

# USDA Agricultural Checkoff Programs' YouTube Presence and Video Quality

Jenna Holt-Day<sup>1</sup>, Leah Curren<sup>2</sup>, and Erica Irlbeck<sup>3</sup>

## Abstract

*YouTube has existed since 2005. Since that time, many marketing professionals have used the site to combine sight, sound, motion, and emotion to appeal to a target audience. USDA-regulated and producer-funded agricultural research and promotion, or checkoff programs, are no different, and many have used YouTube's platform to reach consumers. This study analyzed the USDA-overseen commodity checkoff programs' YouTube presence for views, subscribers, mean length, and number of posted videos. Researchers also analyzed the overall quality of videos, visual frames of the most popular videos, and the quality of the group's YouTube homepage. The YouTube pages were mostly consistent with the brand and categorized videos into playlists, or frames, with recipe videos being the most common. The most watched video had more than nine million views. In many instances, high quality garnered higher viewership, but not always. Content targeted at the audience brought lots of views, more so than quality. Videos that were approximately one minute in length, in general, were viewed more often than longer videos.*

**Keywords:** YouTube; commodity checkoffs; video quality

## Introduction

YouTube is one of several sites that dominates the social media landscape (Smith & Anderson, 2018). Almost three-quarters of American adults use the site, and 94% of 18-to-24-year-olds use the site regularly (Smith & Anderson, 2018). Although other video sharing sites are available, YouTube has kept its status as the most popular video sharing site in its 13-year history (Smith & Anderson, 2018). Roughly 31% of adults claim to have posted a video to YouTube, and 100 hours of content are posted to the site every minute (Anderson, 2015).

YouTube is one of the most visited websites in the world and one of the most used search engines. As the second largest search network after Google, YouTube has an extensive audience reach (Johnson, 2017). YouTube can be beneficial to marketing to create an image of authority, build credibility and trust, and engage with the audience, more so than many other forms of media (Agrawal, 2016). Businesses have used the site to demonstrate merchandise, promote expertise, interact with customers, and explain important concepts (Evans, 2011). Approximately half of all YouTube users stated they have used YouTube for instructions to help them complete a task, such as cooking (Smith, Toor, & Van Kessel, 2018).

---

<sup>1</sup> Jenna Holt-Day is a former master's degree students in the Department of Agricultural Education and Communications at Texas Tech University.

<sup>2</sup> Leah Curren is a former master's degree students in the Department of Agricultural Education and Communications at Texas Tech University.

<sup>3</sup> Erica Irlbeck is, an associate professor in Department of Agricultural Education and Communications at Texas Tech University. [Erica.irlbeck@ttu.edu](mailto:Erica.irlbeck@ttu.edu)

Because video incorporates sound, visuals, motion, color, and emotion, it is the most powerful tool to communicate (Brown, 2005). Video requires less cognitive processing, the information is retained by the viewer more easily, and it is also an inexpensive form of marketing (Belk & Kozinets, 2012). YouTube has increased the power of a well-produced video as it provides a well-searched forum to share content – many marketing experts claim that well-executed YouTube presence is a vital piece to any marketing strategy (Agrawal, 2016). YouTube has allowed agricultural organizations to showcase various farming, ranching, or food production processes, taking the viewer into places they could not normally see because of location or regulations.

### **Agricultural Research and Promotion Programs**

Agricultural research and promotion (R&P), or checkoff programs, are quasi-governmental programs that are funded through producer assessments. Overseen by the United States Department of Agriculture (USDA), checkoff programs provide a voice for the commodity they represent (USDA, n.d.). R&P programs attempt to “develop new markets, strengthen existing markets, and conduct important research and promotion activities” for the commodities that have a checkoff (USDA, n.d., para. 1). A well-known example of such is the “Beef. It’s What’s For Dinner” campaign, which was created by the Beef Checkoff program. Beyond advertising campaigns, checkoff programs conduct product, research, animal or crop improvement research, engage overseas audiences to obtain international interest in the commodity, and create other promotion programs, such as at food or fashion shows to increase consumer interest (USDA, n.d.). R&P programs are charged with building public interest in the commodity to increase demand and communicate the uses of the product (Findley, 2007). Typically, these programs engage their target audiences through traditional advertising, trade shows, social media, and other methods to get consumers to purchase more of that specific product (Moore, Meyers, Irlbeck, & Burris, 2012).

