



Shamba Shape Up Series 6 - Kenya  
Knowledge, Attitude and Practices Survey Report  
November 2016



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## Executive Summary

Series 6 of Shamba Shape Up was produced and broadcast across Kenya (Citizen TV), Uganda (Urban TV and Citizen TV) and Tanzania (ITV and Citizen TV). The 2016 series was shot in a variety of new locations with a wide range of topics – encouraging the audience to grow to the next level with the program, and making the show more aspirational.

The program reaches more women (60%) than men (40%), and SSU is still the most useful source of agricultural information for its audience.

The series has been successful in providing audiences with information they need to improve their farming practices. 80% of viewers learnt something new. 43% of viewers made a change as a result of watching the program, particularly in poultry, dairy, maize and farm records. 77% of those who made a change reported an increase in income.

Dairy continues to have one of the highest rates of learning and change second only to poultry, a pattern similar for all series. 33% of viewers claim to have learnt something new about dairy and beef farming with 19% of those claiming to have made a change in their farming practices.

46% of viewers claim to have learnt something new about poultry farming from watching SSU. 27% of viewers who are poultry farmers also claim to have made changes as a result of the program – this is the topic with the highest rate of change and the most sought after information on the program (13% of viewers).

Brand loyalty is still a feature of the program; audiences recognise and prefer to buy brands associated with the program.

Social media is an important component of the program. Shamba Shape Up has one of the largest dedicated agricultural Facebook pages in the region with over 61,000 fans. This is a 20% increase from Series 5 of the program and signifies growing online impact.

Shamba Shape Up's Twitter account has 8,200 followers, up from 4,500 at the start of Series 6, with 64% of them between the ages of 25-34.

Overall, the program continues to be successful in its aims to give farmers the information they want and need to improve their productivity and become better farmers. The program's partners continue to use East Africa's most popular farming program to reach millions of people, cost effectively, with their useful and engaging messages.

Series 7 is under production and will broadcast in the 2017 long growing season. Series 8 will be produced in 2017 and early 2018, for broadcast in 2018.

## Introduction

Shamba Shape Up (SSU), Mediae’s agricultural reality TV show, has grown significantly since its inception in 2011.

Since the first series, which was shot and aired in Kenya, the show has been shot and aired in Kenya, Uganda and Tanzania. The show is supported by an SMS platform for audience feedback and requests for more information. There is also the option of a radio version in Kenya.

Series 6, on whose impact this report focuses, was shot in Kenya, Uganda and Tanzania in 2015/16 and broadcast in 2016 across the three countries in English and Swahili. (Kenya – English & Swahili, Tanzania – Swahili, Uganda – English).

This report summarises the findings from the pre and post-broadcast KAP (Knowledge, Attitude and Practices) surveys and the SMS data, gathered out across Kenya for the series’ first broadcast run (March to September 2016).

## Shamba Shape Up Series 6

Shamba Shape Up Series 6 was produced as a 6 month long (26 week) series to cover the entire growing season in one series. 20 episodes were shot in Kenya, 3 episodes were shot in Uganda around Mbale and 3 episodes in the Arusha/Mt Meru region in Tanzania.

The series aired from March to September 2016, and is on repeat from September 2016 to March 2017.

## Partners

Shamba Shape Up Series 6 sponsoring partners were:

KHS,Rijk Zwaan & Plant Raisers	Osho Chemical Industries Ltd	GeoPoll
Cooper K-Brands	Mea Fertilizers	FAO
Kenchic	Real IPM	CGAP
d.light	The Rockefeller Foundation	UNGA Farm Care EA
GALVmed	SoilCares	Seedco
ICRAF	ICRISAT	iShamba

Other partners who appeared as ‘experts’ in the program include: Farm Africa (horticulture post harvest quality controls), Farm Concern (cassava post harvest treatment & storage), Cereal Growers Association (CGA), TechnoServe (TNS) Uganda (mango post harvest) and, One Acre Fund (maize post harvest storage methods).



## Content

Content covered in Shamba Shape Up Series 6 is as follows:

Sector	Content
Poultry	Biosecurity; Housing; Feed & Supplements; Disease control, Newcastle Disease Vaccination; Layers; Broilers, Kenbro
Dairy cattle	Housing; Feeding; Nutrition; De-worming & disease control; East Coast Fever Vaccination; Artificial Insemination & breeding; Aflatoxin
Beef	Marketing; De-worming; Tick-spraying.
Soil	Soil testing; The importance of correct pH and liming; Fertilizer; Visual soil deficiency symptoms; Conservation Agriculture; Mobile soil scanner.
Maize	Choosing the correct maize variety for your area; How to plant & optimise growth; Maize storage to minimise post harvest loss & aflatoxin.
Nutrition	Growing nutritious food – pigeonpea, guava, baobab, finger millet, sorghum, mango, chickpea; Awareness of benefits of nutrients; Cooking for nutrition; Kitchen gardens & vertical gardens.
Post Harvest Loss Management	Farming techniques to optimise harvests; Educating on good storage methods for maize, green beans, mangoes, cassava, green grams, potatoes, cowpea; Working together in farmer groups; Maize aggregation to be able to get a good price at market.
Financial literacy	Record keeping; Budgeting; Farm accounts; Loans; Insurance for farmers; Digital financial services.
Solar lights	Home systems; Portable lights; Solar savings; Solar for health.
Greenhouses	Capsicum & tomato planting; Pruning; Irrigation & pest control.
Conservation Agriculture	Minimum tillage; The importance of soil cover; Understanding the value of crop rotation.
Organic Farming	Gro-Plus maize treatment; Pests in greenhouses; Mango fruit fly control; Organic French bean growing; Bag garden vegetable farming.

## Regions/Locations

Shamba Shape Up Series 6 was filmed in the following areas:

Busia	Mt Meru Tanzania	Bungoma	Mbale Uganda
Makueni	Kajiado	Thika	Kikuyu
Meru	Kampi Ya Moto	Kisii	Homa Bay
Embu	Eldoret	Narok	Kwale

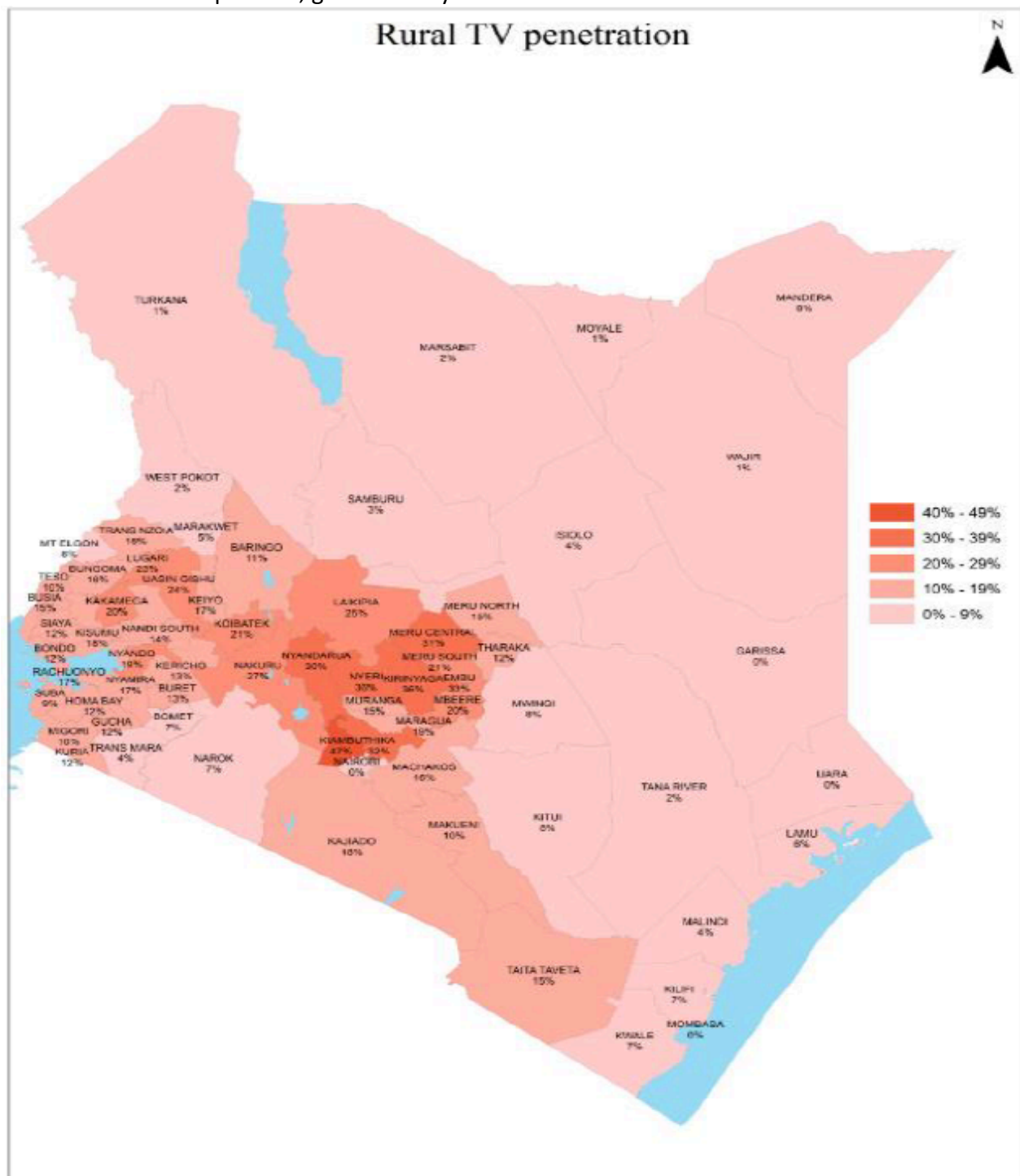
## Broadcast areas

Shamba Shape Up Series 6 was broadcast in Kenya, Uganda, and Tanzania in 2016

Broadcast day and time:

Country	Broadcast	Other broadcast
Kenya	Citizen TV Saturday (English) & Sunday (Swahili) 1.30pm. Repeat Sunday 1.30pm (Swahili).	
Tanzania	ITV Friday 6.30pm, Repeat Saturday 10.55am. Swahili.	Citizen TV Kenya broadcast
Uganda	Urban TV Sunday 2pm. English.	Citizen TV Kenya broadcast

The rural TV penetration in Kenya roughly correlates to the productive agricultural areas of the country as illustrated in the map below, generated by ACAR in 2014:

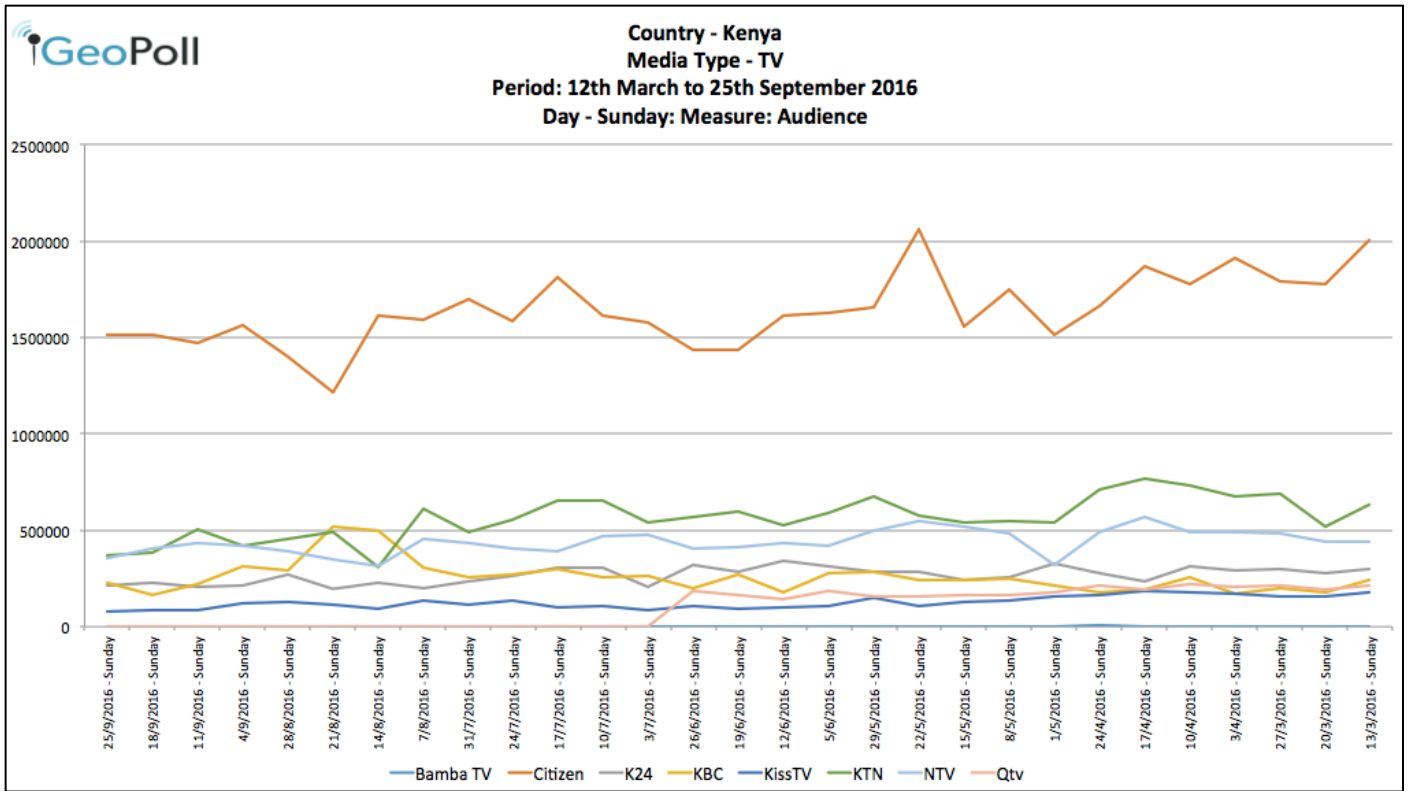


### Viewership data

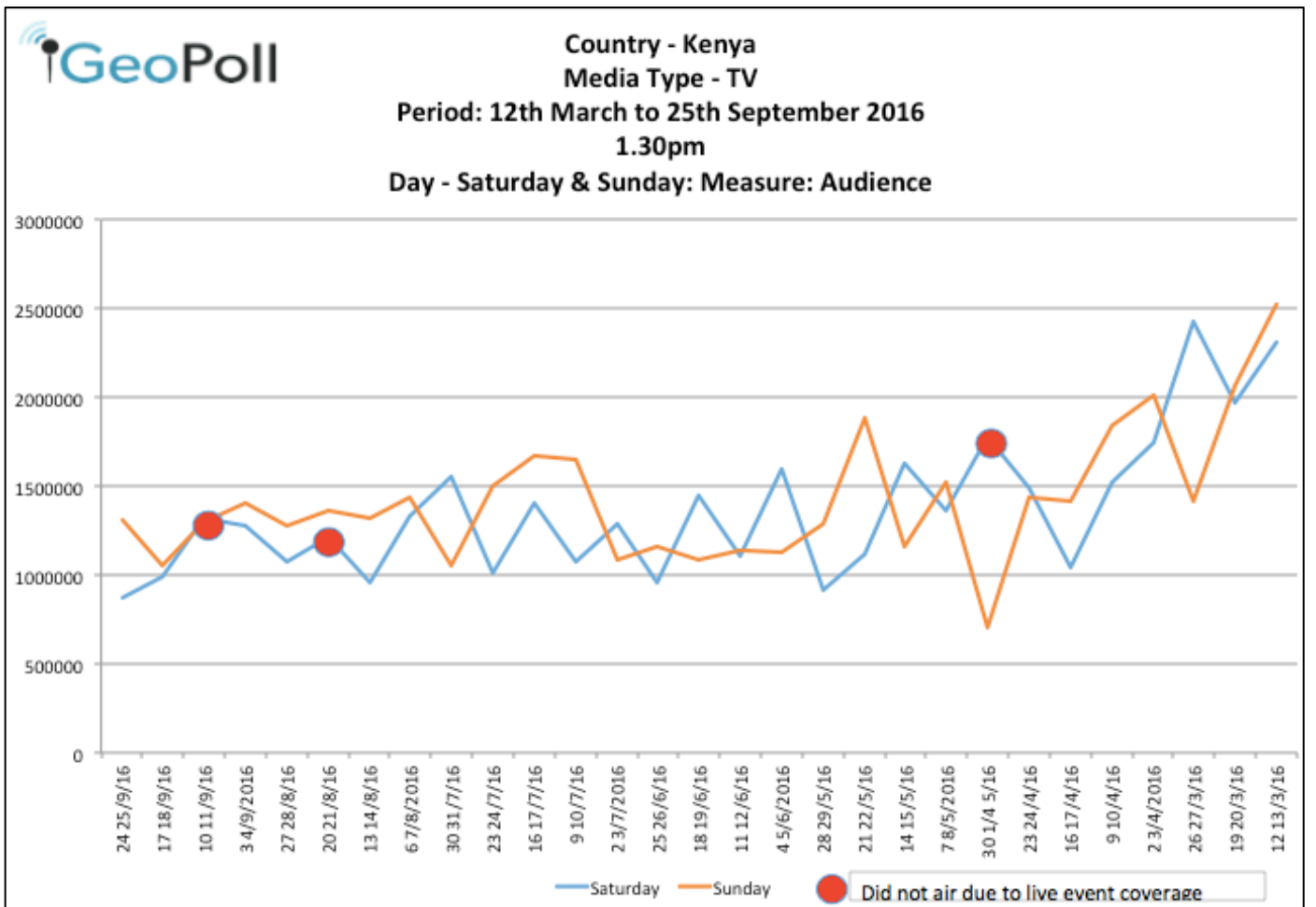
According to research data compiled by a consortium led by Reading University in Kenya, SSU is watched in 13% of households, including those without TV, in rural areas. This constitutes 39% of the total number of people who watch TV once a month.

