceptions about the quality and demand for these goods.

28. *For each of the following products, designate the start <u>and</u> end of the season they are available from Colorado fruit and vegetable growers.

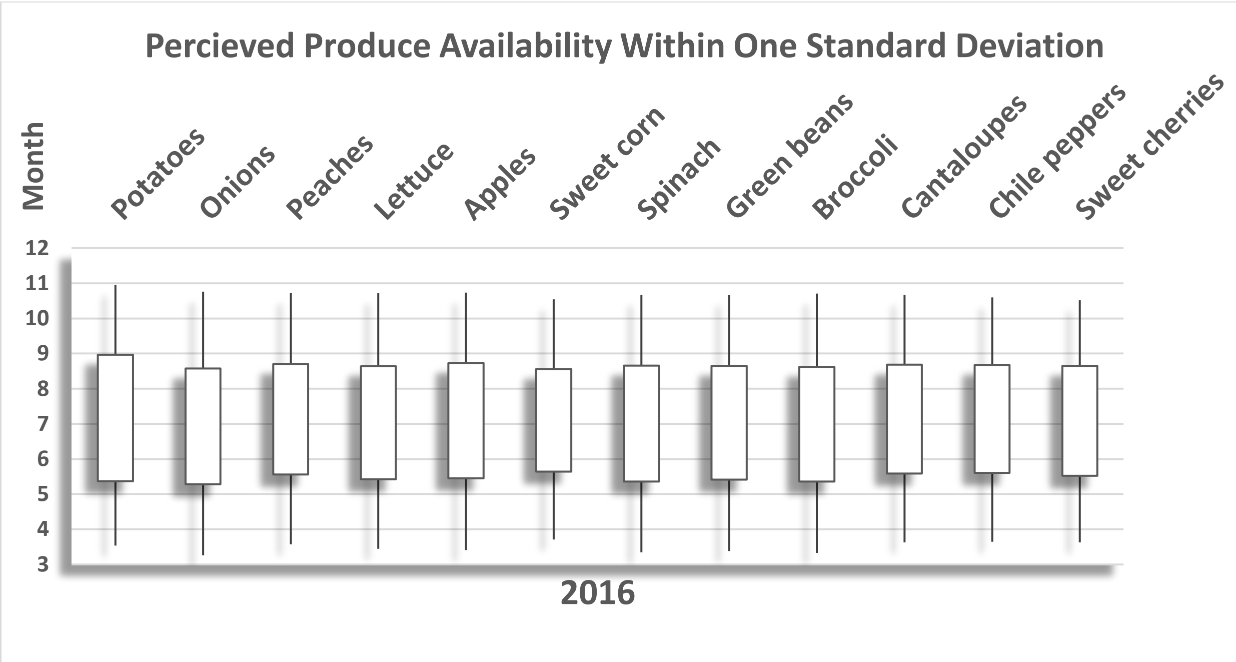


Figure 48

	-1 Std. Dev.	Avg. Start Date	Avg. End Date	+1 Std. Dev.
Potatoes	17-Mar	11-May	30-Aug	30-Oct
Onions	8-Mar	9-May	18-Aug	24-Oct
Peaches	18-Mar	17-May	22-Aug	22-Oct
Lettuce	14-Mar	13-May	20-Aug	22-Oct
Apples	13-Mar	14-May	23-Aug	23-Oct
Sweet corn	22-Mar	20-May	17-Aug	17-Oct
Spinach	11-Mar	11-May	20-Aug	21-Oct
Green beans	12-Mar	13-May	20-Aug	21-Oct
Broccoli	10-Mar	11-May	19-Aug	22-Oct
Cantaloupes	19-Mar	18-May	21-Aug	21-Oct
Chile peppers	20-Mar	19-May	21-Aug	19-Oct
Sweet cherries	19-Mar	16-May	20-Aug	16-Oct

Table 16

This question on the typical season for availability of fresh produce, also new in 2016, was designed to gauge consumer’s knowledge. Figure 48 plots the average start and end dates of responses (bottom and top of the box, respectively). The whiskers extend one standard deviation outward from each of these endpoints. As can be seen from Figure 48 and Table 16, responses for all these different agricultural products varied little but the standard deviations were broad, indicating a lack of awareness among Coloradans about local, seasonal product availability. This is of some concern given the strong interest in local offerings noted by respondents in other sections of the survey.

29. a) *What would motivate you to buy and eat more Colorado fruits and vegetables?