### **Purpose and Objectives**

The purpose of this study was to analyze checkoff programs’ use of YouTube as a marketing and communications tool. The following objectives guided this research:

1. Describe the YouTube pages for each commodity checkoff: number of subscribers, posted videos, categories/playlists, and established.
2. Analyze the quality of each of the commodity checkoffs’ YouTube homepages for consistency with brand, utilization of playlists, and use of thumbnail images.
3. Determine the visual frames for each of the categories (playlists) on the homepage.
4. Analyze the top five most popular videos on each of the checkoffs’ YouTube pages for the number of views, quality of each video, and mean length.

This research fits into AAAE’s Research Priority Area 1: Public and Policy Maker Understanding of Agriculture and Natural Resources (Roberts, Harder, & Brashears, 2016). As YouTube is one of the most used sites on the internet, the public can gain a wealth of agricultural information. YouTube is an efficient communications tool to inform public opinion, and it is important to understand how to use it in the most effective manner possible.

### **Quality Video and YouTube Pages**

Research supports utilizing visuals to increase engagement and reach (Rodriguez & Dimitrova, 2011; Belk & Kozinets, 2005). Videos have been credited as one of the most powerful tools for creating a strong impression of an organization (Brown, 2005). Videos incorporate verbal, vocal, and visual components of communication to create a personable and strong impression of an organization (Waters

& Jones, 2011). Videos are simple to watch and retain, and have been reported as a more cost-effective option when compared to other marketing methods (Belk & Kozinets, 2012).

Although the way a message is presented, or framed, is important, the quality of the message should also be carefully crafted. Even the first impression of a YouTube page should be planned as it is the first recognizable story of a brand to an individual (Rodriguez & Dimitrova, 2011). The following practices have been reported as effective professionalism, branding, and marketing strategies on YouTube channels: A consistent presence of the logo; an apparent thematic plan for video topics; background colors that match the brand; the player view; captivating thumbnails; and featuring the most popular content (Brooks, 2011; Guerrero, 2011).

In addition to creating a memorable YouTube page, an organization must create quality, compelling videos. Brooks (2011) defined a compelling video as one that is helpful and valuable in addressing an audience's needs. Quality videos are shot using a tripod, proper light, clearly focused, obey the rule of thirds, have an appropriate setting for the storyline, and optimize video text (Brooks, 2011; Guerrero, 2011). Videos that have been created with quality content in mind along with high resolution visuals tend to get more clicks than others (Barysevich, 2017). Videos that have been scripted, rather than a haphazard compilation of images are well-received by an audience (Barysevich, 2017).

The YouTube recommendation system encourages content that runs nine to 15 minutes in length (Smith et al., 2018). Digital Marketing Institute (DMI) (2018) recommends building videos around a single topic, rather than trying to include a multitude of themes in one video. Tutorials (how-to) and videos that provide answers to frequently asked questions are important to include in an organization's YouTube presence – the audience is looking for those types of videos and it helps build search engine optimization (DMI, 2018; Smith et al., 2018).

## **Conceptual Framework**

### **Framing/Visual Framing**

Framing theory (Goffman, 1974) is commonly used in agricultural communications to investigate how a message is presented or how a story is told to an audience. Framing does not refer to what a message is, rather how the message is being presented (Scheufele & Iyengar, 2012). Rodriguez and Dimitrova (2011) said framed messages come from the creator of the message taking a surplus of information and condensing it all to effectively share the message with the public. In order for the public to organize the surplus of information, it must create “mental maps,” to make sense of it all. These mental maps are considered “audience frames” (Rodriguez & Dimitrova, 2011). The audience uses these mental maps to make sense of all similar information they are subject to (Rodriguez & Dimitrova, 2011).