This indicates that approximately 5 million people in Kenya watch SSU at least once a month with 43% of viewers watching TV outside their homes.

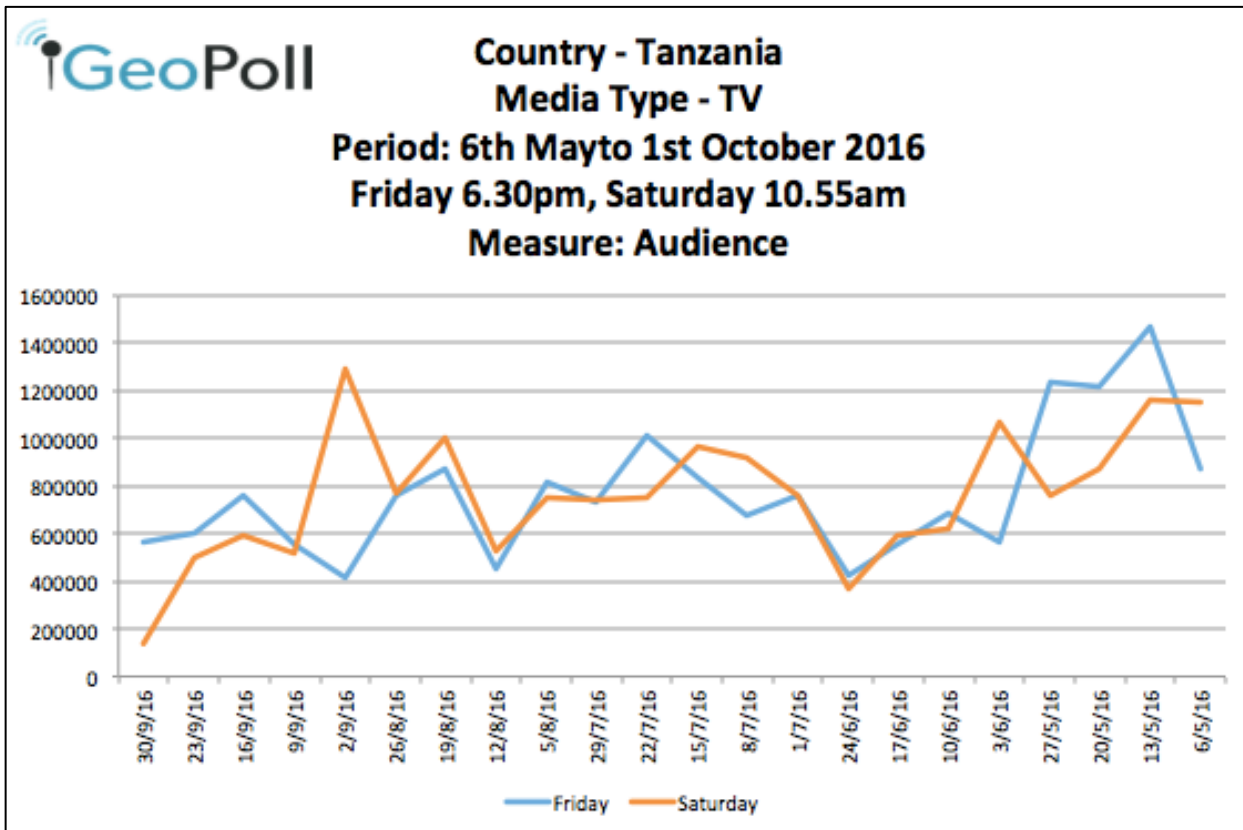
In Kenya, Shamba Shape Up airs on Citizen TV which continues to dominate the market. The impact on viewership of various channels is clearly illustrated in the chart below.



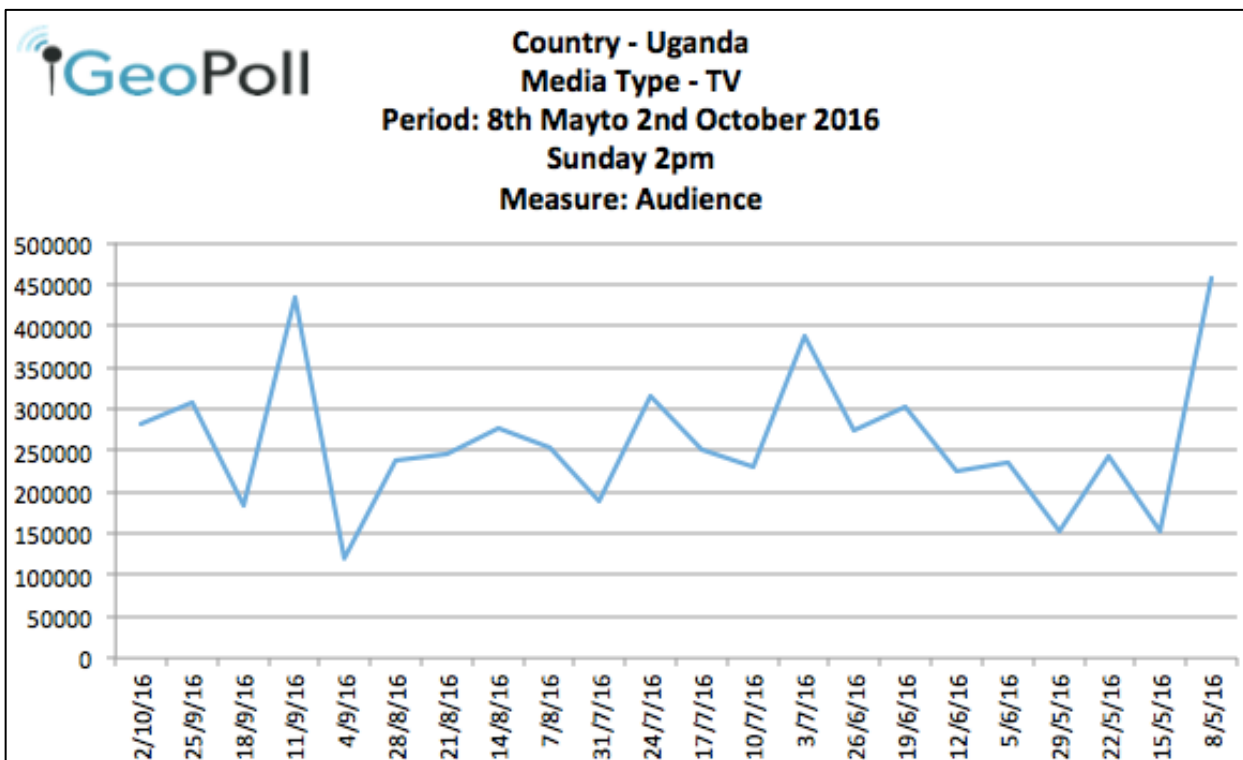
Data from Geopoll in 2016 show that the average audience at 1.30pm in Kenya on Saturday and Sunday between June and October 2016 was 3.09 million every week (1.52m & 1.57m).



In Tanzania SSU is aired on ITV on Friday evenings and Saturday mornings in Swahili.  
 The Geopoll 2016 data for Tanzania shows an average combined weekly audience of 1.5 million.



In Uganda SSU is aired on Urban TV on Sunday afternoons in English.  
 The Geopoll 2016 data for Tanzania shows an average weekly audience of 260,000.



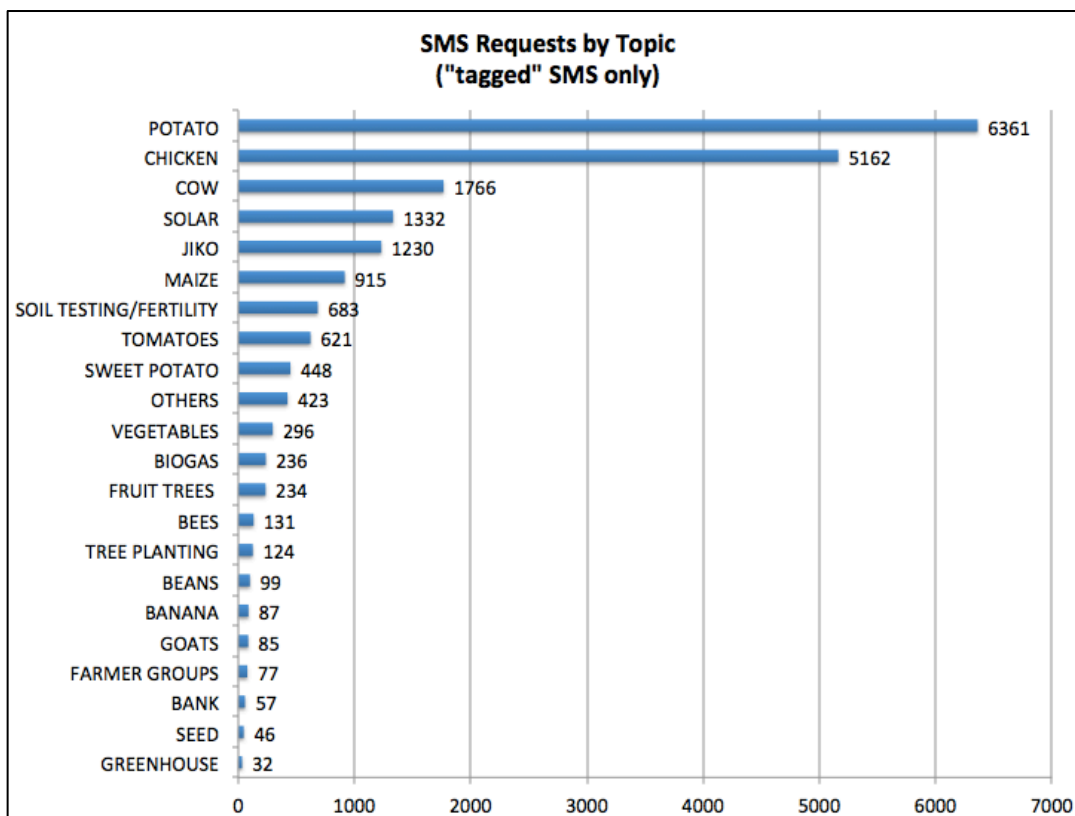


## SMS database traffic

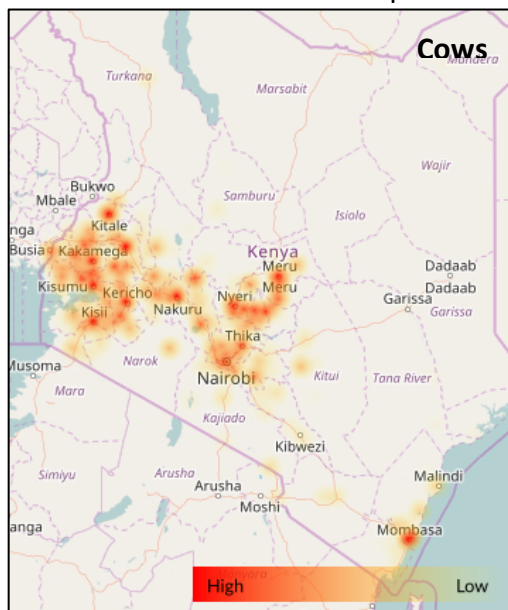
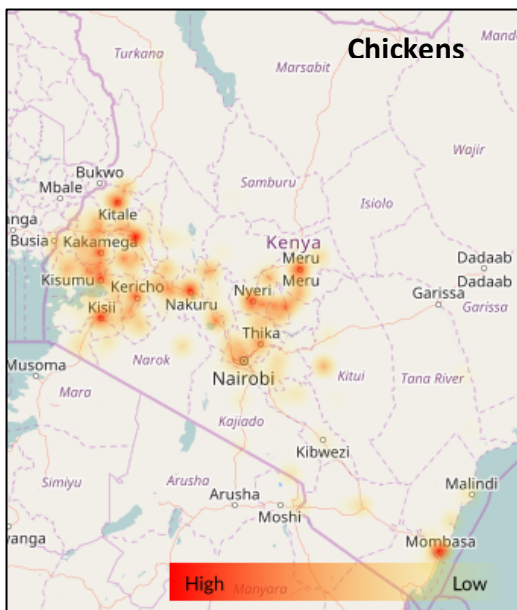
Series 6 received 11,956 SMSes from 12<sup>th</sup> March 2015 to 8<sup>th</sup> October 2016, and will continue to receive SMSes until the series re-run ends in March 2017.

The SMSes received are either a request for more information via a leaflet or farming questions that are passed on to iShamba, Mediae's mobile information service

The chart below shows the distribution of tagged SMSes, i.e. SMSes regarding a specific topic request – e.g. if the sender writes 'Chicken' or 'Kuku' as opposed to asking for the leaflet for an episode (e.g. 'Farmer Lydia') or for all episodes (e.g. 'All' or 'Zote').



The areas from which SMSes about chicken and cows were sent follow the TV reach pattern.



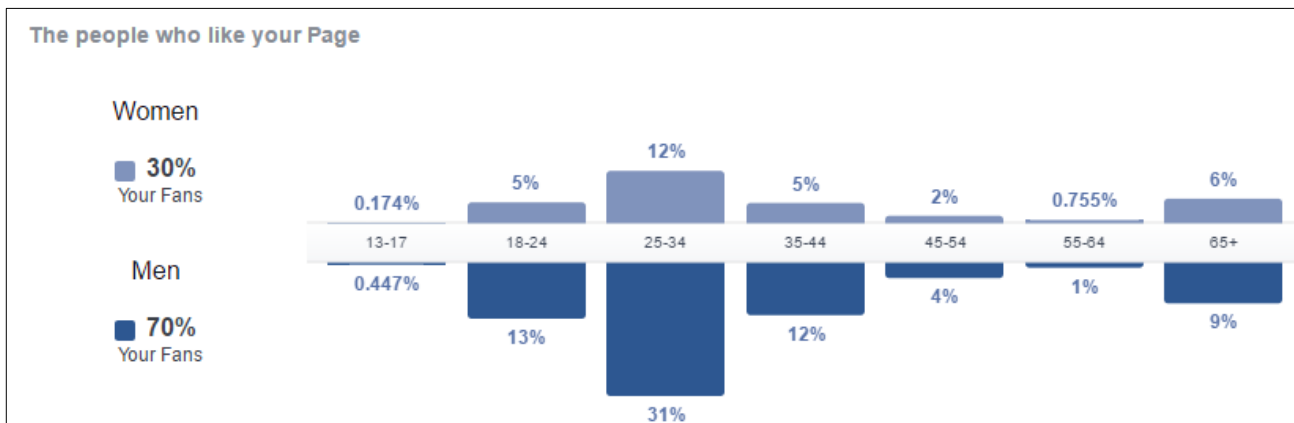
## Social media/internet use

The number of Internet users in Kenya grew to 31.9 million from 29.6 million in the previous quarter (2016, Communications Authority of Kenya). Consequently, the portion of the Kenyan population accessing Internet services reached 74 %.