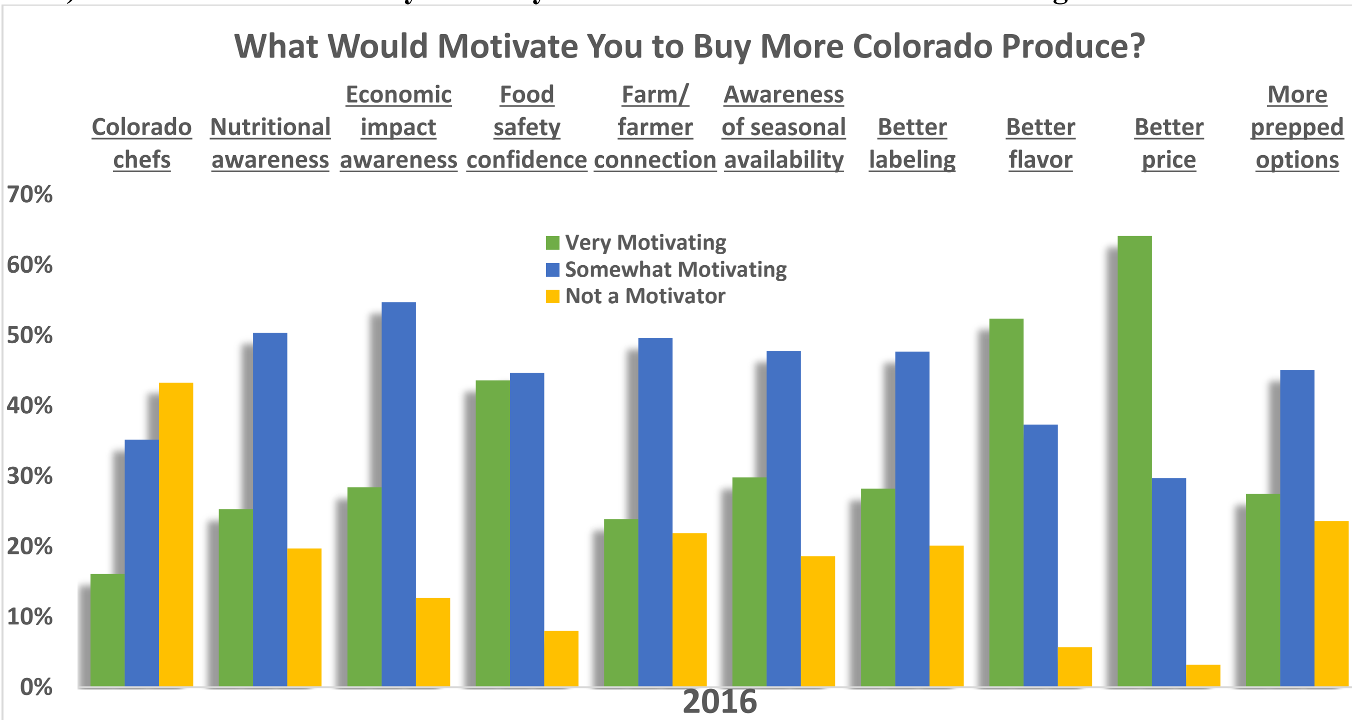


Figure 49a

	CO chefs	Nutrition	Economic impact	Safety confidence	Farm connection
Very Motivating	16%	25%	28%	44%	24%
Somewhat Motivating	35%	50%	55%	45%	50%
Not a Motivator	43%	20%	13%	8%	22%
	Seasonal availability	**Better labeling**	**Better flavor**	**Better price**	**Prepped options**
Very Motivating	30%	28%	52%	64%	28%
Somewhat Motivating	48%	48%	37%	30%	45%
Not a Motivator	19%	20%	6%	3%	24%

Table 17

Another question added in 2016 explored what motivated Coloradans to buy and eat more produce (or, more broadly, Colorado food products). As can be seen in Figure 49a and Table 17, a majority of respondents consider Price (64%) and Flavor (52%) to be Very motivating factors, followed by food safety confidence, seasonal availability knowledge, nutritional and economic impact awareness. Involvement of Colorado chefs, prepped options, and the existence of a connection to the farm or farmer (not a motivator for 43, 24 and 22%, respectively) do not show much potential as methods to increase interest in Colorado produce.

b) ***What would motivate you to buy and eat more Colorado food and agricultural products?**