Framing theory is primarily used for textual analysis; however, other researchers have specifically looked at visual frames, which is more fitting for this study. The concept of visually framing messages came about as the importance for visually communicating to the audience arose (Rodriguez & Dimitrova, 2011). O'Neil and Smith (2014) explained images help in information exchange as they draw an individual's interest easier than text. An audience interpreting visual information requires less of a cognitive load than text, and audiences appear more likely to accept visuals as the truth (Rodriguez & Dimitrova, 2011). Individuals can remember the visual information and images can be understood across the world (O'Neil & Smith, 2014). Visual messages should be framed, or categorized, to explain or educate the public about a topic, thus guiding how an individual should think or feel (Nisbet, 2009), based on their previous understanding of the world (Rodriguez and Dimitrova, 2011).

For the purposes of this study, framing theory guided the development of the code book. Just as visual messages should be categorized (Nisbet, 2009), the researchers categorized the themes of the YouTube videos. Additionally, although video is less of a cognitive process than text, it still requires a certain level of quality to receive more views (Barysevich, 2017). Thus, the quality score of the messages is an important construct in this research.

### **Methods**

The researchers content-analyzed all of the USDA-overseen national agricultural commodity groups' YouTube pages and videos. The analysis occurred over the course of two days in June 2017 to control for changing data due to page updates. A researcher-created codebook was utilized to catalog descriptive data each YouTube site included the following: number of subscribers, number of YouTube pages, total number of videos, year established, number of video playlists, quality of YouTube site, visual frames, and quality of videos. These data are publicly available on each YouTube site.

To analyze the quality of the YouTube homepages, researchers created a rubric to score the homepages, based on previous recommendations regarding branding, logos, thematic plans, thumbnails, and featured content (Brooks, 2011; Guerrero, 2011; Rodriguez & Dimitrova, 2011). The rubric consisted of a five-point Likert-type scale with one being lowest quality and five being highest. To determine if the page was consistent with the brand, researchers analyzed the overall YouTube page for use of logo and colors, commodity-specific cover photos, and repeated use of the checkoff's name, tagline, and/or commodity name (for example beef, or Beef It's What's for Dinner). Utilization of playlists meant that the page organizer placed the videos into clearly-titled playlists and the content was organized and fit with the title. Use of thumbnails meant that the page organizers utilized clear, bright, attention-grabbing images with a descriptive title.

The researchers then analyzed the playlists on the YouTube homepages and classified them into visual frames based on the category title, video thumbnails, title, and content. These visual frames emerged through the data collection process and researchers found seven common types of videos on most of the commodity groups' YouTube pages: how-to (recipes), food science and/or product innovations, handling and use, product facts, nutrition, and sentimental.

Based on YouTube's ability to sort out the most popular video on each commodity's page, the researchers analyzed the top five videos for quality. The researchers created an instrument that measured effective use of lighting, focus, tripod use, shot frames, setting, use of text, editing, title, use of brand, audio quality, and overall helpfulness of the content – the areas of video quality discussed above (Brooks, 2011; Guerrero, 2011; Rodriguez & Dimitrova, 2011). Each element was scored on a five point Likert-type scale with 1 being poor quality and 5 being outstanding quality. The mean score for each element was calculated, and then a grand mean for all five videos in the sample was figured and reported. Number of views, likes, and visual frames were also recorded for each video.

Two researchers independently coded the YouTube page and videos and, in cases of discrepancies, met to reach consensus. The primary researchers for this study were trained in video production by a secondary researcher, so there was consistency in the understanding of video quality and frames. The researchers agreed on approximately 95% of the coded materials. In cases of discrepancies, the researchers discussed to reach consensus so that all findings were consistent.