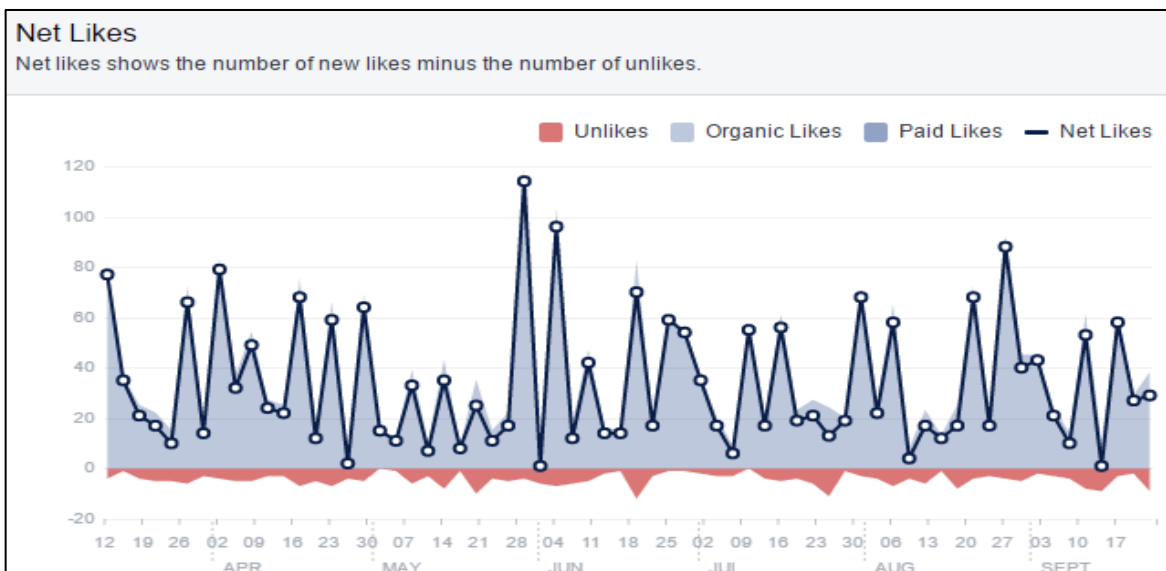
Facebook is one of the most visited websites and Shamba Shape Up has one of the largest dedicated agricultural Facebook pages in the region with over 61,000 fans. This is a 20% increase from the Series 5 of the program and signifies growing online impact. Moreover, Shamba Shape Up won the ‘Best Agriculture’ award in the OLX Social Media Awards (SOMA) 2016. The awards recognise brands that use social media to impact and transform lives, further underlying our effective use of the platform to captivate audiences.

The page is predominantly used to engage with viewers on a more personalised level, share agricultural information and tips, hold competitions, and for peer-to-peer information exchange.

In terms of demographics, almost 80% of fans are Kenyan (48,838). 7,599 are Tanzanian, an 86% increase in a year and 1,435 are Ugandan, which marks an increase by 32%. USA ranks fourth with 436 fans and United Arab Emirates fifth with 219. 25-34 remains the most popular age cohort for Facebook. We have seen a steady growth amongst 18-25 year olds and an increase in the 35-44 age bracket for both males and females.



Similar to last year’s trend, the highest Facebook traffic occurs over the weekend, particularly on Saturdays, when the episodes air. The extended peaks in traffic are due to competitions held with partners of the program, as well as posting engaging content during optimal times.



The Twitter account is used for interaction with current and potential partners, Shamba Shape Up's Twitter account has 8,200 followers, up from 4,500 at the start of Series 6, with 64% of them between the ages of 25-34.

Shamba Shape Up got involved in various Twitter chats such as #AgribusinessTalk254 and #IamAg, celebrated international observance days and posted on topical issues such as climate change and post-harvest loss, which allowed us to generate and share ideas on how to improve the realities of smallholder farmers.



Over 1,200,000 hits have been recorded on the YouTube site, Africa Knowledge Zone. The site holds all of Mediae's programming; all SSU episodes are uploaded after broadcast for free access.

## *Research methodology – KAP study*

The KAP (Knowledge, Attitudes and Practices) field survey was conducted by GMaurich Company pre-broadcast in March 2016, and post-broadcast in October 2016.

The surveys were conducted in Meru, Kisii, Kikuyu/Ruiru, Kiserian/Kajiado, Kilifi, Makueni, Busia, Eldoret/Elgeo, with an even split of respondents in each location. 800 respondents were interviewed in total in each survey wave.

The sample was split between

1. those who own a TV and have not watched SSU in the past 4 weeks (Non SSU),
2. those who own a TV and watch SSU (TV Viewer)

This excludes a large proportion of viewers who do not have a TV and watch SSU outside the home, which according to a report by Reading University could be 43% of total viewership.

We have studied the data for any differences in estimates between the pre broadcast viewers and non-viewers, and the post broadcast viewers and non-viewers samples. Differences in the order of six percentage points would be necessary in order for us to make any inferences about the impact of the programme on knowledge and practice. The differences we have observed tend to be small but directionally positive in terms of increasing awareness and knowledge. Influencing actual practice is slower and takes longer.

Pre and post broadcast differences become more challenging over time as the program has been a broadcast fixture for around six years and finding small holder farmers who have not been exposed to the content one way or another is increasingly difficult. In order to address some of these issues, Mediae is undertaking a complete review of its tracking methodology with a view to refining the sample design and the questions asked. It is our opinion that observation techniques could greatly enhance answers to survey questions and verify some of the behaviour changes farmers claim to have made as a result of the program.

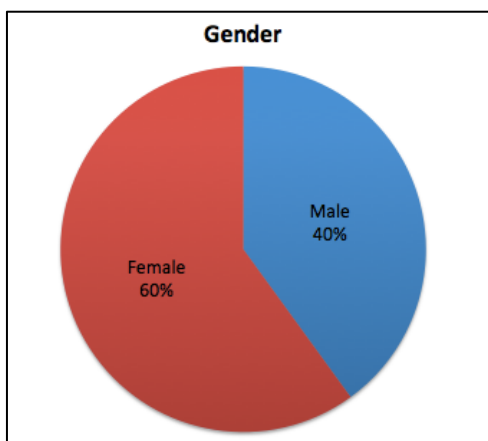
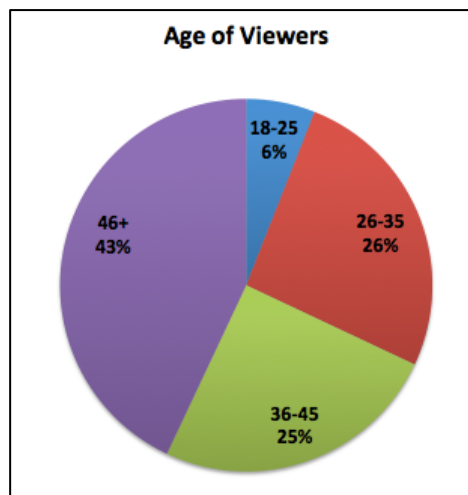
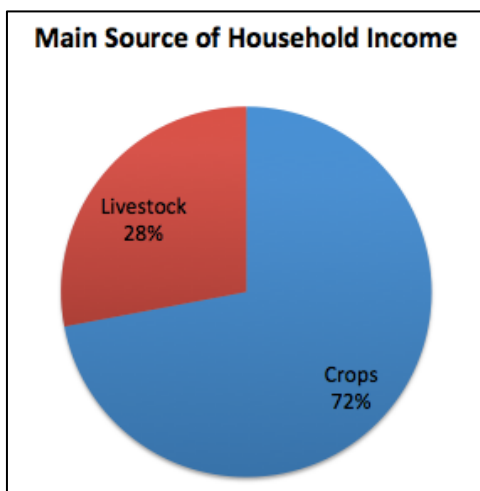
The survey sections below focus specifically on the differences between the post-broadcast viewers and non-viewers. Overall, we observe some differences in awareness and knowledge that we believe can be attributed to viewing, but few differences in actual practice. Our learning from these findings is that in future we should illustrate more effectively the positive changes and benefits that farmers can achieve by changing their practices and acting as examples of success for neighbouring farmers.

The survey sections covered are:

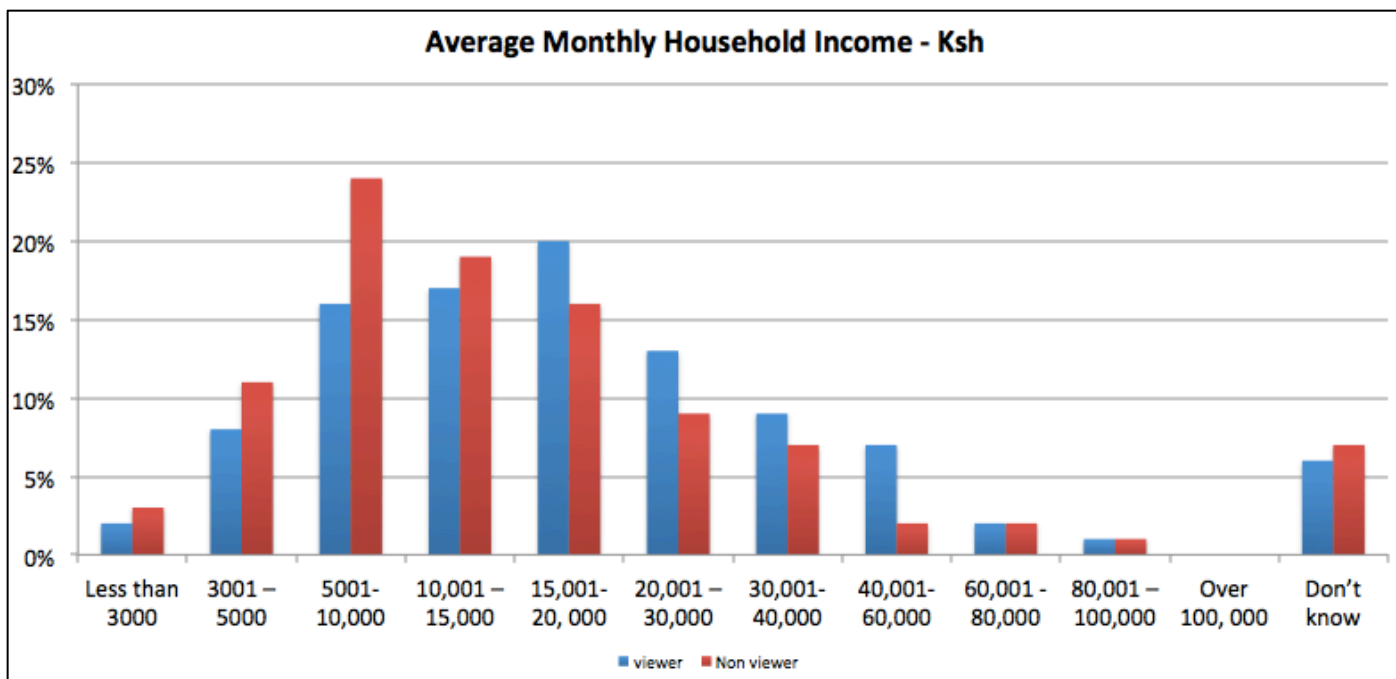
- Soil Fertility & Conservation Agriculture
- Solar Lights
- Dairy
- Beef
- Poultry
- Maize
- Mangoes, Potatoes, Cassava, Greengrams
- Group Stores
- Greenhouses
- Post Harvest Loss
- Financial Literacy (including Insurance and Mobile Money)
- Nutrition

## Viewer Demographics

- Average land size cultivated for TV viewers: 1.96 acres



The program reaches more women than men. This is important, as women are generally excluded from traditional trainings and workshops. Furthermore, women accessing the programs directly, reduces the problems associated with inaccurate transfer of knowledge, and allows them to make the decision to adopt the practices they wish to, based on the information they have received.



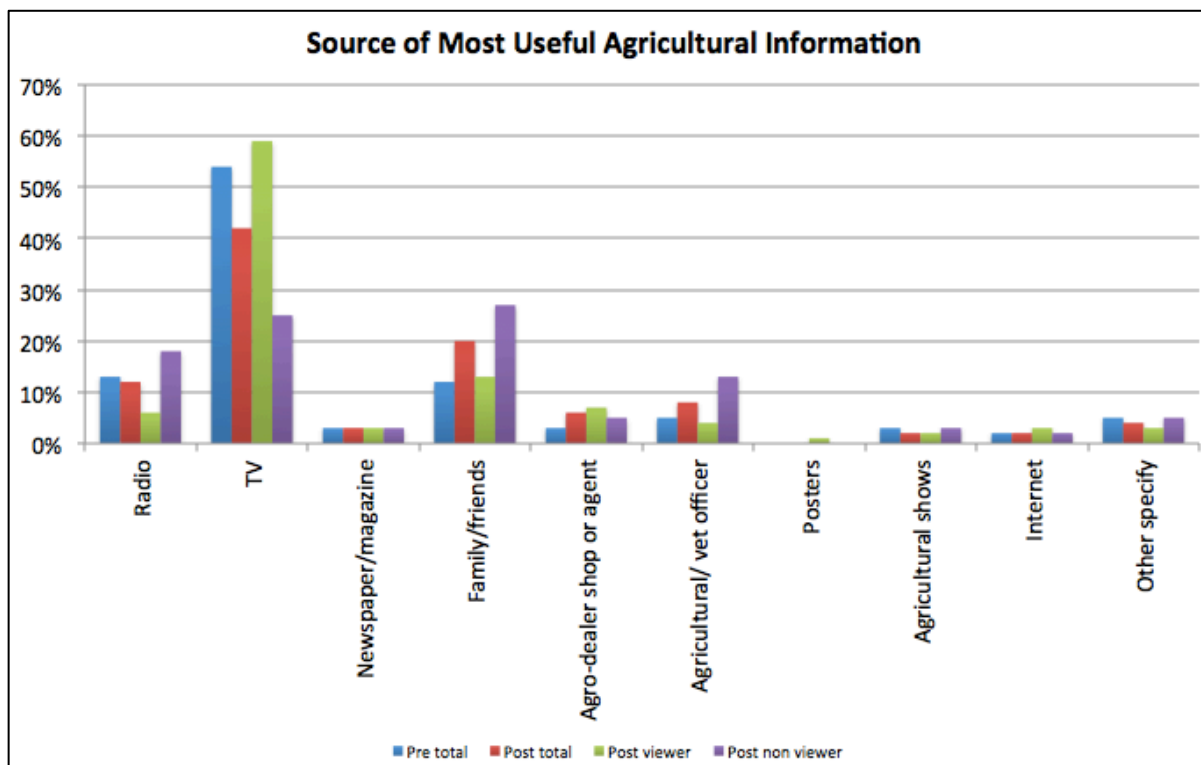
33% of viewers earn between 15,000/- and 30,000/- a month compared to 25% of non-viewers. 57% of non-viewers earn 15,000/- or less a month compared to 43% of viewers.

## Sources of agricultural information

Viewers of SSU find TV the *most useful source* of agricultural information, followed by family and friends, and Agro-dealers.

Those who do not watch SSU go to family and friends as their first port of call followed by TV and then radio.

Very few farmers source information from newspapers/magazines, posters or agricultural shows. Audio-visual media are therefore very important in terms of supplying *useful* agricultural information to farmers.

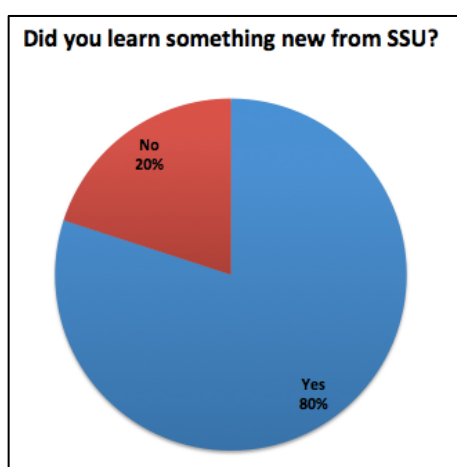


## Impact – changes in Knowledge, Attitude and Practice (KAP)

### Knowledge - Learning

The program aims to change the audience's knowledge, attitudes and practices by providing them with easily understood, practical ways to improve their farming and their livelihoods.