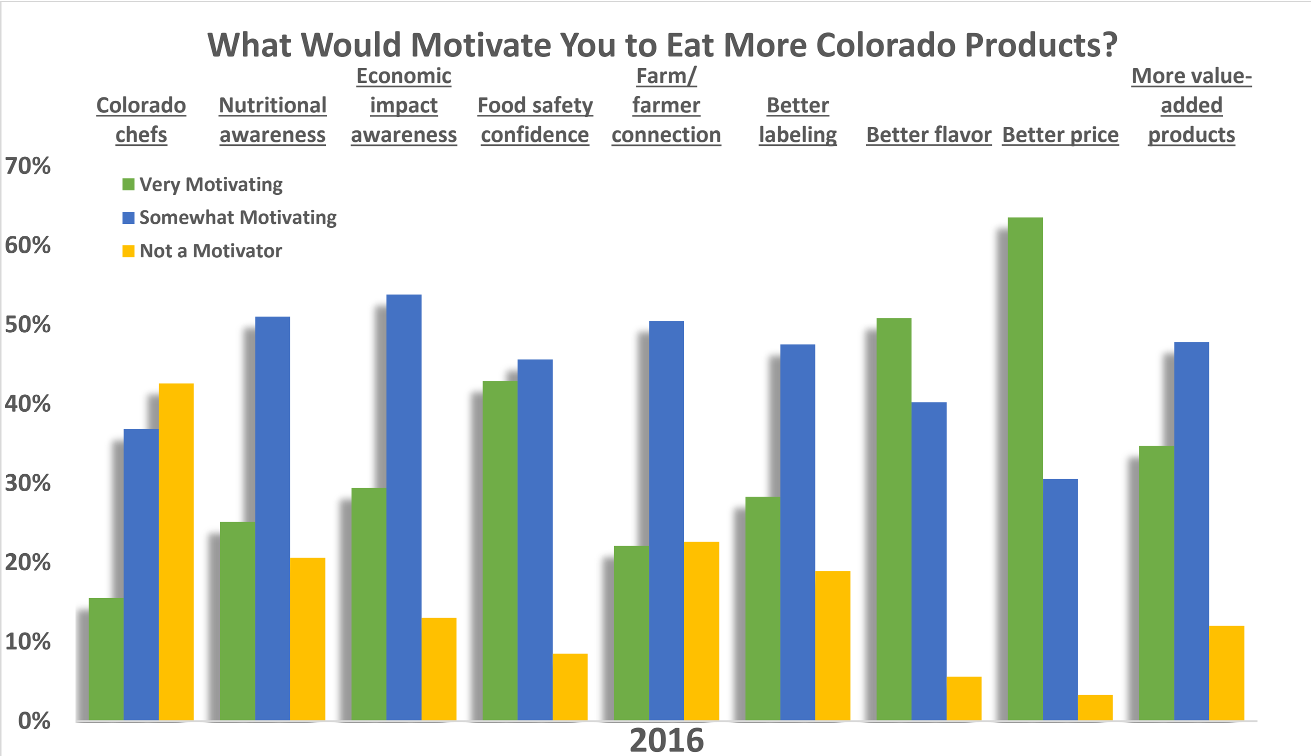


Figure 49b

	CO chefs	Nutrition	Economic impact	Safety confidence	Farm connection
Very Motivating	16%	25%	29%	43%	22%
Somewhat Motivating	37%	51%	54%	46%	51%
Not a Motivator	43%	21%	13%	9%	23%
	Better labeling	**Better flavor**	**Better price**	**Value-added**	
Very Motivating	28%	51%	64%	35%	
Somewhat Motivating	48%	40%	31%	48%	
Not a Motivator	19%	6%	3%	12%	

Table 18

Similar to the previous question, Figure 49b and Table 18, there are similar findings when we asked about the broader set of Colorado food products. Again, a majority consider Price (64%) and Flavor (51%) to be Very motivating factors for Colorado food products, followed by food safety confidence and more value-added options (a contrast from the lack of interest in prepped options for produce). As above, involvement of Colorado chefs and the existence of a farm connection are not motivators for many Coloradans.

30. *How would you rate the following as methods for you to get information about Colorado food and agricultural products?

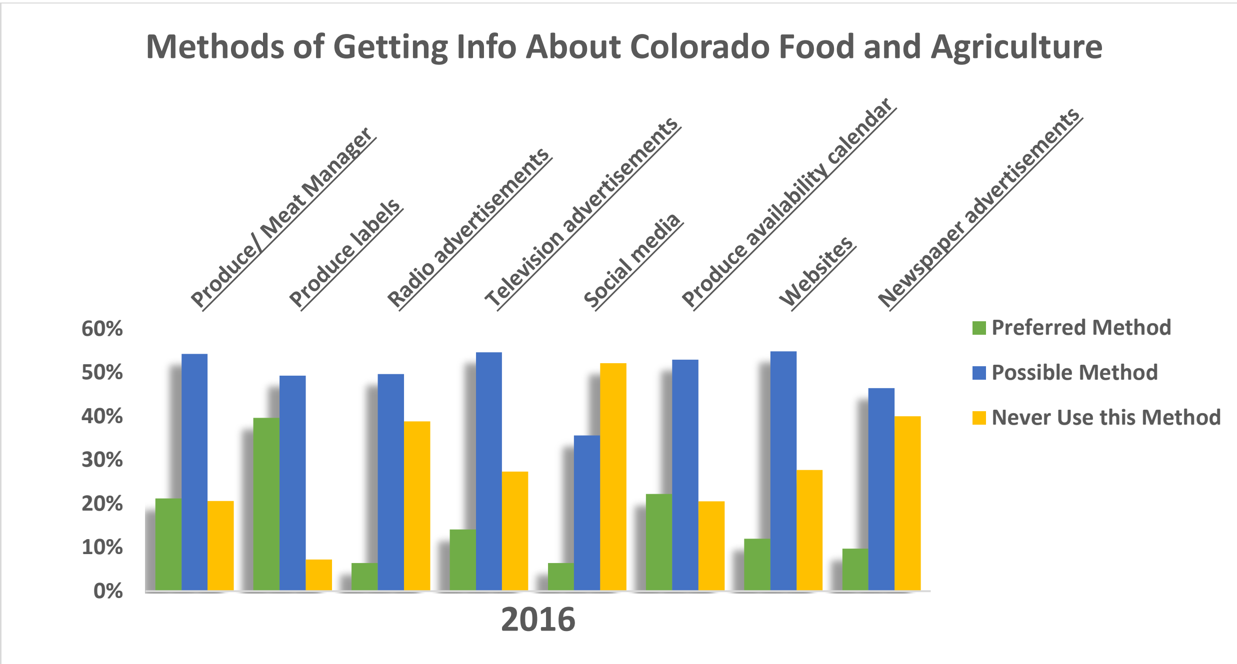


Figure 50

	Dept Mgr.	Labels	Radio	TV	Social media	Availability calendar	Web	Newspaper
Preferred Method	21%	40%	6%	14%	6%	22%	12%	10%
Possible Method	54%	49%	50%	55%	36%	53%	55%	46%
Never Use this Method	21%	7%	39%	27%	52%	21%	28%	40%

Table 19

In an attempt to understand where Coloradans get information regarding Colorado food and agriculture so that education and promotional programs could be targeted, another question was introduced in 2016. More respondents (40%) prefer Labels to any other method, followed by an Availability Calendar (22%) and information from Produce/Meat/Department Managers (21%). Somewhat surprisingly, Social Media (Never Used by 52%), Newspaper (Never Used by 40%) and Radio (Never Used by 40%) advertisements were the least preferred methods.