### **Findings**

All but two of the commodity groups had a presence on YouTube on the days of data collection. Researchers conducted several searches with multiple search terms and did not find YouTube pages for Softwood Lumber Board or Fluid Milk Processors Promotion Program. Table 1 addresses the first research objective regarding general information about the YouTube presence of commodity groups in the sample. The National Mango Board has utilized YouTube the longest, beginning in the early days of the site in 2007.

Table 1

*Information Regarding YouTube Pages in the Sample on the Date of Data Collection*

Checkoff Name	Number of subscribers	Number of pages	Number of videos	Number of playlists	Year established
Paper & Packaging Board	7,544	1	37	2	2015
National Pork Board	5,831	2	110	0	2008
Cattlemen's Beef Board	5,191	2	110	15	2013
National Mango Board	1,171	1	97	14	2007
American Lamb Board	1,169	1	74	4	2008
Hass Avocado Board	853	1	47	8	2009
National Honey Board	540	1	99	5	2010
American Egg Board	432	3	59	5	2012
Mushroom Council	529	1	40	7	2012
United Sorghum Checkoff	417	1	62	9	2011
Nat'l Potato Promo. Board	362	1	99	9	2009
Nat'l Watermelon Board	268	1	81	6	2014
United Soybean Board	231	1	151	2	2009
National Peanut Board	187	1	34	2	2009
Highbush Blueberry Council	182	1	49	12	2011
Christmas Tree Promo. Board	59	1	7	0	2016
Processed Raspberry Council	47	1	14	9	2014
Popcorn Board	43	1	40	4	2012
Cotton Board	19	1	12	0	2016
Nat'l Dairy Promotion & Research Board	*	1	110	11	2012

*Note.* Information with an \* was not reported by YouTube

Overall, the range of number of videos posted was quite varied, with seven being lowest (Christmas Tree Promotion Board) and 151 the highest (United Soybean Board). Paper and Packaging Board had the highest number of subscribers ( $n = 7,544$ ) and the Cotton Board had the least ( $n = 19$ ) with the National Dairy Promotion and Research Board being the only page that did not publicly report a number in this category.

To address the second research objective, researchers analyzed the quality of each of the commodity groups' YouTube homepages for consistency with the brand, utilization of playlists, thumbnail images, and visual frames found on each of the pages. The checkoffs' YouTube pages mostly exhibited consistency with the brand, utilized playlists to organize videos, and displayed captivating thumbnail images.

For the third research objective, the researchers found that all but three organizations organized videos into playlists and exhibited a clear plan for their page. The three most common playlist frames were how-to ( $n = 32$ ), innovative ( $n = 29$ ), and handling ( $n = 25$ ). Paper and Packaging had an innovative way of branding its YouTube page in that its page does not contain the name of the commodity group, rather the name of the page is "How Life Unfolds," the commodity's tagline. See Table 2 for additional details.

Table 2

*YouTube Page Playlist Frames*

Checkoff Name	How-to	Innovative	Handling	Facts	Nutrition	Sentimental	Total
Beef	6	0	6	0	2	1	16
Raspberry	5	0	5	2	0	1	14
Blueberry	2	4	0	5	1	0	11
Mushroom	6	2	1	0	1	0	10
Potato	2	2	0	2	0	0	10
Dairy	1	7	1	0	0	0	9
Mango	1	1	2	1	2	1	9
Sorghum	0	3	1	3	0	2	9
Avocado	2	3	1	1	0	0	7
Popcorn	2	1	2	1	0	0	7
Watermelon	1	1	0	2	1	1	6
Egg	1	1	2	1	0	0	5
Honey	2	1	0	1	1	0	5

Table 2

*YouTube Page Playlist Frames Continued...*

Lamb	1	1	2	0	0	0	4
Soybean	0	1	1	2	0	0	4
Paper/Packaging	0	1	1	0	0	1	3
Peanut	0	2	0	0	0	0	2
TOTAL	32	29	25	21	8	7	131

*Note.* National Pork Board, Christmas Tree Promotion Board, and Cotton Board are not included in this table as they did not have videos organized into playlists.