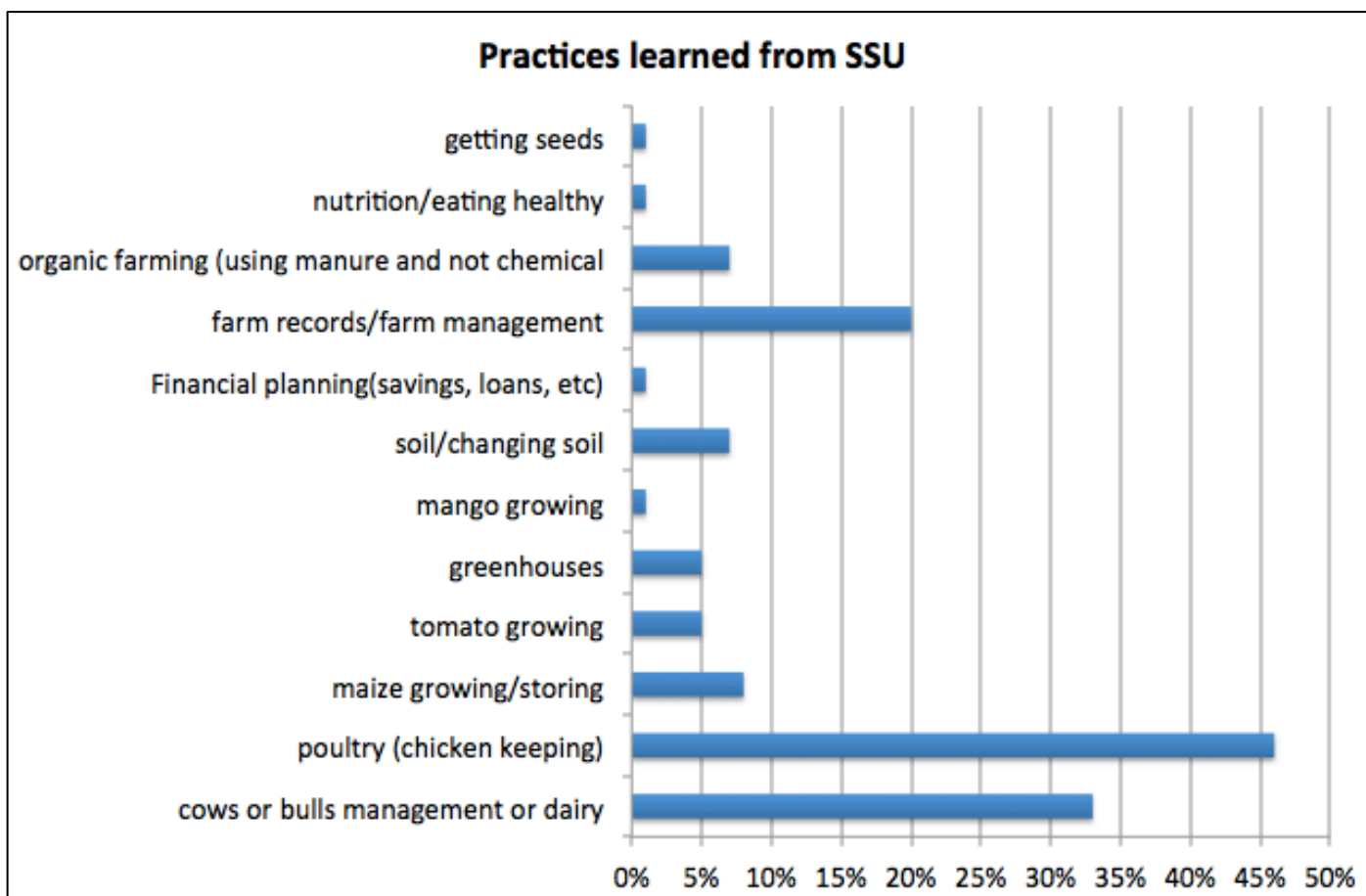
The surveys measure changes in KAP by asking what the respondents know, think and do.



Rates of learning something new (i.e. something the viewer did not know before) are high. If we estimate a 3 million TV audience in Kenya alone, this can translate roughly to 2.4 million people learning something new in 2016 from the TV program.

The next important, step is that those who learn then apply their new knowledge to their farming. This can be tracked through what practices they changed as a result of watching the program.

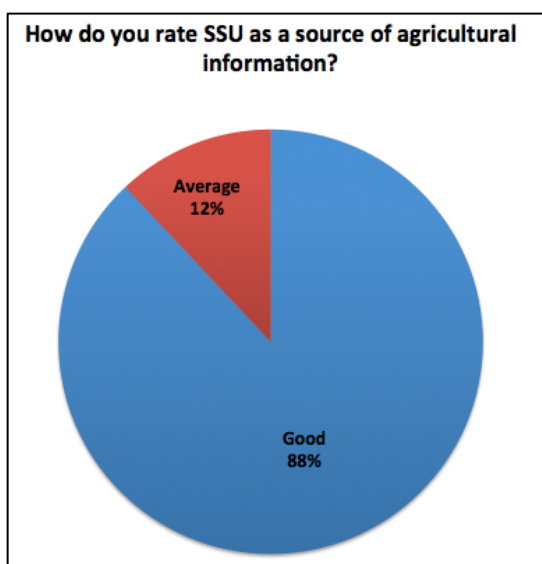
As expected, the frequency of learning is highest in the most popular topics. For TV viewers this was chicken and cattle with a noticeable uptake of information on use of farm records.



### Impact – changes in Knowledge, Attitude and Practice (KAP)

#### Attitude to Shamba Shape Up

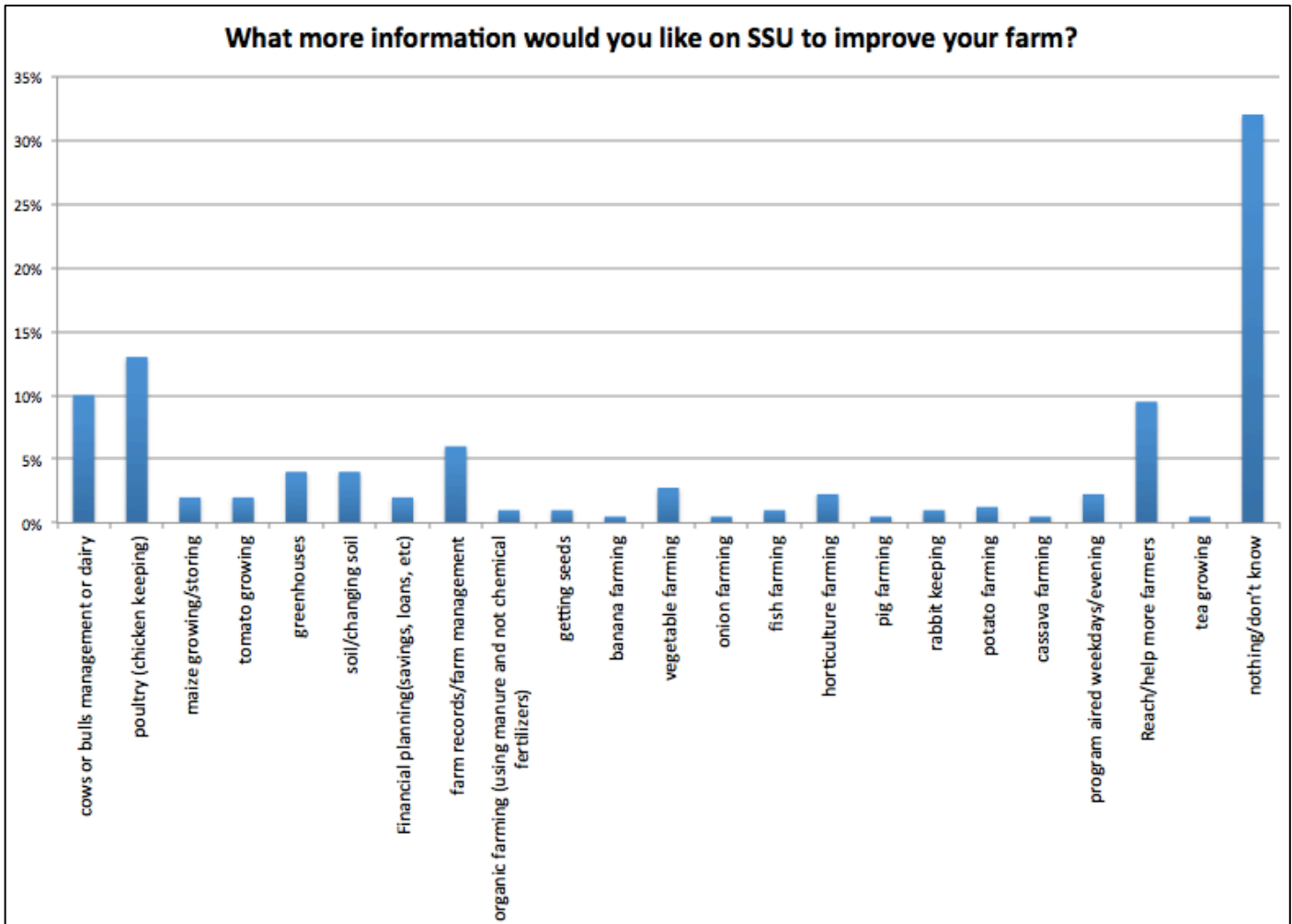
In order for SSU to be successful, viewers must rate the program highly – entertainment for education can only be effective if users return by choice. In this regard the program has been successful:



Over the entire series, we received 11,956 SMSes and sent out over 60,000 information leaflets with 82% of recipients rating them well. Over 4,000 SMS questions came in that were answered by iShamba.

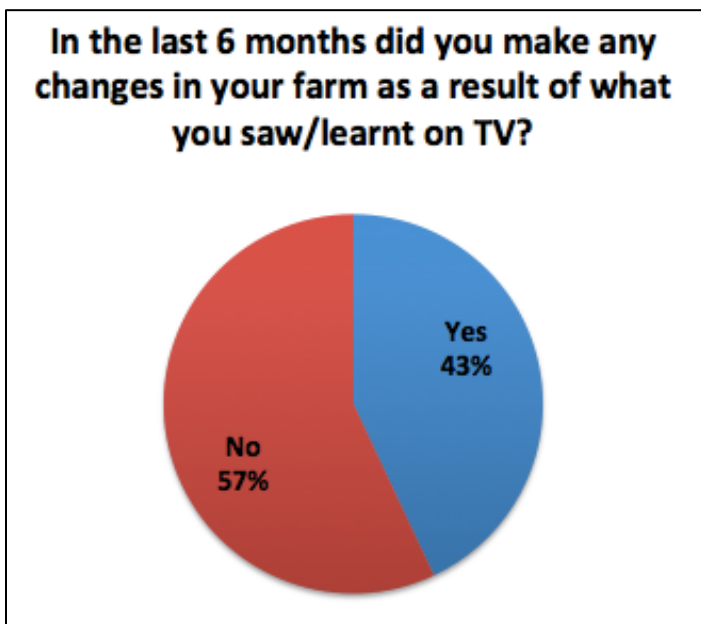
**Information requested from Shamba Shape Up**

SSU content is informed by research. One source is this KAP survey where viewers are asked what additional information they want from SSU. The most frequently requested topics are poultry and dairy



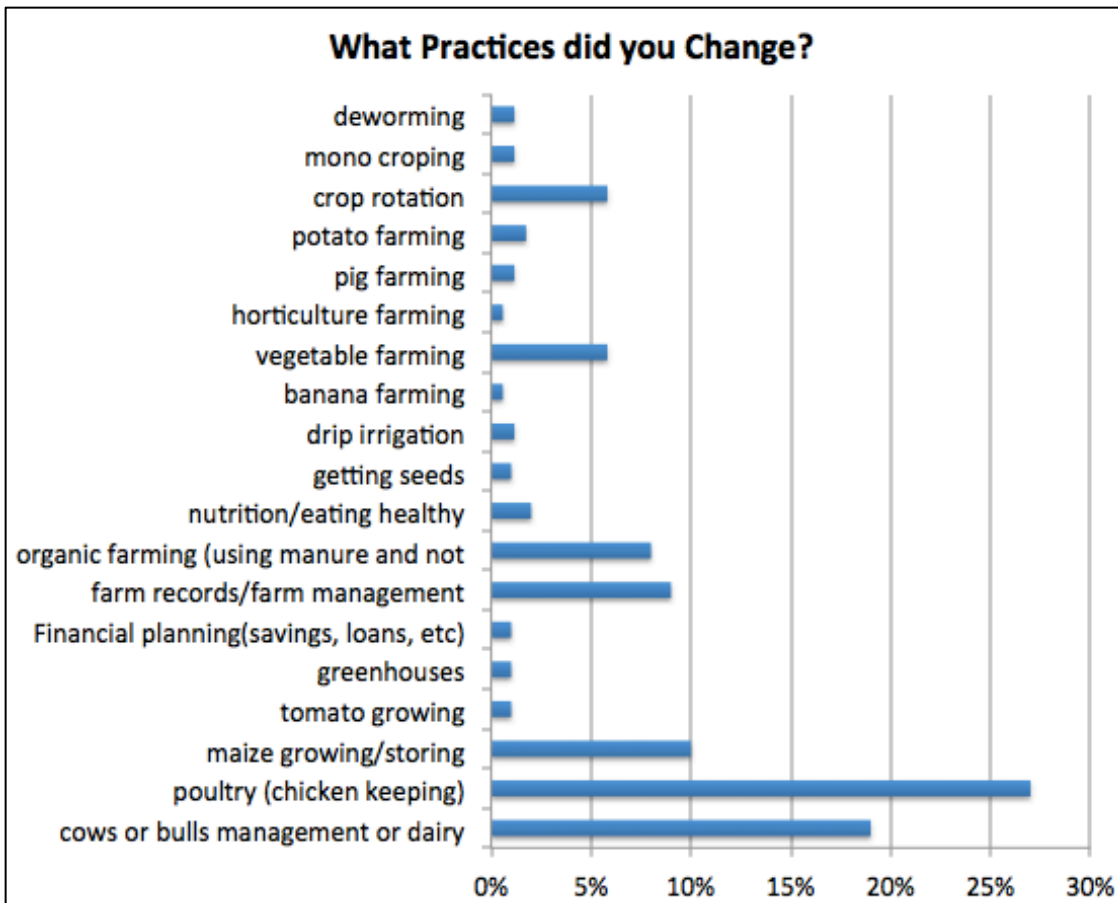
**Impact – changes in Knowledge, Attitude and Practice (KAP)**

**Practice – behaviour**



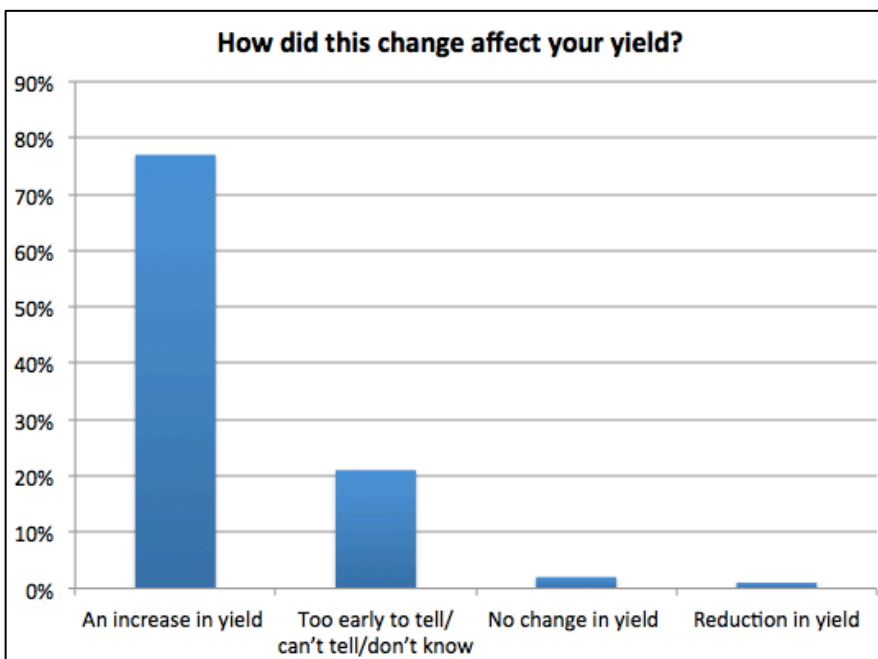
43% of respondents who are viewers made a change which can be estimated to be equal to 1.29 million people across Kenya.





