
Content of YouTube Videos on Cassava Production and Processing in Nigeria

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Abstract

This study examined content of YouTube videos on cassava production and processing posted in Nigeria between 2009 and 2019. Purposive sampling method was used in selecting 155 YouTube videos with cassava production and processing contents. Primary data on video source, content, duration, quality, number of views, subscribers, likes, comments, presentation format and year of upload were obtained by watching these videos. Data were analysed using frequency counts, percentages, means, standard deviation. Many (53.5%) of the videos were on processing of cassava, while most (80.0%) of the videos were relatively recent (2014 - 2019). Private individuals (38.7%) and media houses (34.2%) were the main sources of videos on cassava production and processing on YouTube. The major content of the video was on agronomic practices in cassava production (12.9%) and value addition (11.0%). Also, 66.0% of the videos had video description (descriptive texts), 36.8% had mobilizing information while 52.3% had a video quality of 720p. Furthermore, 72.9% of the videos had between 1-to-7-minute runtime and these videos had more likes than dislikes with mean values of 92.8 and 5.6 respectively. The mean number of views, subscribers and comments

were 11,138.1, 179,537.6 and 13.6, respectively. The presentation patterns in the videos were in form of news (24.5%) and documentary (20.0%). YouTube videos on cassava production and processing were well viewed with a substantial number of subscribers. More YouTube videos on cassava production and processing should be produced with varied contents by different stakeholders in the agricultural sector.

Keywords: Content of cassava production, Cassava processing on YouTube Video.

Introduction

Agricultural extension is a crucial component for agricultural development, improvements in food security, and the enhancement of rural livelihoods (Tata and McNamara, 2016). Information which is the crux of Agricultural extension services is an essential ingredient for agricultural development. Therefore, there is an urgent need to improve on extension delivery systems in order to enhance the quality of agricultural information, its availability and accessibility to all agricultural stakeholders.

However, in Nigeria farmers seldom feel the impact of agricultural innovations either because they have no access to such vital information or because it is poorly disseminated (Mgbenka and Mbah, 2016). Traditional extension services face several challenges in developing countries such as Nigeria that limit their efficiency and poor infrastructure makes it harder and more costly to visit remote areas. For this reason, farmer seldom feel the impact of agricultural innovations. In addition, traditional extension is plagued by a shortage of extension agents.

Tata and McNamara, (2016) asserted that many farmers are constrained by extension systems and services that are difficult to access or lack quality services that utilise modern approaches, technologies and training methodologies. Weak extension and advisory services, therefore, limit the ability for potentially-beneficial agricultural innovations and market opportunities to reach smallholder farmers. This has far-reaching implications in agriculture and development (Tata and McNamara, 2017)

Cassava is one of the most important food crops in this part of the world. It is an important staple food in Nigeria as well as some other countries and it plays a major role in the economy (Egwuma, Muhammed, Ojeleye, Oladimeji, and Hassan, 2019). Nigeria is regarded as the world largest producers of cassava with a total production of 56 million metric tons annually from a cultivated area of about 3.7 ha (Food and Agriculture Organization of United Nation 2018). Cassava is so important that information about it has to be made readily available and easily accessible to farmers.

Nzonzo and Mogambi (2016) posited that information is the driving force of a modern society and that it is becoming a major input in agriculture. Therefore, in order to achieve development in the agricultural sector and improve food security in Nigeria,

farmers must have access to relevant and timely agricultural information which is a key function of agricultural extension.

However, due to the insufficient number of extension workers in this part of the world and some other teething challenges, the dissemination of agricultural information is not been effectively done. It is therefore pertinent to deploy modernized methods of disseminating agricultural information especially with Information and Communication Technologies.

Information and Communication Technologies (ICTs) can play a substantial role in agricultural information flow as well as for agricultural growth through the use of various devices (Saidu, Clarkson, Mohammed, Adamu, and Jibo, 2017). One of the most fascinating, effective, and popular ICTs is Web 2.0 which include YouTube, Facebook, Twitter and these tools are highly relevant in information dissemination across many fields today.