To address the fourth research objective, researchers analyzed each commodity's YouTube page and sorted the videos by most popular first, and then analyzed the quality of the top five most popular videos. The most popular video – from the Beef Checkoff – had more than nine million views. There was a wide variety in number of views; range of views is reported in Table 3 below. The Paper and Packaging Board had a perfect mean quality score and American Egg Board received the lowest ( $M = 4.00$ ,  $SD = .62$ ). With its perfect quality score, Paper and Packaging also had the second shortest mean length with 48 seconds. The commodity group with the three highest scores had mean lengths between 48 seconds and one minute, 50 seconds. The lowest mean quality score had the second-longest mean length.

The researchers determined how-to were videos that demonstrated how to prepare or use that specific commodity (if applicable), most commonly, these videos were recipes. The food science/product innovations frame was defined as a video sharing scientific information, innovations in food science, or new, unique, or different ways to use or see a product. The researchers determined handling and use would refer to how to safely prepare, store, handle, and/or consume the commodity, or how to safely or accurately use a commodity that is not edible. Product fact videos were “did you know?” types of videos that provided information about the product's origin, how it gets to the consumer, and/or frequently asked questions. Nutrition was defined as a video solely providing health benefits or sharing healthy habits relevant to that specific commodity. Sentimental videos were those designed to evoke memories or emotions about using that particular product or if the goal of the work was to emotionally connect with the audience.

Table 3

*Quality, Views and Likes for the Top Five Most Popular Videos on Each YouTube Page*

Checkoff	Range of views	Mean quality score	SD	Mean Length
Paper/Packaging	284,664 - 761,789	5.00	0.00	0:48
Soybean	2,445 - 131,399	4.98	0.05	1:50

Table 3

*Quality, Views and Likes for the Top Five Most Popular Videos on Each YouTube Page Continued...*

Beef	950,875 - 9,921,368	4.93	0.15	0:50
Avocado	23,197 - 142,807	4.76	0.25	2:18
Pork	136,154 - 3,241,263	4.31	0.21	3:34
Peanut	4,431 - 10,677	4.67	0.43	2:05
Popcorn	397 - 10,629	4.67	0.42	1:38
Potato	10,613 - 45,109	4.64	0.30	2:11
Sorghum	4,533 - 107,859	4.61	0.16	4:11
Raspberry	142 - 3,373	4.47	0.47	5:29
Watermelon	7,723 - 36,030	4.47	0.34	1:26
Blueberry	44,645 - 254,804	4.47	0.04	0:16
Mushroom	3,292 - 73,263	4.42	0.12	3:10
Christmas Tree	84 - 13,835	4.33	0.42	2:22
Mango	6,870 - 3,434,431	4.22	0.42	2:31
Dairy	353,847 - 4,460,900	4.22	0.14	1:22
Lamb	20,442 - 183,210	4.14	0.63	8:09
Cotton	252 - 1,863	4.09	0.99	2:46
Egg	5,125 - 29,978	4.00	0.62	7:45

*Note:* For mean length, the first numeral is the number of minutes, the numbers after the colon are the number of seconds.

The findings of this study were limited to data YouTube publicly provides. The researchers assumed the available information was accurate at the time of data collection.

### Conclusions and Recommendations

Video is one of the most important tools an organization can use to build reputation (Brown, 2005), and a strong YouTube presence is critically important to marketing (Agrawal, 2016). Many of the checkoffs in the sample have taken advantage of the visual elements YouTube offers, which helps educate consumers about the product. The overall YouTube participation by commodity checkoff programs widely varied in numbers of subscribers, likes, views, and total videos, as well as with the topics of the playlists.