Highest rates of change were seen in poultry and dairy. This is a similar pattern for all series, however new to series 6 is that Farm records and learning about farm management is up 7% from Series 5.

*Impact – value implications – monetary and food security*



The positive changes to yield can translate into increased income or food supply for households adopting new practices or behaviours. We can therefore conclude that average viewer incomes increase as a result of the program, as compared to non-SSU farmers.

## Impact on KAP by sector

### *Soil fertility*

#### *Testing*

SSU has been educating on the importance of soil testing for 6 series. The program encouraged farmers to test their soil using mobile laboratories and demonstrated how to take a sample while also enforcing the message of why soil testing is salient.

Awareness of soil testing has increased (5% higher than Series 5), however, the rate of adoption remains low. 82% of viewers compared to 68% of non-viewers have heard of soil testing but only 12% of those viewers claim to actually have done a soil test.

The majority of viewers (56%) say they know their soil has a problem as the crops become stunted and withered, and yields decline showing a reactive approach to soil health. The program needs to emphasize the importance of a proactive approach to soil health, continuing to increase awareness but also educating on where to go to get a soil test done. Farmers need a better understanding of the correlation between healthy soil and high yields.

KALRO, formerly KARI, remains the best known place to get soil tested (35% of viewers) followed by Daktari wa Udongo and Cropnuts (10% of viewers). While there has been a 7% increase in the number of viewers who know where to take soil for testing, 45% of viewers and 50% on non-viewers do not know where to get their soil tested which helps explain why actual testing is only at 12%.

Nine per cent more viewers than non-viewers (51% to 42%) understand that soil testing helps them know what type of fertilizer to use and 12% more viewers than non-viewers (49% to 37%) understand that soil testing enables them to know how much fertilizer they need.

#### *Using fertiliser*

The program recommended non-acidifying fertilisers, and using the fertiliser recommended in the soil test, rather than using DAP every season.

76% of viewers used fertiliser last season with the majority (51%) using the fertiliser that is most commonly used in the area, typically DAP at planting and CAN at topdressing. The majority of viewers (55%) continue to use DAP as the fertilizer of choice at planting despite not knowing the acidity or nutrient requirements of their soil.

For brand awareness, when asked which brands they know, respondents generally cited the type of fertiliser (DAP, CAN) instead of a brand. However, MEA Fertilizers was the highest cited brand at 17% of viewers (against 10% non-viewers).

An area to focus on is visual soil deficiency symptoms as awareness is still low and confusion remains with regards to phosphorous and nitrogen deficiency.

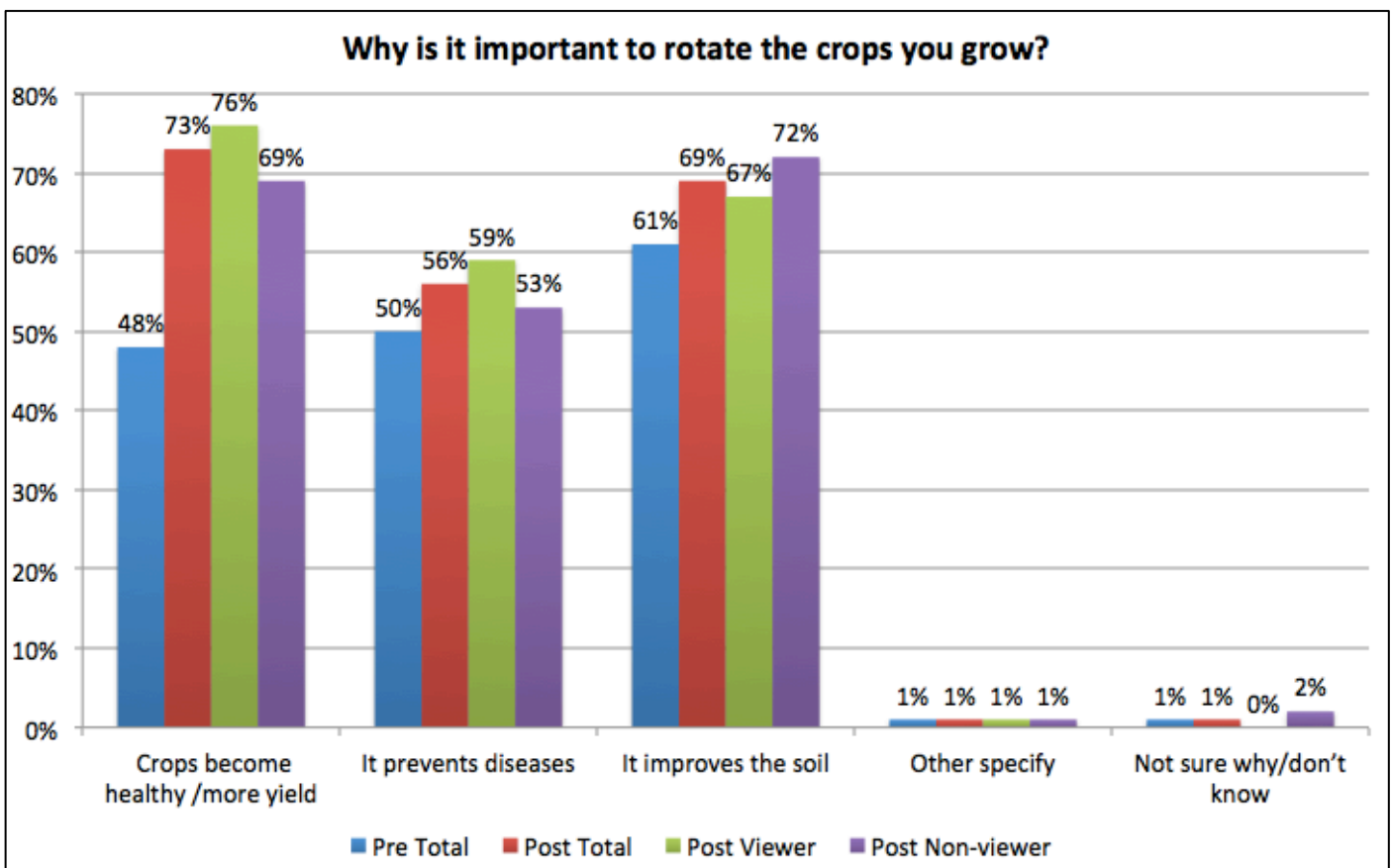
### Conservation Agriculture

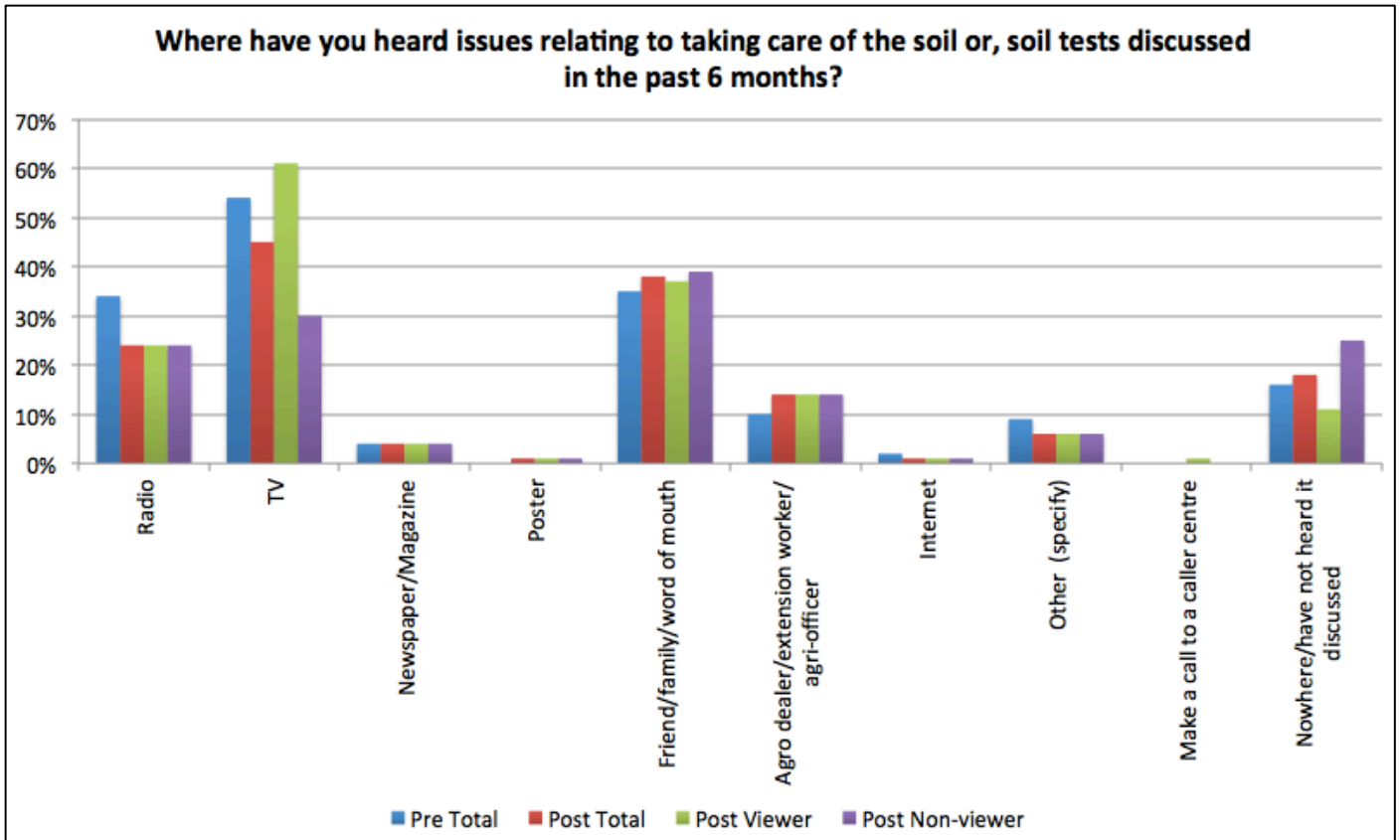
The program introduced farmers to Conservation Agriculture (CA) and the 3 principles, namely:

- Minimum tillage
- Soil cover
- Crop rotation

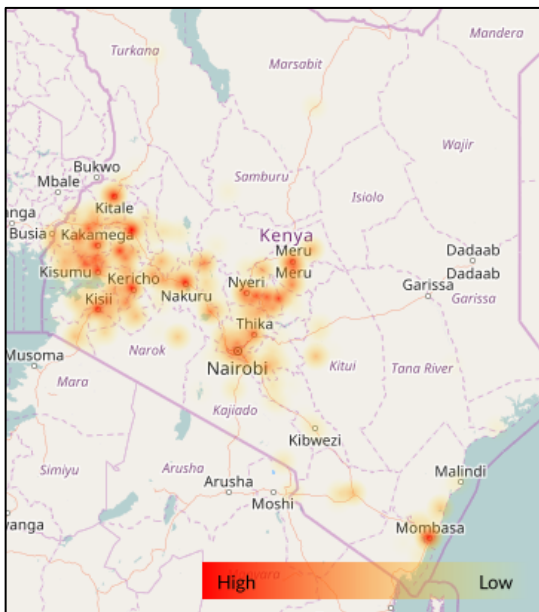
While 12% of viewers claimed to know what Conservation Agriculture is, compared to 6% of non-viewers, the topic is relatively new to farmers and needs to be reinforced.

1. Minimum tillage: Awareness remains low with 91% of all respondents claiming to have ploughed the whole plot.
2. Soil Cover: 26% of viewers compared to 18% of non-viewers covered the soil with dry grass or leaves. This shows not only an awareness of the practice but also implementation amongst viewers.
3. Crop Rotation: 54% of viewers compared to 51% of non-viewers claim to practise some form of crop rotation citing that it prevents diseases, improves soil and yield.

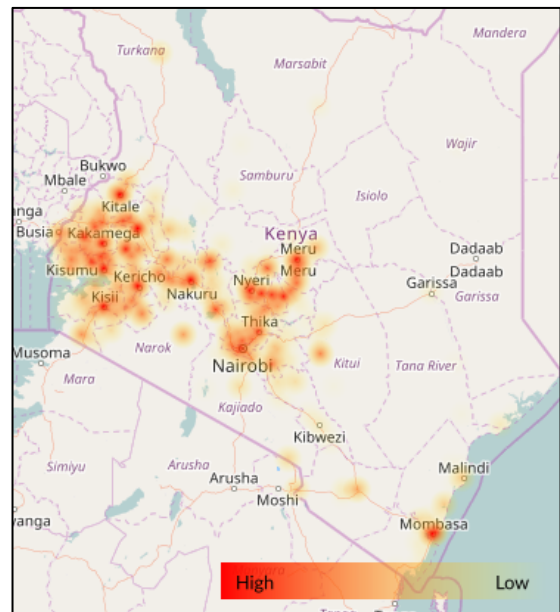




*SMS traffic for Soil Health*



*SMS traffic for Conservation Agriculture*



## Dairy

Dairy continues to have one of the highest rates of learning and change second only to poultry. As a source of cash income, the dairy/livestock sector remains an important part of the program. The series tackled housing; animal nutrition (feeding, supplementation and minerals); disease management and parasite control; and artificial insemination.

In 2014, Reading University estimated that the impact of SSU on the dairy sector in Kenya was a total value of US\$24 million, through increased milk production.

According to the KAP field survey, 63% of respondents have milking cows with an average of 2 cows per small-holder farmer.

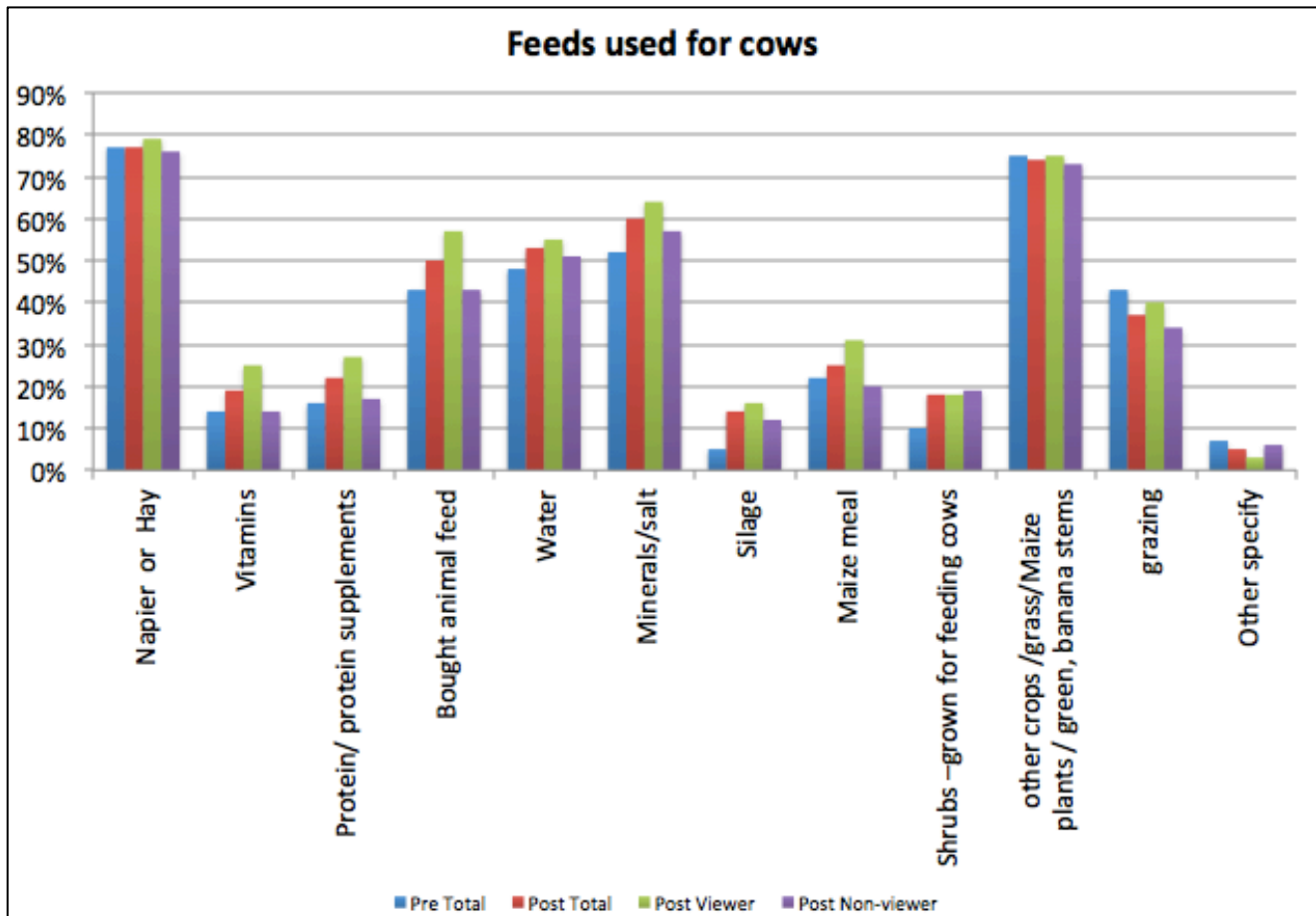
Moreover, 33% of viewers claim to have learnt something new about dairy & beef farming with 19% of those claiming to have made a change in their farming practices.