Agriculture and Quality of Life

The role of agriculture in Colorado's quality of life is one dimension that has been asked throughout the years and it appears that agriculture remains a key element of the quality of life respondents experience in Colorado. Although there have been some minor shifts over the last three survey periods, it is notable that there are consistently 85-90% of Coloradans who feel agriculture is either Very or Moderately important to their quality of life. This does represent a slight decrease from previous years, particularly the share rating it as Very important, but given the high share of in-migration and numerous respondents with a short history in the state, the persistent perception of agriculture benefitting quality of life is encouraging.

31. How important is the presence of ranches, farms and agriculture to the quality of life in Colorado?

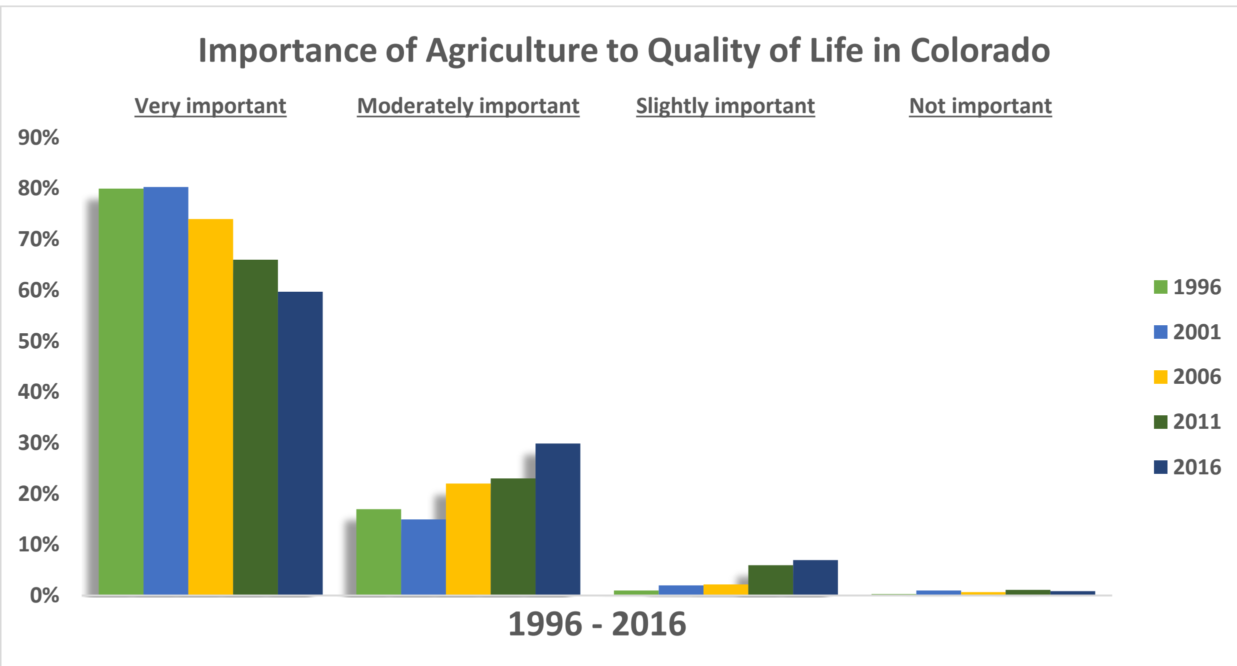


Figure 51

	1996	2001	2006	2011	2016
Very important	80%	80%	74%	66%	60%
Moderately important	17%	15%	22%	23%	30%
Slightly important	1%	2%	2%	6%	7%
Not important	0%	1%	1%	1%	1%

Table 20

32. a) Have you visited or participated in farm or ranch related recreation or education activities in the past year?

Although more detailed questions on agritourism were asked previously, in 2016, a shorter question to assess Coloradans participation levels in agritourism was added. Only a small percentage (14%) of respondents participated in such activities in the last year. However, when asked more broadly about frequency of participation overall, there appears to be more popularity (or at least interest).

b) How many times per year do you typically participate in farm or ranch related recreation or education activities?