Many commodity groups have effectively harnessed the power of YouTube. For example, the National Mango Board was the first checkoff to create a YouTube page, is one of the most active groups to post videos, effectively categorizes videos into playlists, and has one of the most watched videos: How to Cut a Mango. However, a longer tenure on YouTube does not necessarily mean it is the most effective. The Paper and Packaging Board joined YouTube in 2015 (third to last to join) and has more subscribers than any of the other checkoffs. Paper and Packaging posts its television commercials – which are very sentimental and high quality, on its YouTube site where fans can re-watch, which further increases the power (and number of views) of a well-produced video.

YouTube promotes an organization's brand by establishing authority, credibility, trust, and engagement (Agrawal, 2016). For the most part, the observed YouTube pages were consistent the respective checkoff's brand. However, the researchers noticed an occasional lack of brand consistency when new branding or re-branding strategies (like new logos or color schemes) were adopted by a checkoff. A few checkoffs left the old branding on their YouTube videos, which is not ideal but understandable. Updating all of the videos posted before the branding changes would be an arduous task, and the original video files sometimes are misplaced or deleted by the editor.

Some of the commodities' YouTube pages did not seem to have a clear plan, such as no playlists or no clear theme in topics. The researchers noticed the entire YouTube page appeared less organized when playlists/ themes were not apparent; however, this did not appear to affect number of subscribers.

The researchers found 82% of the videos were framed as how-to, product innovations, handling and use, or product facts. It was assumed that those four categories were widest used because, along with other trending life-hack style videos such as *Tasty*, audiences like alternative ways to use everyday products and thus will watch and share.

One of a checkoff's purposes is to increase demand for a product (USDA, n.d.), but if consumers do not know how to properly consume, select, or utilize an edible product, demand could decrease. Poor product use and lack of knowledge could create an unsafe, unhealthy, or poor consumer experience, so it is very important to have information available for consumers who are looking to prepare or consume a particular commodity. Visual framing literature explains that visual information requires less of a cognitive load than text (Rodriguez & Dimitrova, 2011), so how-to, product innovations, handling and use, and product fact information – topics that can sometimes be complicated – will be better understood through video (O'Neil & Smith, 2014). For example, food safety. Several of the food products, such as beef, eggs, lamb, poultry, or pork or could cause a consumer to become ill if handled improperly. Many checkoffs have utilized the power of video to teach safe food handling techniques, which will give the consumer a higher quality, not to mention safer, experience with the product.

The Paper and Packaging Board presented an interesting case in that it does not have an edible product and obviously does not have recipe videos; however, the group received a perfect score for the quality of videos. The group used sentimental and innovative frames with some of its videos, rather than the how-to that many other commodities use. Sentimental frames were very popular in terms of viewership; however, sentimental frames were only used seven times at the time of data collection.

Many of the videos on the pages were high quality as supported by Brooks (2011) and Guerrero (2011). High quality, in many instances, supports high viewership. The Beef Checkoff, which had the second-highest number of videos on its YouTube site ( $n=110$ ), utilized YouTube very well for using recipe and handling and use videos. It had the highest number of views in the sample, and had the third-highest quality score ( $M = 4.93$ ,  $SD = .15$ ). However, high quality does not always mean high

viewership. The National Mango Board was rated one of the lowest for quality ( $M = 4.22$ ,  $SD = .14$ ) but had one video with more than three million views. It is important to note, however, the Mango Board was the first checkoff in the sample to have a YouTube site, and some of their videos could be of lesser quality simply because they were made 10 years ago with older equipment.

The American Egg Board received the lowest quality score, due to the way the visual frames were presented in the videos. Not only was the most recent video published two years prior to this study, titles were often misleading for the content, and one video demonstrated extremely poor editing techniques. It is important to note that the American Egg Board seems to cater its video content toward a very industry-specific audience instead of curating content to reach all audiences. This extreme niche targeting strategy may be limiting them from capturing a much larger market. Although replacing dated, targeted videos with better quality, broader-reaching content could strip the page of accrued views, promoting better quality content could heighten the overall user experience and quality of the page.