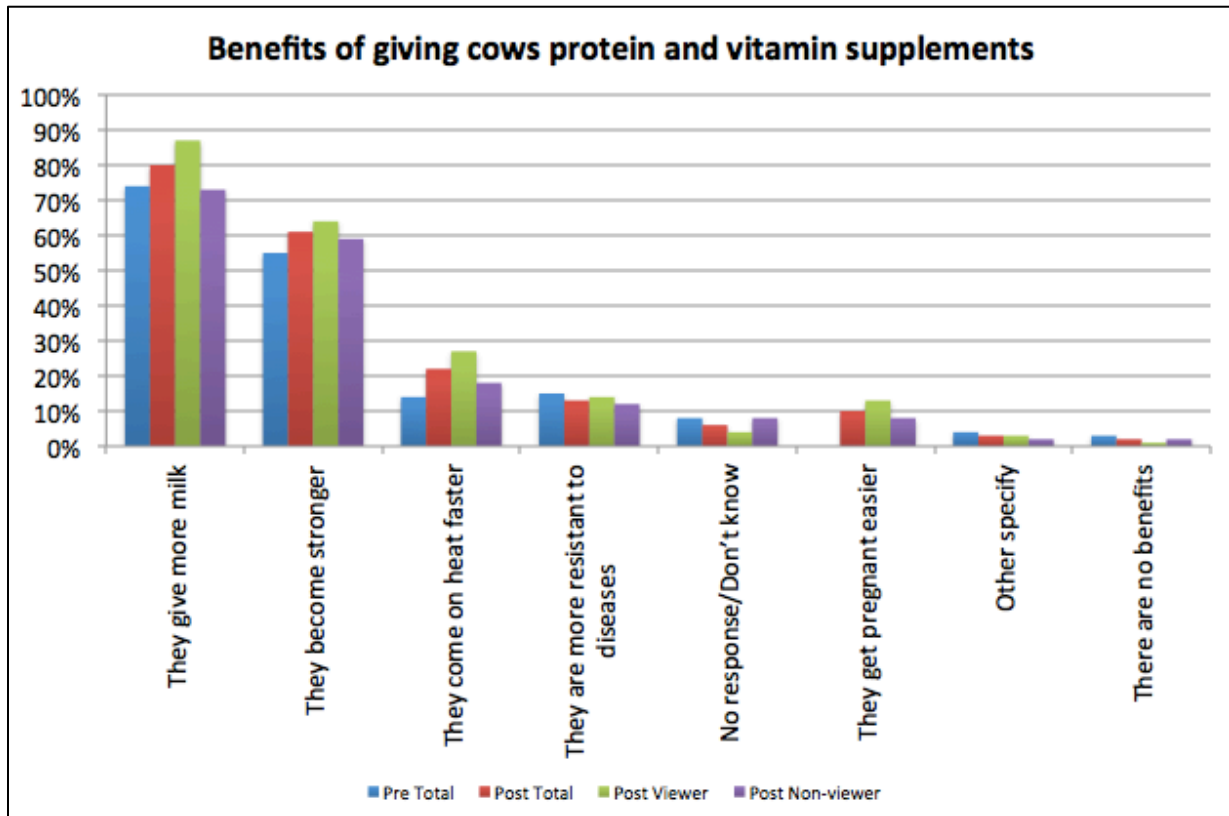
## Housing

64% of viewers zero-graze their cattle and keep them in a shed, an increase of 17% from last series. 58% of non-viewers zero-graze their cattle.

## Feeds & Supplements

The series covered use of targeted animal feed, silage, fodder shrubs and supplements for cattle. Encouragingly, 14% more viewers bought commercial animal feed and 10% more use supplements than non-viewers. Awareness of the benefits of supplements in increasing milk production has increased from last series (78% to 87%). An area to continue to work on is silage production (4% more viewers than non-viewers) and fodder shrubs to ensure a good source of protein during the dry season.

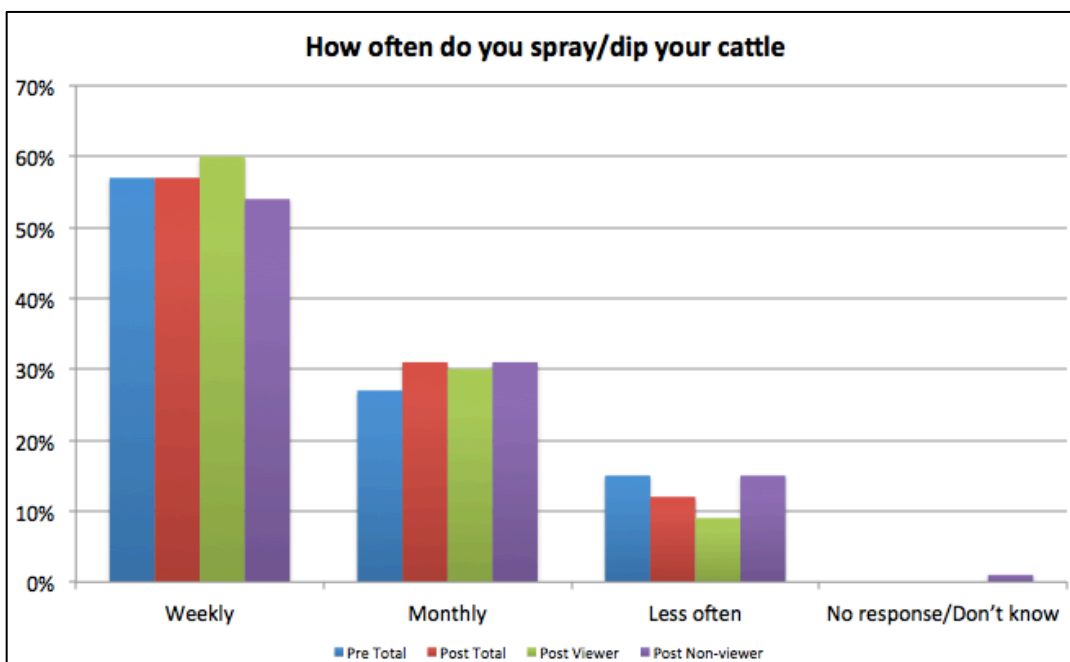




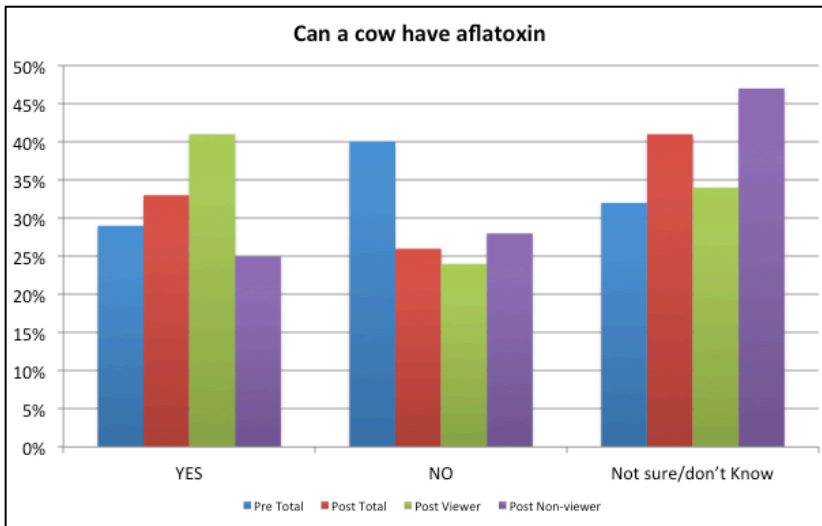
#### Health and diseases

All are aware of worms and ticks in cattle and 98% of viewers and 96% of non-viewers de-worm their cows. 62% of viewers compared to 71% of non-viewers rely on their vets to decide which de-wormer to use. Only 5% of viewers and 3% of non-viewers mention using a weigh band to calculate the amount of de-wormer to use. This is an area to continue to focus on to educate farmers on how to de-worm their cows without having to rely on a vet. 18% of viewers and 12% of non-viewers source their de-wormer from Cooper K Brands Ltd.

84% of viewers compared to 75% of non-viewers spray or dip their cows against ticks. The number who spray or dip at the recommended 1-week interval is 60% of viewers compared to 54% non-viewers.

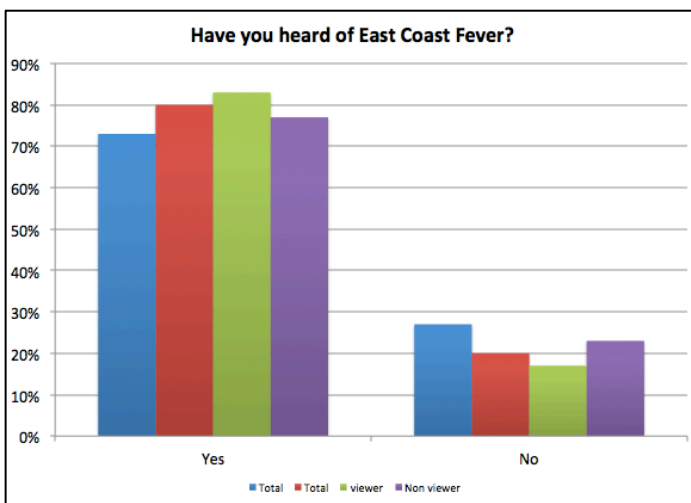


## Aflatoxin



Encouragingly, 41% of viewers compared to 25% on non-viewers understand that a cow can have aflatoxin, with 14% viewers compared to 6% non-viewers aware that you can add a binder to the cow feed to eliminate the aflatoxin from the animal.

## East Coast Fever



83% of viewers compared to 77% of non-viewers have heard of East Coast Fever (ECF) with 61% of viewers, 7% more than non-viewers, aware that it is caused by ticks. There is a good level of awareness, amongst viewers (67%), on how spraying and dipping can minimise the risk of ECF. 49% of viewers are aware of a vaccine and 40% of those claim to have vaccinated their cattle.

## Artificial Insemination

The program covered signs of coming on heat and how to best prepare for Artificial Insemination (AI). 46% of viewers compared to 56% of non-viewers use a bull to impregnate their cows while 9% more viewers than non-viewers claim to use AI instead. 32% of viewers are aware that the vet can give the cow an injection to encourage them to come on heat. The majority of respondents (70%) are unaware of specific AI providers with 21% relying on advice from the vet. This highlights the need for repetition on this topic to create specific brand awareness.

## Beef

14% of viewers say they keep bulls with an average of 2 bulls per small-holder farmer.

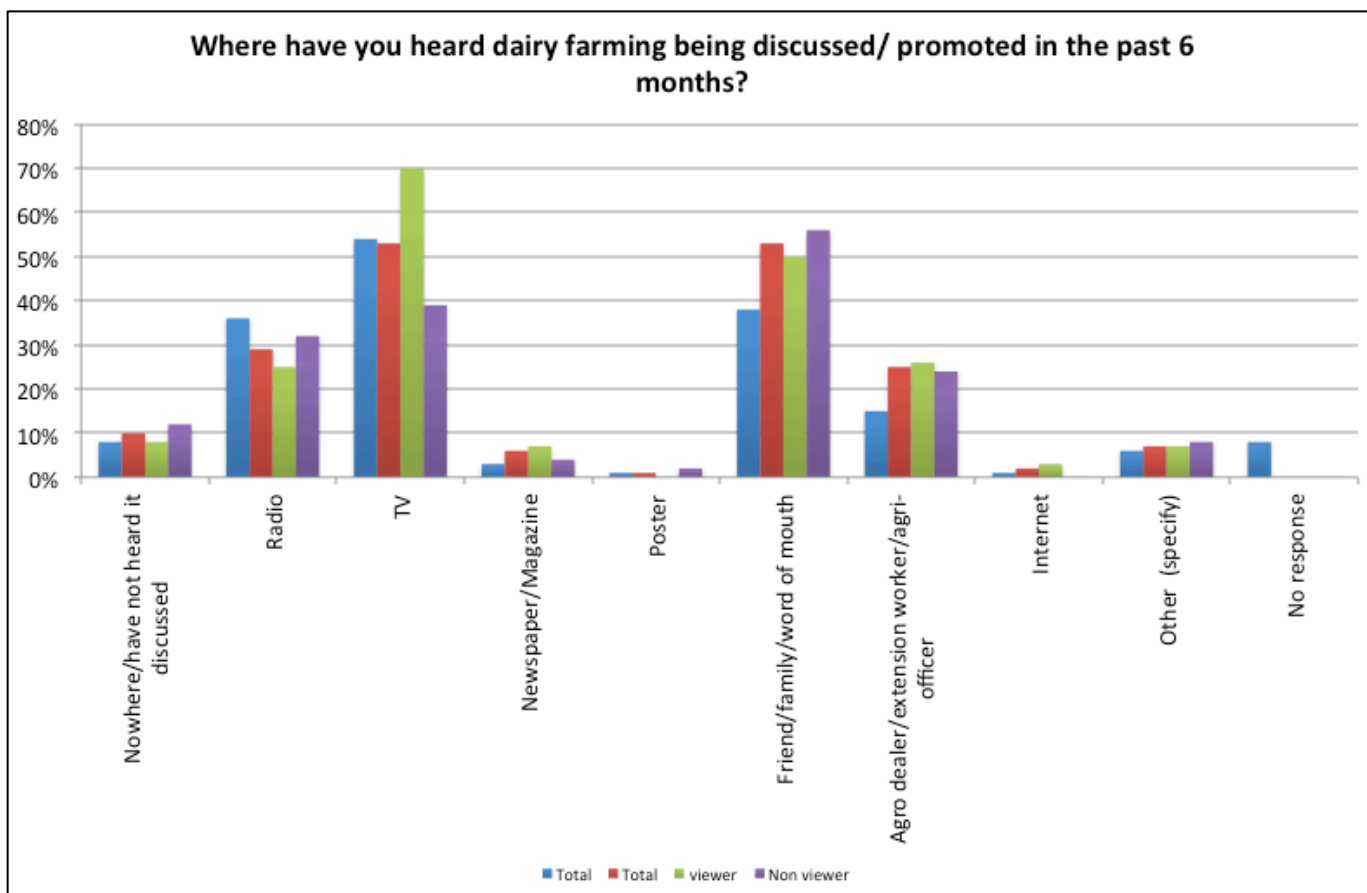
All farmers claim to de-worm their bulls with 25% of viewers using a de-wormer from Cooper K-Brands compared to 11% of non-viewers.

We need to continue to educate on the use of a weigh band as a means of measuring the amount of de-wormer to use as 80% of viewers rely on a vet or agro-dealer for advice and only 6% of viewers use a weigh band (2% non-viewers).