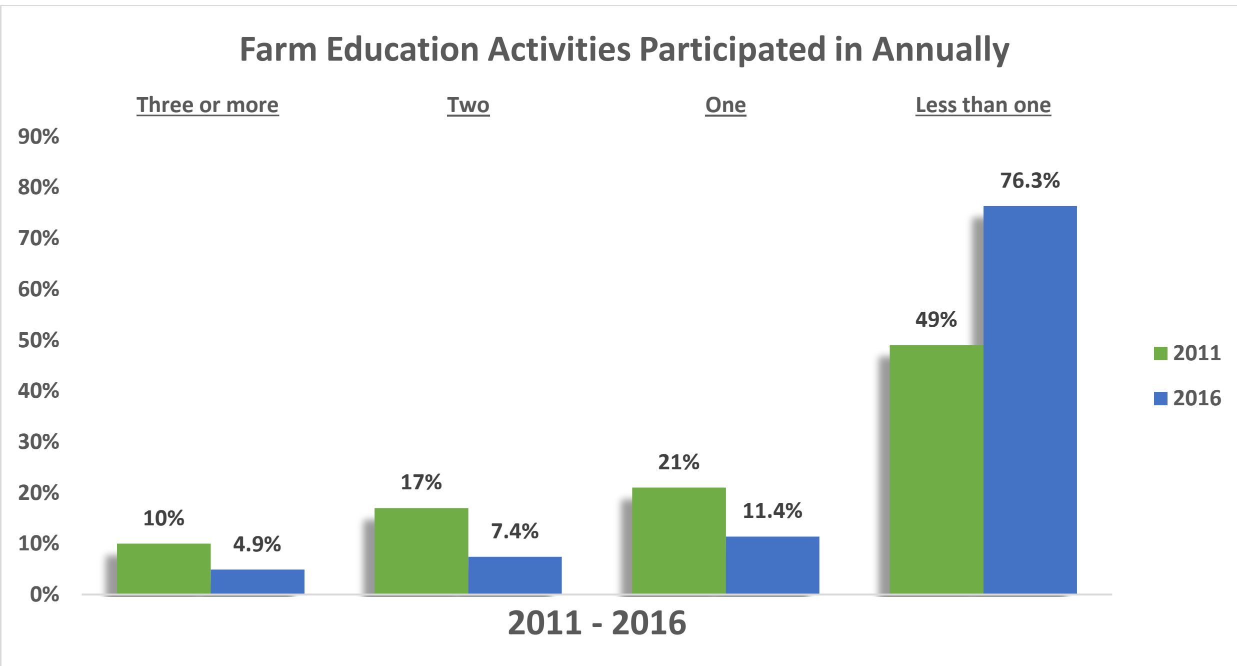


Figure 52

Figure 52 shows that more than three-fourths of respondents (76.3%) indicate they typically participate in agritourism activities one or fewer times per year. However, 23.7% indicated more frequent anticipated visitation. In general, about 10% more respondents claim to visit farms than have actually visited them in the last year.

33. Why do you participate in farm or ranch related recreation or education activities? (For a full list of verbatim reasons for participating in these activities see Appendix C)

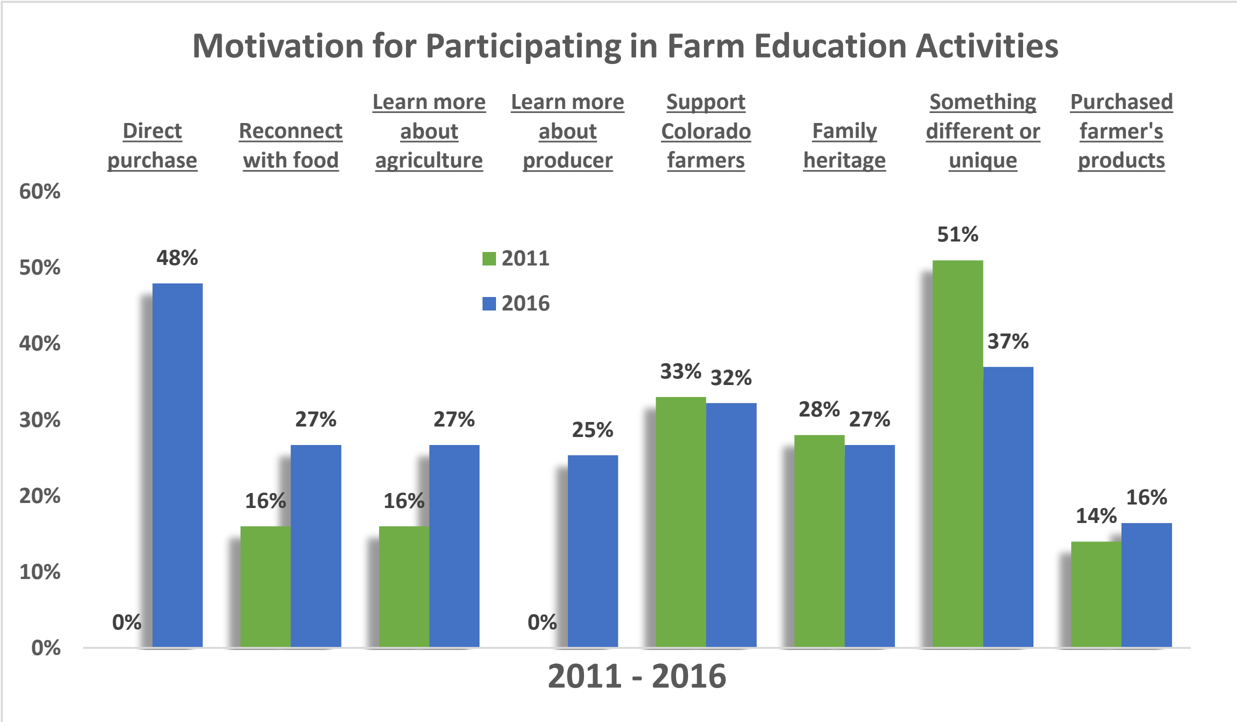


Figure 53

The survey's final question asked respondents about their motivations for participating in agritourism. This question was first asked in 2011. In the 2016 survey we added two new categories based on previous write-in responses: Direct Purchase and Learn More about Producer. Nearly half of all responses (48%) visited farms in order to purchase products directly from the farmer. Just over a third (37%) participated in agritourism because it provided them with something different or unique to do. More than half of respondents visited farms to learn more about the producer or agriculture in general. It is important to note that 16% of respondents visited a farm they became interested in after purchasing that farm's products elsewhere.

APPENDIX A

What basic approach should be used to protect agricultural land and water in Colorado?