YouTube is a video-sharing social network for the world to see and users around the world create, post, share and view created videos. As of 2015, YouTube alone had more than 1 billion viewers every day, watching hundreds of millions of hours of content (YouTube, 2015). YouTube's content offers opportunities to disseminate agricultural content to a very broad audience globally. The site thus serves as an attractive platform for both amateur content creators and media companies alike. YouTube has become an important medium to educate, entertain and in finding solutions to problems and invariably can be channelled for effective and efficient dissemination of agricultural information to different stakeholders. Audio-visual characteristics of videos makes it a veritable tool that can be deployed for educational purposes. YouTube is the third most visited website in the world, a total number of 3.25 billion videos are watched on the website each month and more than half of the views are from mobile devices (YouTube, 2015). YouTube videos are easy to make even when one is not computer literate and it consist of a wide variety of videos on varied subject-matters. Sequel to these reasons, this study content analysed YouTube videos on cassava production and processing that were posted in Nigeria between 2009 and 2019. The specific objectives of this study were to:

1. ascertain the metadata (video source, year of upload, description and duration) for cassava production and processing videos posted on YouTube;
2. analyse the characteristics of these sampled videos on YouTube;
3. analyse the contents of these videos;
4. examine the presentation patterns for these videos; and
5. ascertain audience engagement (number of views, comments, subscribers, likes and dislikes) for these videos.

Methodology

This study was carried out between September to October 2019. Purposive sampling method was used in selecting 155 YouTube videos because of the cassava production and processing contents. Primary data on video source, content, duration, quality, number of views, subscribers, likes, comments, presentation format and year of upload were obtained by watching these videos.

Video Metadata: Sources from where the videos were uploaded was measured using a dichotomous option of Yes (2) and No (1) on a list of seven different sources, recency of video upload: year of upload was categorized into recent (2015-2019) and not recent (2010-2014) while video description which is a descriptive text that provides a summary of what the video is all about was measured using dichotomous variable of not available (1) and available (2) and the actual video duration was obtained to ascertain video duration.

Video Characteristics: Type of video was categorised as production (1) and processing (2), video quality was ascertained based on five different video qualities of 720p, 480p, 360p, 240p and 144p. Presence of mobilizing information which is meant to encourage viewers to take action or seek additional relevant educative resources was measured as present (2) and not present (1) while the type of mobilizing information was ascertained using a six item scale categorised as yes (2) and No (1).

Audience Engagement: Audience engagement which indicates the number of views, likes, dislikes, comments and subscriber was measured through actual counts.

Presentation Pattern: This was measured using a dichotomous variable of Yes (2) and No (1) on a list of presentation patterns such as news, documentary and training/demonstration.

Content of YouTube Videos on Cassava Production and Processing: This was measured by counting the actual number of times a content featured in the videos. Data were analysed using frequency counts, percentages, means and standard deviation.

Results and Discussion

Metadata of YouTube Videos on Cassava Production and Processing

Results in Table 1 show that 38.7% of the videos were posted by private individuals while 34.2% were posted by media houses. This implies that private individuals and media houses were the leading sources of videos on cassava production and processing on YouTube and this may be due to the fact that these sources may be enlightened, cosmopolite, and technology-savvy. Most (80.0%) of the videos were uploaded recently. This indicates that more videos were uploaded in the last five years and the reason might be adduced to the growing concern in the agriculture sector to maximize the potentials of cassava as a draught-resistant and multiple-use crop. Also, the focus on the use of Information and Communication Technologies (ICTs) for agricultural development (ICT4D) has encouraged the use of these tools for agricultural information dissemination. Furthermore, Table 1 shows that the majority (66.5%) of the videos had video description (descriptive text) This imply that

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the majority of the videos afforded viewers the benefit of reading a summary of what a video is all about, giving them an idea of what to expect in such video; this means that through the video description, viewers are presented with a choice, either to watch a video or not. The majority (72.9%) of the videos had between 1- and 7-minutes runtime and this indicates that the majority of YouTube videos on cassava production and processing were short in duration. This can be considered as a plus because the audience can be attentive and concentrate easily on the message content of the video if the runtime is not too long. This will drastically eliminate the issue of fatigue or non-attentiveness if the video duration is unnecessarily long.