With its ability to use sight, sound, motion, color, and emotion, video creates a lasting and strong impression (Waters & Jones, 2011). Video can create higher message retention (Belk & Kozinets, 2012) and can pique an individual's interest (O'Neil & Smith, 2014). However, high message retention does not always equate high attention span. Although YouTube recommends content should run more than nine minutes (Smith et al., 2018), some of the highest-watched videos in this sample lasted between 48 seconds and one minute, 50 seconds. The checkoff with the lowest mean quality score had the second longest mean length (American Egg Board).

### **Recommendations for Agricultural Communications Practitioners**

Visual messages can be framed to educate an audience about a particular topic (Nisbet, 2009). With YouTube's reach and search engine capacity, not only commodity checkoffs, but all agricultural organizations, should use its power to increase audience engagement and reach (Rodriguez & Dimitrova, 2011; Belk & Kozinets, 2005).

To further extend brand recognition, the researchers recommend that commodities treat the YouTube page as an extension of the website, complete with organizational branding and key messages. YouTube allows for cover photos and logos. The more impressive checkoff pages utilized these functions well and organized videos into theme-driven playlists with attention-grabbing thumbnail images.

Regarding the playlists, the researchers encourage commodity checkoffs to continue publishing how-to and handling and use videos. Most of the commodities are food products, and recipe videos are instructional. Videos that include tips for proper food preparation are helpful to consumers. Additionally, if a food product is poorly prepared, it can lead to a poor, potentially unhealthy, experience. Continual production of food handling videos is critical to educate the public about safe, innovative, fun, delicious, and healthy uses of the product.

Since food and the agricultural lifestyle can be sentimental for many consumers, the researchers encourage sentimental videos. The Paper and Packaging Board is not a food product, but the producers made very heartfelt videos that demonstrate the emotional response that can happen when someone receives letters or a boxed gift. Even though sentimental videos were not the most popular frames used by a checkoff, they were some of the most-watched videos.

Researchers encourage high-quality videos. Although high quality does not necessarily mean high viewership, well-produced videos promote the commodity in the most professional light possible. Professional production does not have to be expensive. The researchers noticed several high-scoring

videos that were created with minimal equipment, possibly even a smart phone; however, the video contained thoughtful content that appealed to the target audience. Finally, researchers recommend videos that are approximately 60 seconds in length as the data indicate videos at this length, in general, have a higher viewership.

One of the videos received more than nine million views. Numbers that high can very rarely be reached with paid television advertising. YouTube's reach is global, and organizations beyond commodity groups can use its power. The agricultural industry is using it to promote agricultural literacy, to advocate, and to advertise. It can also be used to recruit potential students, promote research, and further reach constituents of extension-based programming. Its use and potential are incredible.

### Recommendations for Future Research

Future recommendations for research are to examine additional videos on the commodity checkoffs' YouTube pages. Although this research yielded interesting data, including more videos in the data set would provide richer results. Future research could also employ the use of third party analytics collectors to gain non-static quality measures. The video quality rubric could be utilized for scoring assignments that have a required video element.

Research should be conducted to determine the quality and use of frames in other agricultural industries, as well as state commodity groups. Understanding quality and frames, and the popularity of such, can help agricultural communicators create videos that reach broad audiences.

Other recommendations for future research would be to further understand why certain videos gain popularity. The researchers did not look at comments or dislikes on each of the videos. It was apparent in the data that sometimes a video is popular because it was viewed in a negative light. It is possible that individuals are watching and sharing videos based on their dislike or distrust in the video. The researchers did not determine if the reason for popularity was positive and negative, but this would be important to determine before creating more videos of a similar nature.