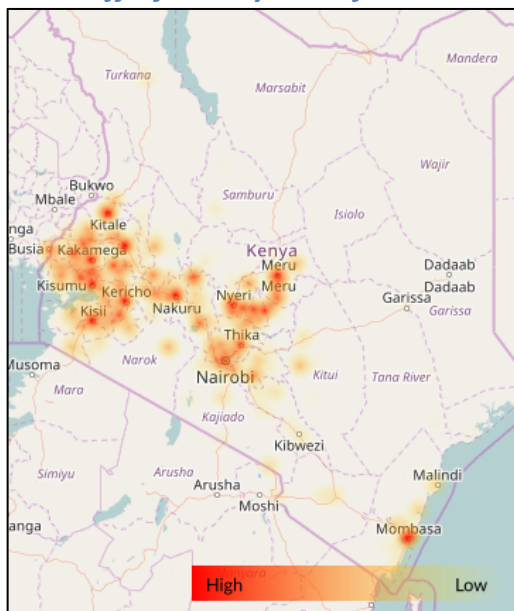
86% of respondents spray or dip the bulls, with 65% viewers compared to 56% non-viewers spraying / dipping at the recommended weekly intervals.

35% of viewers use a Cooper K-Brands tick spray / dip compared to 19% non-viewers.

## Sources of information for dairy/cattle



## SMS traffic for dairy & beef sector



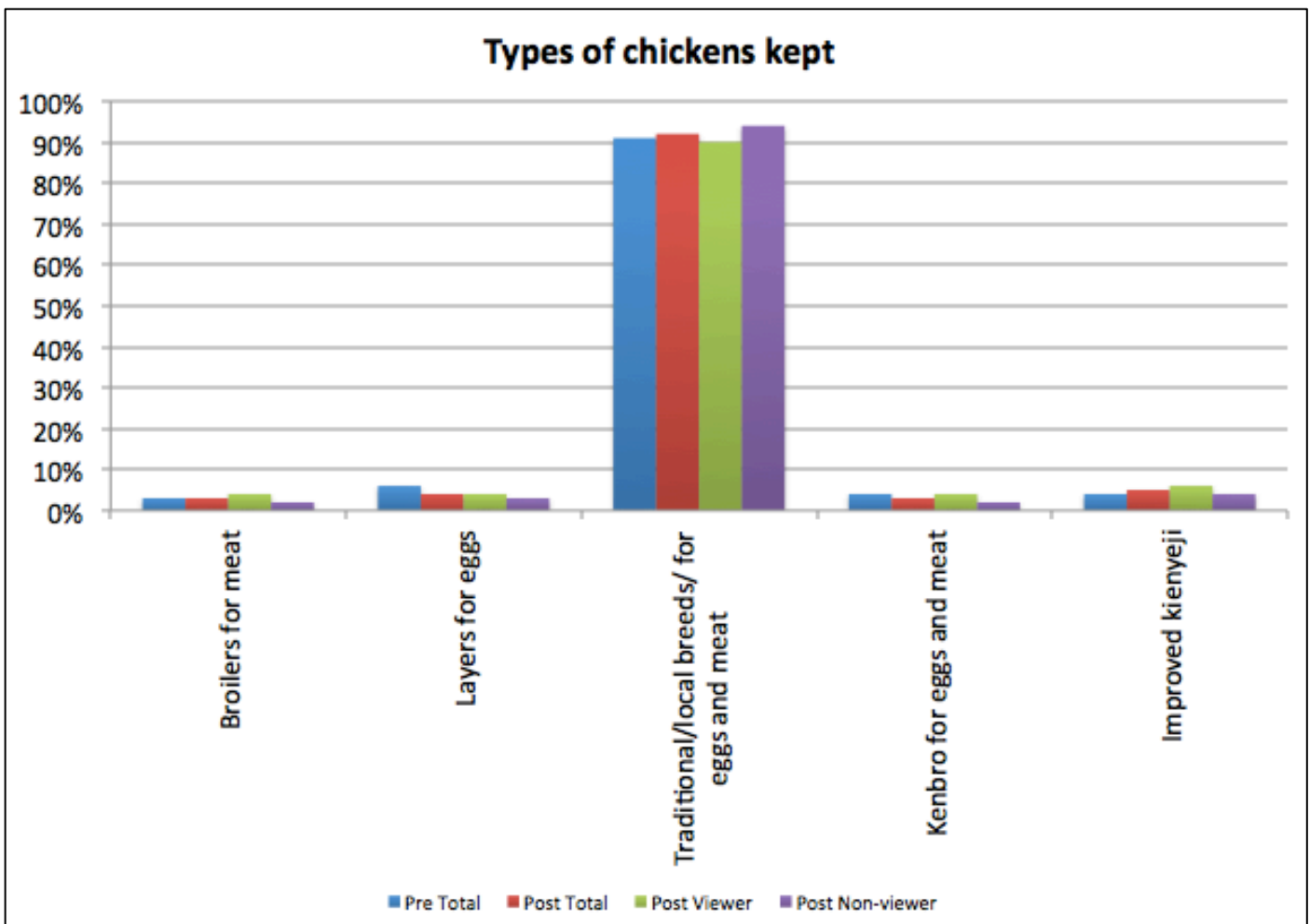


## Poultry

46% of viewers claim to have learnt something new about poultry farming from watching SSU. 27% of viewers who are poultry farmers also claim to have made changes as a result of the program – this is the topic with the highest rate of change and the most sought after information on the program (13% of viewers).

The series encouraged farmers to vaccinate against Newcastle Disease, improve biosecurity for their chickens to reduce diseases, control rodents, and discussed feeds and management for local, mixed and broiler chickens. Chickens feature often on the program, as they are ubiquitous and also generate high levels of demand from the audience.

80% of viewers have chickens, over 90% are local or mixed breeds. The average number of chickens for viewers of SSU is 28.



“Grade” chickens (layers or broilers) are expensive to keep, and with fluctuating feed prices, many farmers prefer local breeds. Most farms have local chickens in a free-range minimum management method; others have local or improved kienyeji chickens for sale for meat or eggs.

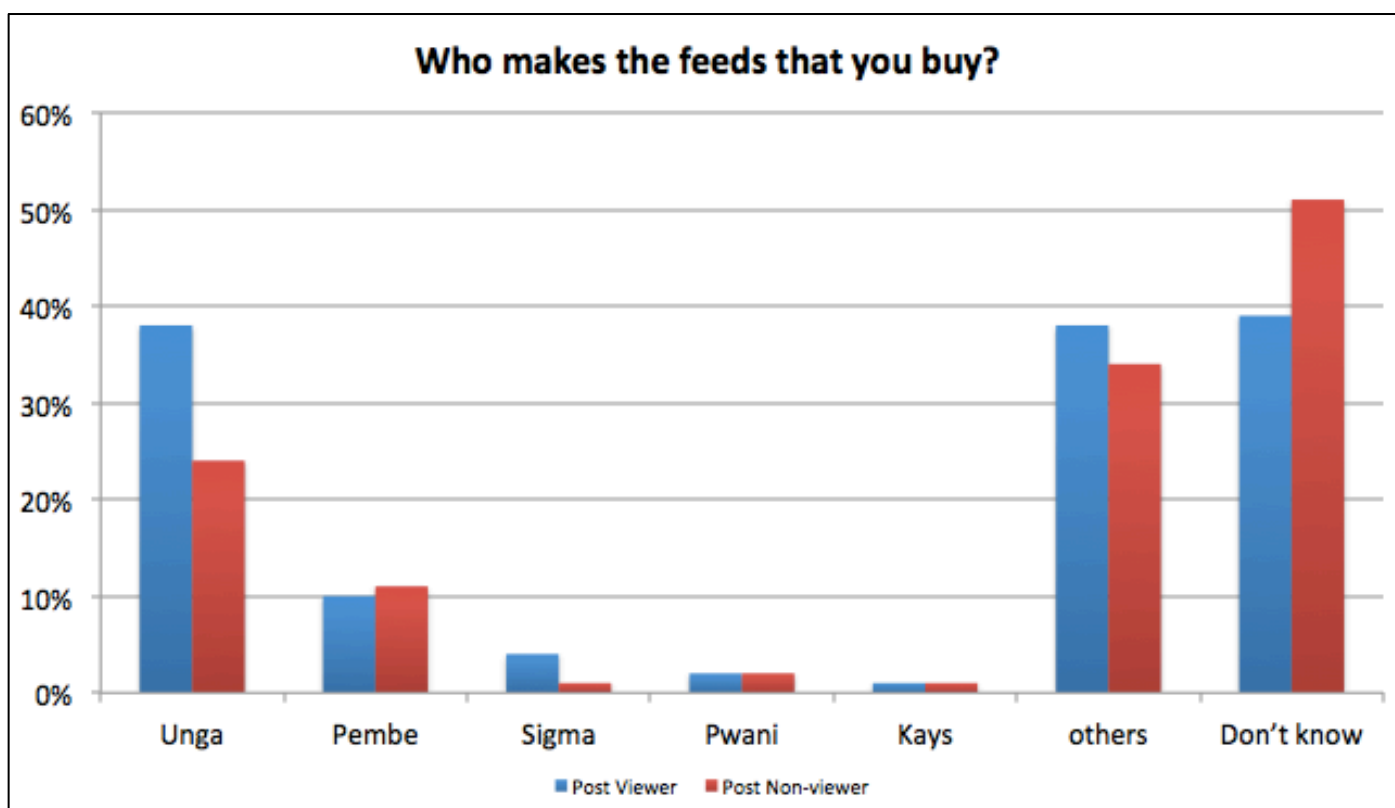
4% of viewers and 2% of non-viewers keep broilers. 75% of viewers sourced the day old chicks from Kenchic as compared to 17% of non-viewers.

4% of viewers and 3% of non-viewers keep layers. 69% of them source day old chicks from Kenchic compared to 40% of non-viewers.

More than 80% of viewers and 67% of non-viewers have heard of Kenbro chicken, however, only 4% of viewers and 2% on non-viewers claim to have Kenbro chickens. An awareness has been created and the program should continue to focus on the benefits of Kenbro and how farmers can benefit financially from having Kenbro chicken.

### Feeds

12% more viewers than non-viewers buy commercial feed for their chickens and 15% more viewers than non-viewers buy supplements for their chickens. This is consistent with previous data that SSU audiences are more likely to spend more on inputs and investments for their farms than non-SSU farmers.



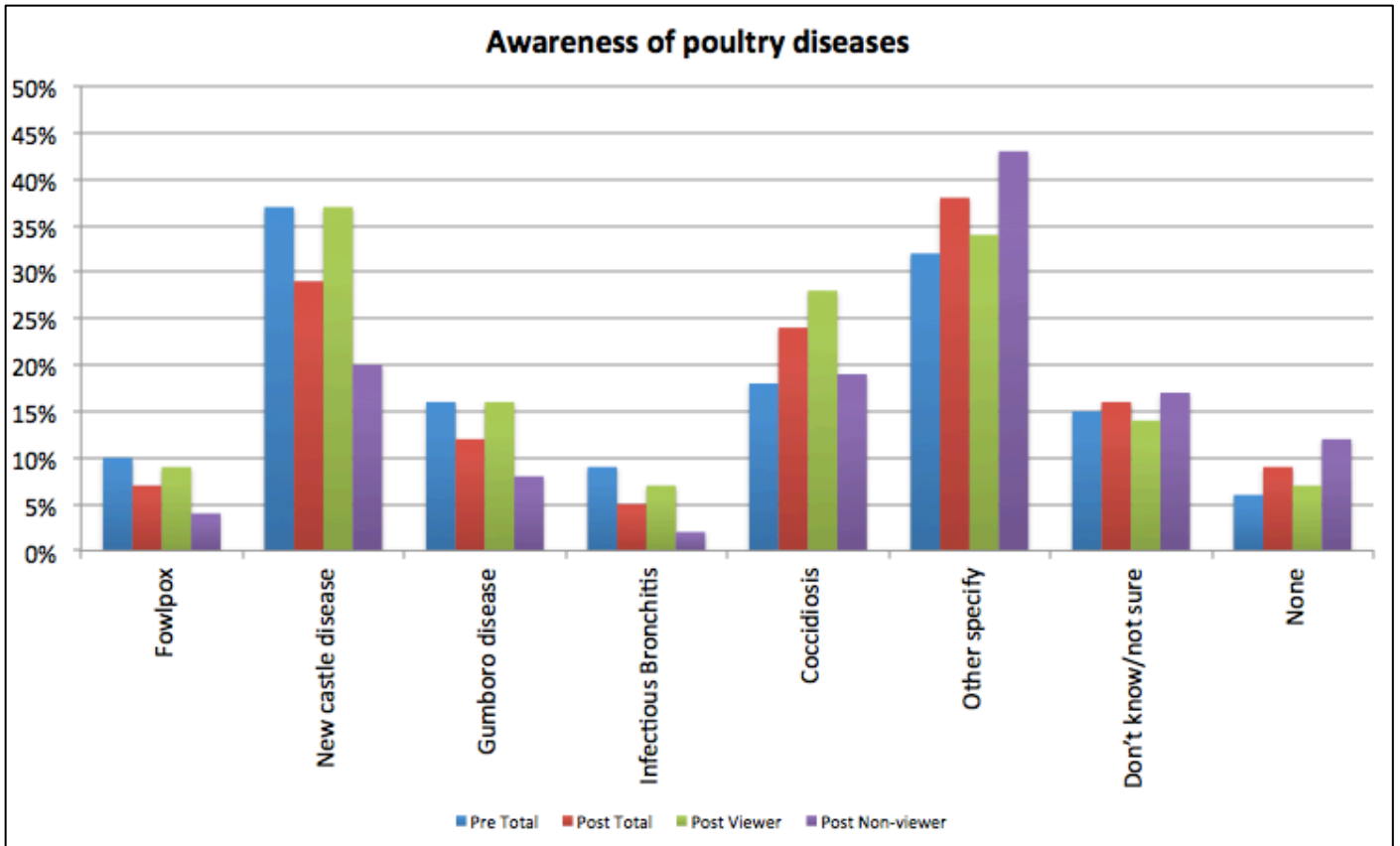
Unga Farm Care EA is the preferred supplier of chicken feeds for viewers of the program (38%). 6% more viewers than non-viewers are applying the principle of targeted feeding and giving chicks under 3 weeks old Chick Mash.

### Health

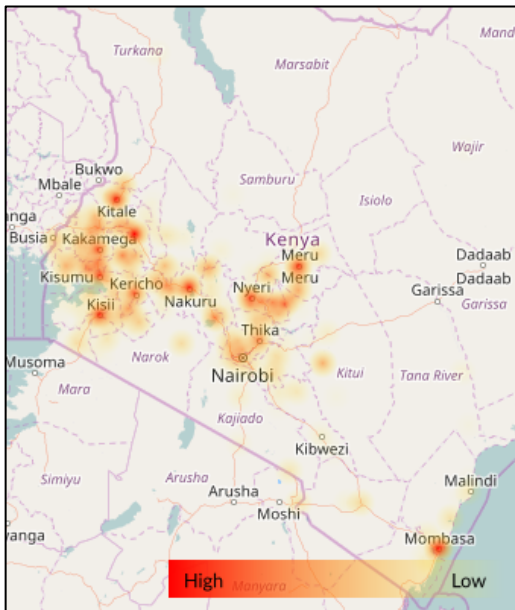
The series extensively covered health, hygiene and Newcastle Disease (NCD) vaccination and control.

Viewers of SSU are more aware of different diseases in chicken with 37% of viewers aware of NCD compared to 20% of non-viewers.

While 53% of viewers claim to give medicine to prevent NCD compared to 38% of non-viewers, 85% of viewers and 77% of non-viewers mix the medicine in the drinking water. Only 7% viewers use drops in the eye or nose, highlighting the need to continue to emphasise this as the most efficient method. It is also important to ensure a good distribution and availability of the vaccine.