Table 1: Metadata of YouTube videos on cassava production and processing

Metadata	Percentage	Mean (Sd)
Video source		
Private individual	38.7	
Media house	34.2	
Farms & processing outlet	14.2	
Research institute	6.5	
Agricultural project	3.9	
Government agency	1.9	
Academic institution	0.6	
Recency of video upload		
Recent (2015-2019)	80.0	
Not Recent (2010-2014)	20.0	
Video description		
Available	66.5	
Not-available	33.5	
Video duration		
1 – 7	72.9	6.43(6.45)
8 – 14	17.4	
15 – 21	5.2	
22 – 28	3.9	
29 – 35	0.0	
36 – 42	0.7	

Source: YouTube Survey, 2019

Characteristics of YouTube Videos on Cassava Production and Processing

Table 2 shows that many (53.5%) of the videos were on cassava processing while 46.5% were on cassava production. This indicates that more videos were posted on cassava processing than on cassava production. This may be adduced to the activities or interest of the sources of the sampled videos because this will influence the type of videos that would be produced and uploaded on YouTube. The predominant video qualities of the sampled videos were 720p (52.3%) and 360p (32.9%) and this implies that the majority of the videos were posted with good video qualities which would afford viewers quality viewing experience. Table 2 further reveals that 63.2% of the videos did not have mobilizing information which is expected to enable them embark on some activities as well as seek for further

information or other enquiries. This implies that more of the sampled videos were not packaged with information that encourages viewers to take action or seek additional relevant educative resources. This implies that viewers would merely watch these videos without been able to seek for further information or linked to how to obtain more information. Also, the leading types of mobilizing information in the videos that had mobilizing information were websites (45.6%) and telephone numbers (42.1%). This implies that websites and telephone numbers were the most frequently featured mobilizing information in the videos. This may be adduced to the popularity of these channels of information and also the ease of incorporating them into video clips.

Table 2: Characteristics of YouTube videos on cassava production and processing

Variables	Percentage
Type of video	
Processing video	53.5*
Production video	46.5
Video quality	
720p	52.3
360p	32.9
480p	5.8
240p	5.8
144p	3.2
Mobilizing information	
Present	36.8
Not present	63.2
Type of mobilizing information (n = 57)	
Website	45.6
Phone number	42.1
Social media address	19.3
Blog	8.7
Physical address	3.5
Email	3.5

*Multiple responses; **Source: YouTube Survey, 2019**

Content of YouTube Videos on Cassava Production

Table 3 reveals that a total of 16 categories of videos on production and processing of cassava were identified. Findings reveal that agronomic practices in cassava production (12.9%), value addition (11.0%), traditional processing of *garri* and profitability of commercial cassava farming (10.3%) respectively, were the major content of cassava production and processing videos posted on YouTube in the years under review. This implies that viewers were opportune to be informed on a wide variety of topics relating to cassava production and processing on YouTube. This is an indication that content generating and sharing sites such as YouTube serve as sources of information for various topics of interest to would-be users of information. Furthermore, the content of the videos would also again be influenced

by the source from where the video emanated from based on their interest and intent for producing such videos.