Verbatim responses under the 'Other' category:

use marijuana taxes to provide financial incentives
To regulate water usage and have the state name land for saving.
The first two both sound like reasonable options to me.
The fed government owns most of the land in CO, get the land and water from them
take the land and make it open space for the public
stop sending our water to California
Stop selling water to other states, keep Government hands out of agricultural businesses
Stop making rules to discourage small family farming.
Stop allowing it to go to California
provide legislation and a market that makes farming and ranching worthwhile doing from and economic standpoint
Provide incentives for developers to develop on land that is not currently used for growing crops
Land Trust
Just prohibit development beyond a certain percentage
Instead of paying farmers not to raise certain products pay them incentive to raise needed produce
increase storage in reservoirs
first two items listed

APPENDIX B

Can you list any specific programs that the Colorado Department of Agriculture operates? List the names of three programs that come to mind.
Verbatim responses:

4-H
4H
4h/FFA/Coop Ext
a sponsor of state fair
ag-culture
Agricultural advice
agriculture
Agritourism
agrowin
animal health division
any
any
assists with grape growing in vineyard areas on western slope
Beginners Farmers program
Bio control
Blm land
brand inspector
Canibus Department
cdc
certified gardener program
colorado agriculture extension office
Colorado Animal Care and Facilities Act
Colorado Brand Board
Colorado Grown
Colorado Proud
Colorado Proud
Colorado Proud
Colorado Sheep and Wool Authority
Colorado State Fair
Colorado State Fair
Colorado State University
Colorado Water

Colorado Water Commission
Commodity Handlers Program
conservation
Conservation services
Conservation Services
county agent
creative arts
Crop inspections
CRP
custom game meat processing
d
Department of Wildlife
dfsd
doa
Don't know.
Emerald Ash Borer information and updates
Enrich Colorado Ag Grant program
equipment and machinery efficiency
extension programs
extension service
Extension service
extension service
Farm fresh app
farm safe
Farm support
Farmer's Market
farmers market
Farmers Market Information
Farmers Markets
FDA
Feed
Feed Program
FEWEDW
fisheries
food inspection
Food inspection
food inspection
Food prep classes
food preservation

food processing help
Food quality inspection
food safety
food stamps
fracking permits
FSGDHGGJ
gardening
Give a Hoot Don't Pollute
gives ag licenses
GJDHJHFJ
groundwater protection
Hemp
hemp development
Hispanic land grant
HKFHKHJKJHFK
Horticultural
hud
hunting
i
idk
idk
idk
Inspection & Consumer Services
Inspection and consumer services - ICS
Inspection services
invasive weeds programs,
k
Keeping fish species intact
Keeping tree species safe from certain kind of bacteria
Land conservation measures
landscaping help
leadership
lists of trees appropriated for growing in colorado
MAP Program- promoting Colo. products internationally
Master Gardener
Master Gardners Program
me gusta
measurement standards
monitors marijuana

na
na
na
Nass
None
None
None
none
none
none
none
none
none come to mind
noxious weed control
Noxious Weeds Program
Nuisance animal control
Nursery licensing
nusance weeds, non native
Pesticide disposal
pesticide regulation
Pesticides
pesticides
Pesticides Prgram
Pesticides Program
Pesticides Program
Pesticides Program
plant industry division
Prevent wildfires (Smokey Bear)
Regulate pesticide use by companies
Rocky Ford Growers Association
sagarpa
SDFSAE
seed control
sismadro
soil analysis
standards lab
State Fair
state fair
State Fair

stock brand inspectors
Stock Show
storage of foods
sugar beets
The turkey farm in Fort Collins in conjunction with CSU
They do a school outreach program
They have information at the state fair
Ugly water
uknn
US Forestry
Vegetable Gardening
Water regulation for farming and ranching
water requirements for crops
Water shed program
Weed District
Weed free forage
WEFR
Western water conservation
WIC
Wildlife rehabilitation centers
wine industry development
Xoscape Watering

APPENDIX C

Have you visited or participated in farm or ranch related recreation or education activities in the past year? What was your motivation for visiting or participating in these activities? Verbatim responses:

worked at a camp
Visiting friend's family ranch
Scout requirement
job
Helpi
fun recreational activity to do with kids
Fun
ffa
family
Enjoy the pumpkin farm in October.
Daughter's involvement in 4H
connect with friends
as an owner

APPENDIX D

Survey Questions (New Questions marked with a *)

Question 1a: Do you currently live or work on a farm or ranch?

Question 1b: Have you ever lived or worked on a farm or ranch?

Question 1c: Does your household raise any of its own food products?

Question 2a: What is the first thing that comes to your mind when you hear the word agriculture?

Question 2b: What five products can you name that are grown or raised in Colorado?

Question 2c: What agricultural product would you say has the most economic importance for Colorado?

Question 3: Do you agree or disagree that agriculture provides food at a reasonable price in Colorado?

Question 4a: When shopping or eating out, how often do you purchase Colorado products or foods over those produced elsewhere?
Always
Most of the time
Sometimes
Infrequently
Never
Don't know

Question 4b: Would you buy more of the following Colorado grown and produced products if they were available and identified as being from Colorado?
Beef
Lamb
Pork
Poultry
Milk and eggs
Fruits
Vegetables
Grains, beans and legumes
Foods processed in Colorado (salsa, cheese, jerky, jam, bread)

Nonalcoholic beverages (water, cider, juice, tea)
Wine and hard cider

Question 5: Among Colorado's economic sectors, how would you rank the following in terms of importance for the long term future of Colorado?

Education and Public Service
Mining and Petroleum
High Tech Industries
Tourism and Recreation
Agriculture

Question 6: In Colorado, considerable agricultural land and water is being converted to non-agricultural uses such as houses, roads and other uses. How important do you think it is to maintain land and water in agricultural production?

Question 7: Here are four reasons people give for protecting Colorado's agricultural land and water. Please tell us how important each one is for you, to maintain agricultural land and water.

for food and fiber production?
for maintaining open space and wildlife habitat?
for maintaining jobs and business related to agriculture?
for maintaining Colorado's western heritage?