### References

- Agrawal, A. (2016). *3 reasons why you should be marketing on YouTube and Periscope*. Retrieved from <https://www.forbes.com/sites/ajagrawal/2016/01/03/3-reasons-why-you-should-be-marketing-on-youtube-and-periscope/#3173f3673173>
- Anderson, M. (2015). *5 facts about online videos, for YouTube's 10th birthday*. Report from Pew Research Center: Retrieved from <http://www.pewresearch.org/fact-tank/2015/02/12/5-facts-about-online-video-for-youtubes-10th-birthday/>
- Belk, R. W., & Kozinets, R. V. (2005). Videography in marketing and consumer research. *Qualitative Market Research: An International Journal*, 8(2), 128-141.
- Brooks, R. (2011). *8 Ways to Maximize Your YouTube Marketing Results: Social Media Examiner*. Retrieved from <http://www.socialmediaexaminer.com/8-ways-to-maximize-your-youtube-marketing-results/>
- Brown, J. S. (2005). *Storytelling in organizations: Why storytelling is transforming 21st century organizations and management*. Burlington, MA: Elsevier.

- Digital Marketing Institute (2018). *10 ways to grow your YouTube channel in 2018*. Retrieved from <https://digitalmarketinginstitute.com/en-us/blog/02-02-2019-10-ways-to-grow-your-youtube-channel-in-2018>
- Evans, K. (2011). Importance of YouTube to business. *The Houston Chronicle*. Retrieved from <http://smallbusiness.chron.com/importance-youtube-business-56107.html>.
- Findley, M., Doerfert, D., Heuman, A. N., Davis., Akers, C., & Davis C. (2011). *Membership Organization Communication: An Interpretive Analysis of Agricultural Producers' Perspectives on Relationships with Checkoff Organizations*. Doctoral Dissertation. Texas Tech University
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Cambridge, MA, US: Harvard University Press.
- Guerrera, D. (2011). *12 Tips to Instantly Enhance Video Production Quality*. Retrieved from <https://blog.hubspot.com/blog/tabid/6307/bid/29075/12-Tips-to-Instantly-Enhance-Video-Production-Quality.aspx#sm.0001dmu2c5bpaequuf913px4haxnz>
- Johnson, P. (2017). Importance of YouTube marketing & advertising. Retrieved from <https://www.wpromote.com/blog/importance-youtube-marketing-advertising/>
- Moore, M., Meyers, C., Irlbeck, E.G. & Burriss, S. (2012). Exploring U.S. agricultural commodity organizations' use of blogs as a communications tool. *Journal of Applied Communications*, 99(2), 61-75.
- Nisbet, M. C. (2009). Communicating climate change: Why frames matter for public engagement. *Environment: Science and Policy for Sustainable Development*, 51(2), 12-23.
- O'Neill, S. J., & Smith, N. (2014). Climate change and visual imagery. *Wiley Interdisciplinary Reviews: Climate Change*, 5(1), 73-87. doi:10.1002/wcc.249
- Roberts, T.G., Harder, A., & Brashears, M.T. (Eds). (2016). *American Association for Agricultural Education national research agenda: 2016-2020*. Gainesville, FL: Department of Agricultural Education and Communication.
- Rodriguez, L., & Dimitrova, D.V. (2011). The levels of visual framing. *Journal of Visual Literacy*, 30(1), 48-65.
- Scheufele, D. A., & Iyengar, S. (2012). The state of framing research: A call for new directions. *The Oxford Handbook of Political Communication Theories*. New York:Oxford University Press.
- Smith, A., & Anderson, M. (2018). *Social media use in 2018*. Retrieved from <http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/>
- Smith, A., Toor, S., & Van Kessel, P. (2018). *Many turn to YouTube for children's content, news, how-to lessons*. Retrieved from Pew Research Center: <http://www.pewinternet.org/2018/11/07/many-turn-to-youtube-for-childrens-content-news-how-to-lessons/>

USDA. (n.d.). Research & promotion. *United States Department of Agriculture. Agricultural Marketing Services*. Retrieved from <https://www.ams.usda.gov/rules-regulations/research-promotion>

Waters, R. D., & Jones, P. M. (2011). Using video to build an organization's identity and brand: A content analysis of nonprofit organizations' YouTube. *Journal of Nonprofit & Public Sector Marketing*, 23(3), 248-268. doi:10.1080/10495142.2011.594779