Table 3: Content of YouTube videos on cassava production and processing

Cassava production and processing content	Percentage	Rank
Agronomic practices in cassava production	12.9	1 st
Value addition	11.0	2 nd
Traditional processing of <i>garri</i>	10.3	3 rd
Commercial cassava farming profitable	10.3	3 rd
Empowerment of cassava farmers	9.7	5 th
Innovations in cassava production & processing	7.1	6 th
Challenges in cassava production	7.1	6 th
Home-made fufu, starch & <i>garri</i>	5.8	8 th
Modern processing of <i>garri</i>	5.2	9 th
Cassava development fund	4.5	10 th
Cassava breeding & seed multiplication	3.9	11 th
Cassava waste for livestock feed	3.2	12 th
Processing of HQCF	3.2	12 th
Commercial fufu processing	1.9	14 th
Cassava value chain	1.9	14 th
Processing of starch	1.9	14 th

Source: YouTube Survey, 2019

Presentation Patterns of YouTube Videos on Cassava Production and Processing

Results in Table 4 reveal that the main presentation patterns of YouTube videos on production and processing of cassava were news (24.5%), documentary (20.0%), and training/demonstration (17.4%). This indicates that the majority of the videos were presented in form of news, documentary and training/demonstration; this means that through news presentations viewers may be well informed about issues relating to production and processing of cassava, they may be enlightened through documentaries, and they may acquire new skill-set through training/demonstration videos. The presentation pattern used is a function of the choice of the source of the video as well as familiarity with the different patterns. Presentation patterns can influence viewing by the target audience because they appeal in different manners to these audience.

Table 4: Presentation patterns of YouTube videos on cassava production and processing

Presentation pattern	Percentage
News	24.5
Documentary	20.0
Training/demonstration	17.4
Talk	16.8
Exhibition	5.8
Interview	4.5
Elevator pitch	3.9
Tour	3.2
Education	2.6
Testimonial	1.3

Source: YouTube Survey, 2019

Audience Engagement in YouTube Videos on Cassava Production and Processing

Table 5 shows that the mean number of views, likes, dislikes, subscribers and comments were 11,138.1, 92.8, 5.6, 179,537.6 and 14 respectively. This implies that YouTube videos on cassava production and processing posted in Nigeria are receiving a significant amount of viewership. This may be due to the fact that videos aid understanding and improve knowledge retention as one can watch such videos over and over. Ayobolu and Adebayo (2018) reported that video can be a useful tool in raising awareness of and reinforcing good practices with agricultural workers. Also, viewers don't just watch YouTube videos on cassava production and processing but they equally like, subscribe to and give comments about the videos either as contributions or as questions. This means that YouTube is not a one-way medium for passing information, but rather a two-way medium where feedback is possible thereby fostering interaction between the source of the video and the audience.

Table 5: Audience engagement in YouTube videos on cassava production and processing

Audience Engagement	Percentage	Mean	S.D
Number of views			
Below mean	82.6	11138.1	32134.1
Above mean	17.4	-	-
Minimum	-	-	5
Maximum	-	-	254000
Number of likes			
Below mean	87.1	92.8	354.9
Above mean	12.9	-	-
Minimum	-	-	0
Maximum	-	-	2800
Number of dislikes			
Below mean	84.5	5.6	20.3
Above mean	15.5	-	-
Minimum	-	-	0
Maximum	-	-	176
Number of subscribers			
Below mean	71.6	179537.6	317659.9
Above mean	28.4	-	-
Minimum	-	-	0
Maximum	-	-	823000
Number of comments			
Below mean	87.7	14	64.8
Above mean	12.3	-	-
Minimum	-	-	0
Maximum	-	-	684

Source: YouTube Survey, 2019

Conclusion and Recommendations

YouTube videos on cassava production and processing were well viewed by a substantial number of subscribers with varied contents from the different sources. Also, a few videos on cassava production and processing had mobilizing information which could encourage viewers to take action or seek additional relevant educative resources. More YouTube videos on cassava production and processing should be produced by different stakeholders in the agricultural sector with a view to enhance the dissemination of relevant information on cassava production and processing. Mobilizing information such as telephone number, email, websites, social media address, blogs and office address are important for viewers to gain access to more relevant resources; agricultural stakeholders should endeavor to include such information in their subsequent video uploads.

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