Question 8: Agricultural lands are being converted to non-agricultural uses. We would like to know your thoughts about one way of preventing this. It is possible to use public funds to buy the development rights from farmers and ranchers willing to sell them. The farmer or rancher would still own the land and be able to use it for agriculture, but the land couldn't be developed for housing or industrial purposes. How much do you agree or disagree with this approach for maintaining agricultural land?

Question 9: What basic approach should be used to protect agricultural land and water in Colorado?

Question 10: An increasing number of Colorado cities and counties have open space programs. Such programs typically acquire natural areas and trail corridors and allow public access. Some programs use part of their money to help protect local farms or ranches as well. How much do you agree or disagree that more local open space programs should use part of their money to help minimize the loss of farms and ranches?

Question 11: How responsible do you believe agriculture in Colorado has been in protecting the environment?

Question 12: In your opinion, how safe is the food that Colorado farmers and ranchers produce?

Question 13a: In your opinion, how safe is genetically modified (GMOs) food to eat?

*Question 13b: How necessary do you think it is to use genetically modified (GMOs) in order to produce enough food for people?

Question 14a: How necessary do you think it is to use fertilizers and pesticides in order to produce enough food for people?

*Question 14b: In your opinion, how safe are foods to eat that were grown following agricultural best practices that may include fertilizers and pesticides?

Question 15a: Do you believe that farm and ranch animals in Colorado are treated humanely?

*Question 15b: In your opinion, how safe is meat and milk produced from an animal that received antibiotics and/or hormones?

*Question 15c: How necessary do you think it is to use antibiotics and/or hormones in order to produce enough meat and dairy for people?

*Question 16a: In your opinion, how safe are the following foods in terms of the potential for human, food-borne illness?

Fruit and vegetables
Dairy
Eggs
Meat and poultry
Grains

*Question 16b: In your opinion, how safe are the following farming practices in terms of the potential for human, food-borne illness?

Organic farming practices (uses no synthetic fertilizers or pesticides)
Conventional farming practices (uses synthetic fertilizers and pesticides)

*Question 16c: In your opinion, how safe are the following food establishments in terms of the potential for human, food-borne illness?

Farmers market
Produce stand
Community Supported Agriculture
Retail food markets/grocery stores
Restaurant

Question 17: As we continue to think about current practices in agriculture, please tell us how you feel about the following statements.

The United States should increase its production of corn-based ethanol and crop-based bio-diesel as alternatives to petroleum based fuels.

The United States should invest more in alternative energy technology that captures wind, solar and water-based energy.

Ranchers with permits to graze on public land treat that land appropriately.

Current agricultural practices in Colorado to conserve water and soil are effective.

Public funds should be used to help farmers and ranchers improve wildlife habitat and protect soil and water resources.

Developing and supporting local and regional food systems.

Question 18: Water for economic development is often transferred from agriculture. Providing water to agriculture can mean constraints on other uses of water. If it were a dry year, please rank **your top three** uses of water.

Lawns and landscaping

Rafting and fishing

Agriculture

In-stream flow levels for wildlife

Other (Please specify)

Question 19: Here is a list of sources where you might receive information about agriculture. How likely are you to trust information from the following sources?

Colorado Department of Agriculture

United States Department of Agriculture

Other federal government agencies (EPA, FDA, US Forest Service, Bureau of Land Mgmt).

Food industry (processors, retailers, distributors)

News reports in the media

Farmers and ranchers themselves

University and research organizations (Colorado State University, University of Colorado, National Science Foundation)

Environmental organizations (Sierra Club, The Nature Conservancy)

Farm and Ranch Trade Associations (Farm Bureau, Rocky Mountain Farmers Union, US Trade groups)

Farm and ranch commodity groups (Colorado Fruit and Vegetable Growers Association, Colorado Corn, Colorado Cattlemen's Association)

Social media (Facebook, twitter, blogs)

Other (specify)

*(Note, some categories adjusted from 2011 survey for questions 19 and 20)

Question 20: We are also interested in how you receive information about food quality, nutrition and safety. How likely are you to trust information from the following sources?

Colorado Department of Agriculture

United States Department of Agriculture

Other federal government agencies (EPA, FDA, US Forest Service, Bureau of Land Mgmt).

Food industry (processors, retailers, distributors) Slow Food?

News reports in the media

Farmers and ranchers themselves

University and research organizations

Environmental organizations

Farm and Ranch Trade Associations (Farm Bureau, Rocky Mountain Farmers Union, US Trade groups)

Farm and ranch commodity groups (Colorado Fruit and Vegetable Growers Association, Colorado Corn, Colorado Cattlemen's Association)

Social media (Facebook, twitter, blogs)

Other (specify)

*Question 21a: How do you value the activities/ programs of the Colorado Department of Agriculture?

*Question 21b: Can you list any specific programs that the Colorado Department of Agriculture operates?

*Question 21c: List the names of three programs that come to mind.

Question 22: Please indicate all markets and sources you visited for food purchases for your home in the last year.

Supermarket and grocery (e.g., Safeway, City Market, Albertsons)

Superstore and wholesale (Target, Costco, Walmart, Sam's Club)

Health/Natural Supermarket (e.g., Whole Foods, Natural grocers, coop)

Convenience/corner store (smaller stores with limited selection, e.g., Seven-Eleven, Walgreen's, Dollar Store)

Farmers' Market

Bakery, deli, meat or fish market (gourmet or ethnic)

Roadside stand or direct from farm or ranch

Community Supported Agriculture Subscription Service or buying club

Home delivered food (Omaha Steaks, Schwan's, Blue Apron, Harry & David)

Hunting and fishing

Gardening and growing food myself (community gardens, backyard chickens)

Other

(Note, some categories changed from 2011 survey.)

*Question 23: Approximately what share of your household food dollars is spent at the following establishments?

Supermarket and grocery (e.g., Safeway, City Market, Albertsons)

Superstore and wholesale (Target, Costco, Walmart, Sam's Club)

Health/Natural Supermarket (e.g., Whole Foods, Natural grocers, coop)

Convenience/corner store (smaller stores with limited selection, e.g., Seven-Eleven, Walgreen's, Dollar Store)

Farmers' Market

Bakery, deli, meat or fish market (gourmet or ethnic)

Roadside stand or direct from farm or ranch

Community Supported Agriculture Subscription Service or buying club

Home delivered food (Omaha Steaks, Schwan's, Blue Apron, Harry & David)

Hunting and fishing

Gardening and growing food myself (community gardens, backyard chickens)

Other

Question 24a: When you shop for fruits, vegetables, meat, dairy and other food products, what does local mean to you?

Product is produced in Colorado

Product is produced in the county where you live

Product is produced within 400 miles of where you live

Product is produced within 250 miles of where you live

Product is produced within 100 miles of where you live

*Question 24b: When purchasing food products labeled as local, how confident are you that they are actually local?

*Question 25a: Please indicate all markets and sources (away from home) that your family visited for food purchases in the last year.

Restaurant (sit down, casual or formal)

Coffee shop, food court or food kiosk

Fast food establishment or drive-thru

Food truck, street vendors and concessions (sporting events and concerts)

School or work cafeteria

Senior Center or Community Kitchen

Church

Take-out food

Other (Please specify)

*Question 25b: Approximately what share of your household food dollars is spent away from home at the following establishments?
Restaurant (sit down, casual or formal)
Coffee shop, food court or food kiosk
Fast food establishment or drive-thru
Food truck, street vendors and concessions (sporting events and concerts)
School or work cafeteria
Senior Center or Community Kitchen
Church
Take-out food
Other (Please specify)

Question 26: When you shop for fruits, vegetables, meat, dairy and other food products, how important are the following factors in your decision?

Knowing the country of origin of the product
The price
Freshness of the product
That it is locally grown
That it is organically grown
It is a Colorado Proud product
That it has proven health benefits
That it caused minimal environmental impact
That it was produced without pesticides, hormones or antibiotics
That the farm or ranch passed a food safety inspection
That it supports maintaining local farm or ranch land
That farmers received a fair share of economic returns
That it supports the local economy
That farm/ranch labor was treated fairly in terms of pay and working conditions
That farm/ranch animals were treated humanely during production and harvest

*Question 27: What is your level of awareness about each of the following products?

Olathe sweet corn
Palisade peaches
Pueblo chilies
Rocky Ford melons
Colorado sweet corn

Colorado lamb
Colorado dairy products
Colorado Proud-branded products
Colorado beef
Colorado wine

*Question 28: For each of the following products, designate the start **and** end of the fresh season they are available from Colorado fruit and vegetable growers using the slider bar.
Potatoes
Onions
Peaches
Lettuce
Apples
Sweet corn
Spinach
Green beans
Broccoli
Cantaloupes
Chile peppers
Sweet cherries

*Question 29a: What would motivate you to buy and eat more Colorado fruits and vegetables?
Seeing Colorado Chefs and getting their recipes for my kitchen
Understanding more of the nutritional benefits of eating Colorado produce
Understanding the economic benefits of buying Colorado produce
Feeling confident Colorado produce growers implement the best in food safety practices to prevent foodborne illness
Developing a deeper understanding of Colorado produce farms and farmers
Understanding the Colorado produce harvest season
Finding better point of sale identification of Colorado produce (labels, QR codes, etc.)
Tasting better flavor in Colorado produce
Seeing a better price on Colorado produce
Finding more Colorado produce prepped and ready to eat

*Question 29b: What would motivate you to buy and eat more Colorado food and agricultural products?
Seeing Colorado Chefs and getting their recipes for my kitchen
Understanding more of the nutritional benefits of eating Colorado products
Understanding the economic benefits of buying Colorado products
Feeling confident Colorado produce growers implement the best in food safety practices to prevent foodborne illness

Developing a deeper understanding of Colorado farmers, ranchers and food producers
Finding better point of sale identification of Colorado products (labels, QR codes, etc.)
Tasting better flavor in Colorado products
Seeing a better price on Colorado products
Finding more value-added products made from Colorado meats and food ingredients

*Question 30: How would you rate the following as methods for you to get information about Colorado food and agricultural products?

Grocery store produce or meat manager
Produce labels
Radio advertisements
Television advertisements
Social media
Produce availability calendar
Websites
Newspaper advertisements

Question 31: How important is the presence of ranches, farms, and agriculture to the quality of life in Colorado?

Question 32a: Have you visited or participated in farm or ranch related recreation or education activities in the past year?

Question 32b: How many times per year do you typically participate in farm or ranch related recreation or education activities?

Question 33: What was your motivation for visiting or participating in these activities?
To purchase food directly from the producer
To reconnect me and/or my family with my food source
To learn more about agriculture in general
To learn more about the producer's operation
To support Colorado farmers and ranchers with tourism dollars
To participate in Colorado's or my family's heritage
To do something different or unique
Because I established an interest in a farm or ranch through purchasing their foods
Other (Please specify)