### SMS traffic

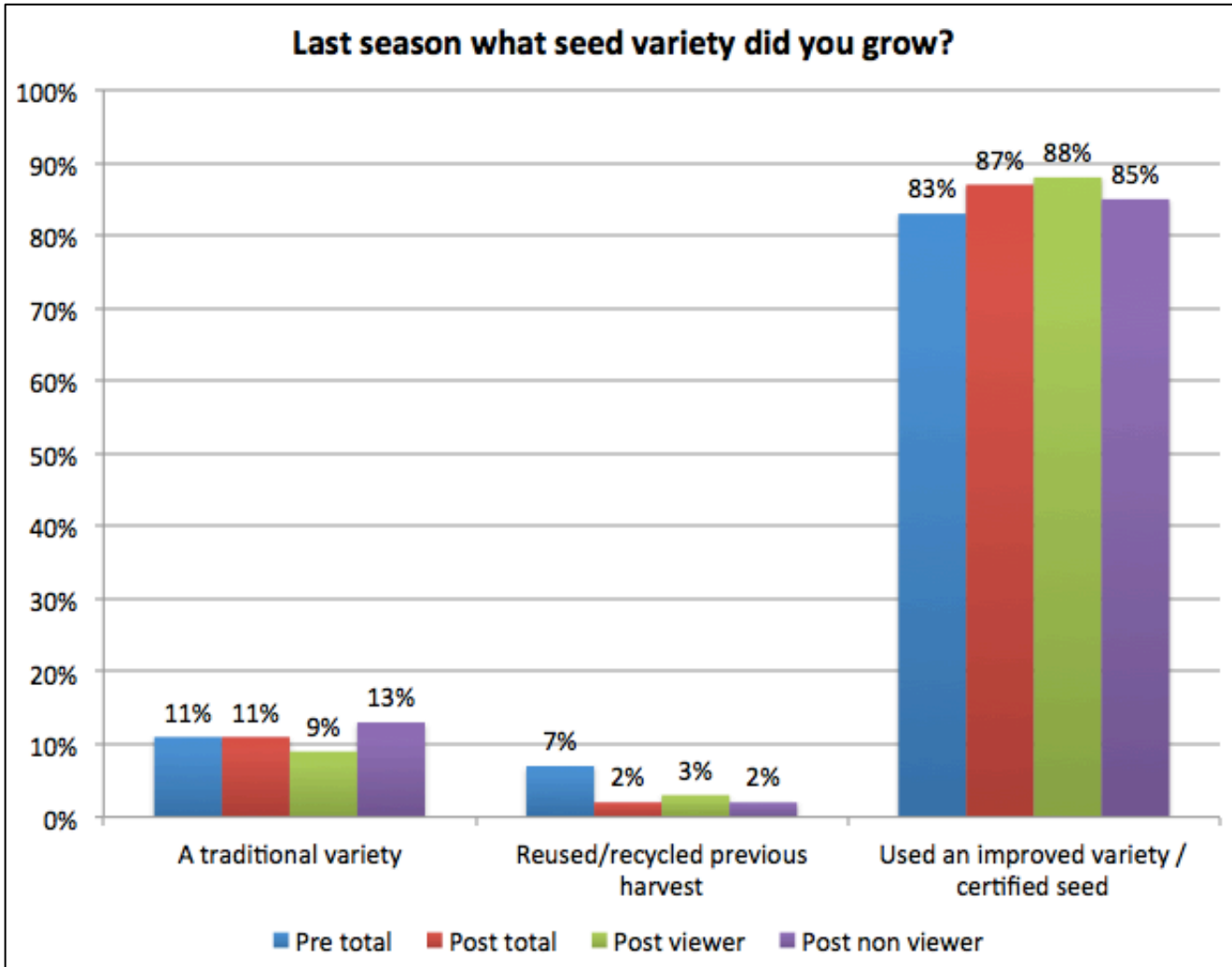


## Maize

94% of all the respondents grow maize. The program covered the following main topics: choosing the correct maize variety for your area; how to plant & optimise growth; maize storage to minimise post harvest loss and aflatoxin. Farmers were informed on the importance of drying maize correctly and storing it in airtight containers such as PICS bags away from floors or walls in rodent proof stores. Farmers were also educated on the benefits of maize aggregation to enable them to get a good price for their produce.

### Source of Seeds

The majority of all respondents – viewers and non-viewers alike (over 80%) claimed to have planted an improved variety / certified seed.



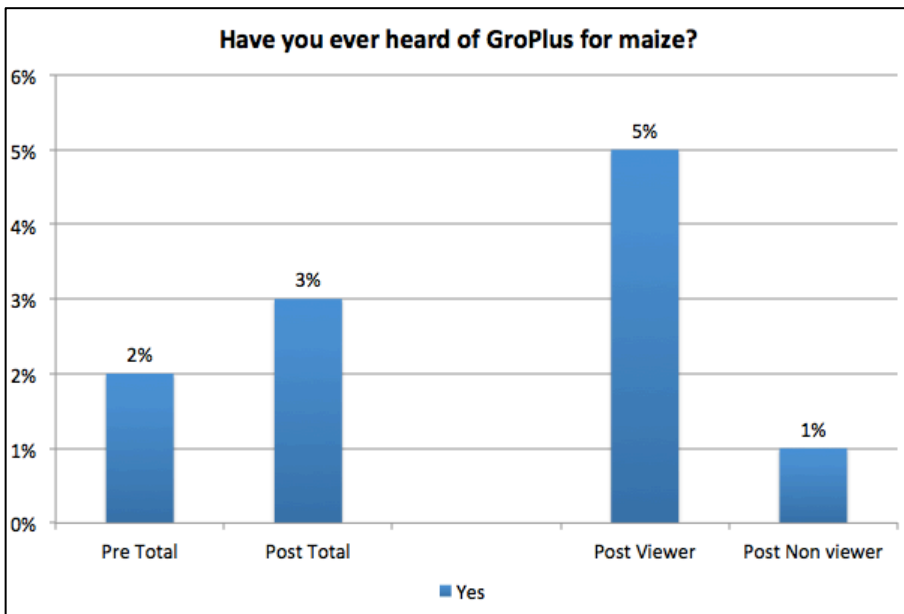
Of all seed varieties covered, Duma was mentioned the most (34% viewers).

The next steps would be to look into the pricing and distribution (availability) of various seeds.

### Gro-Plus Maize Treatment

The program covered Gro-Plus, a starter fertilizer that gives seeds an early boost resulting in an increase in yield of 30%.

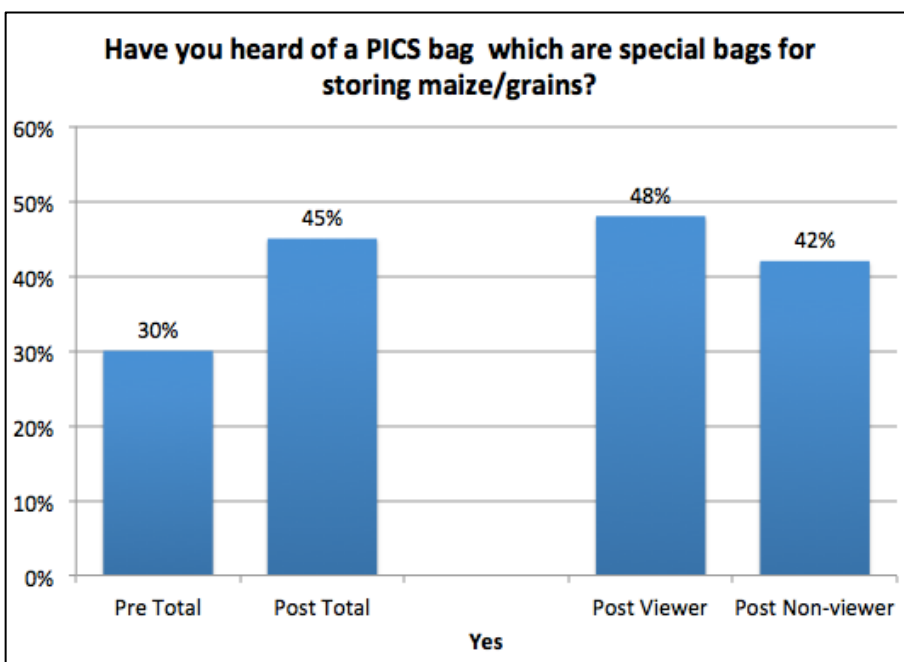
While there were more viewers than non-viewers aware of the product, overall awareness remains very low at 5% or less. The product needs more exposure and prominence. It is also important to understand its pricing and distribution footprint in order to optimise the opportunities for take up.



### Post Harvest Management of Maize

In terms of post harvest management, the program introduced the audience to post harvest storage methods with a focus on airtight PICS bags. It also reinforced the message that maize stored in sacks must be off the ground and away from the walls in the store.

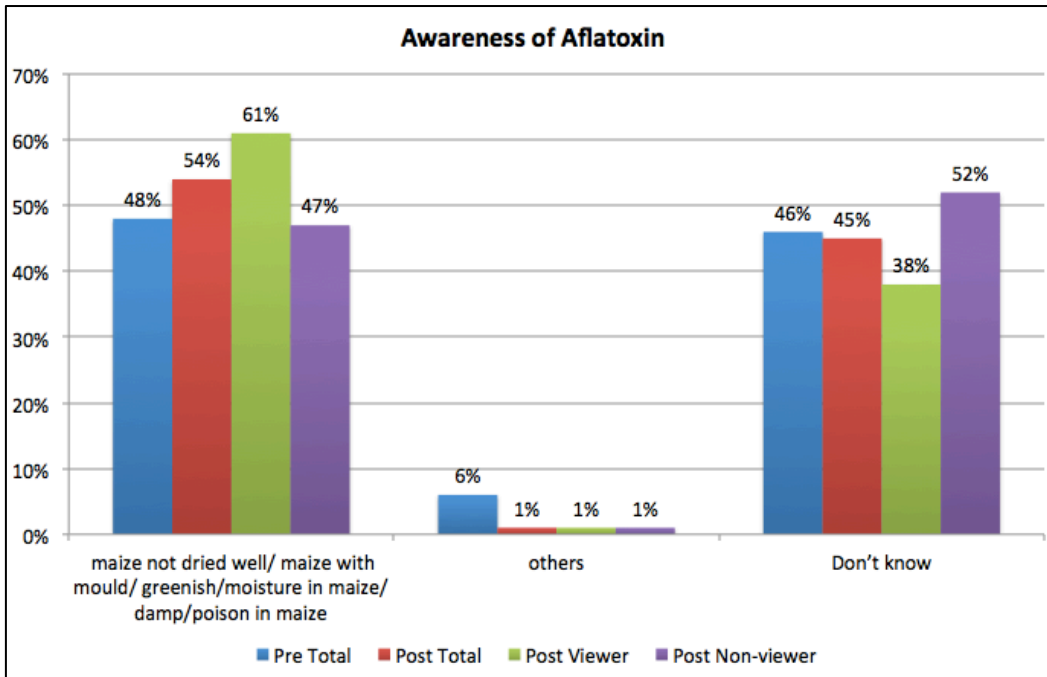
The vast majority of maize farmers (75%) claim to correctly store their maize. There is some evidence that the programme contributed to a greater awareness of PICS bags and their benefits with 6% more viewers than non-viewers claimed to have heard of PICS bags.



While the program has been successful at raising awareness, we are yet to see a significant shift in behaviour towards the use of PICS bags with only 32% of viewers who know what PICS bags are, claiming to use them.

### Aflatoxin

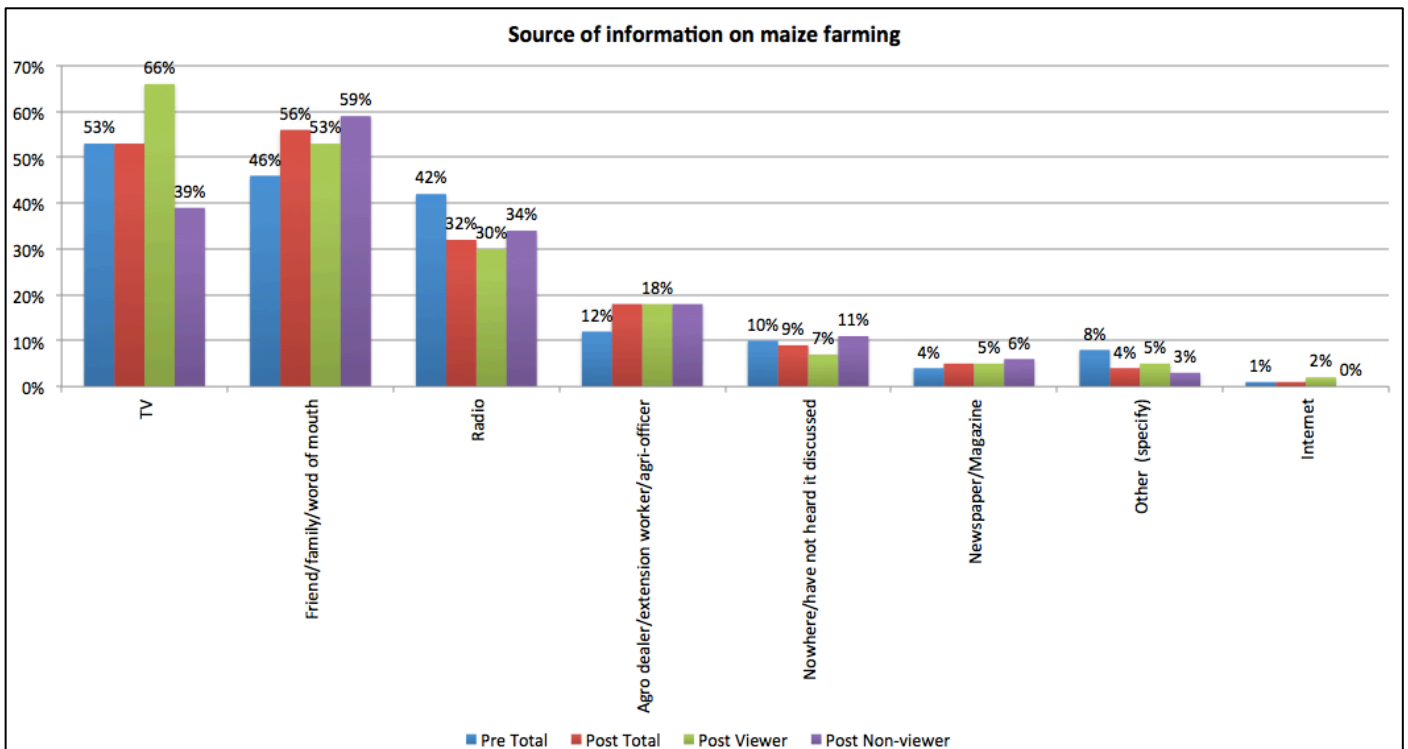
When asked how they know their maize is dry enough, almost half the viewers say they “just know the maize is dry” (46%). 24% of all respondents mentioned biting their maize, while doing something more specific (bottle & salt, moisture meter) is only done by a tiny minority (3%) of maize farmers.



14% more viewers than non-viewers know about aflatoxin, a good indication, that SSU has been successful in communicating to viewers what aflatoxin is.

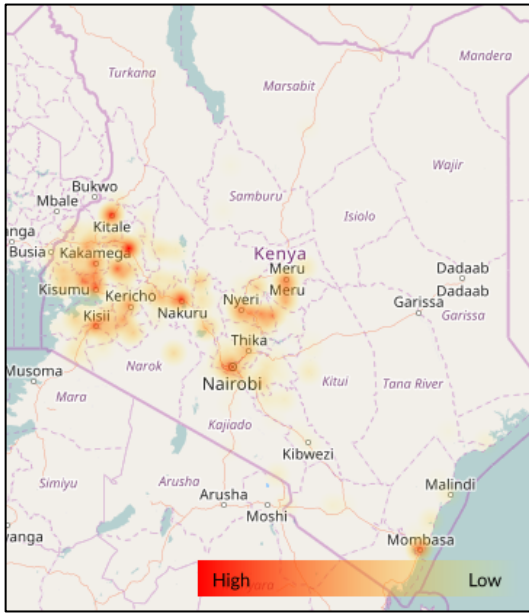
### Information source

TV is a particularly important source of information (about maize farming) with two thirds (66%) of our viewers learning about maize via TV. Complementary to TV is word of mouth, and in this case the importance of friends and family as word of mouth has a powerful ripple effect.



### SMS traffic

The map below shows the areas from where people have sent an SMS for more information or a leaflet.



## Greenhouse Horticulture

### Tomatoes and Capsicums

Green house farming remains low with only 3% of the sample owning greenhouses.

While all respondents with greenhouses grew both tomatoes and capsicums, 9% more viewers than non-viewers grew capsicums and 9% more non-viewers than viewers grew tomatoes. The other crop grown in greenhouses is *sukuma*/kale (23% of respondents).

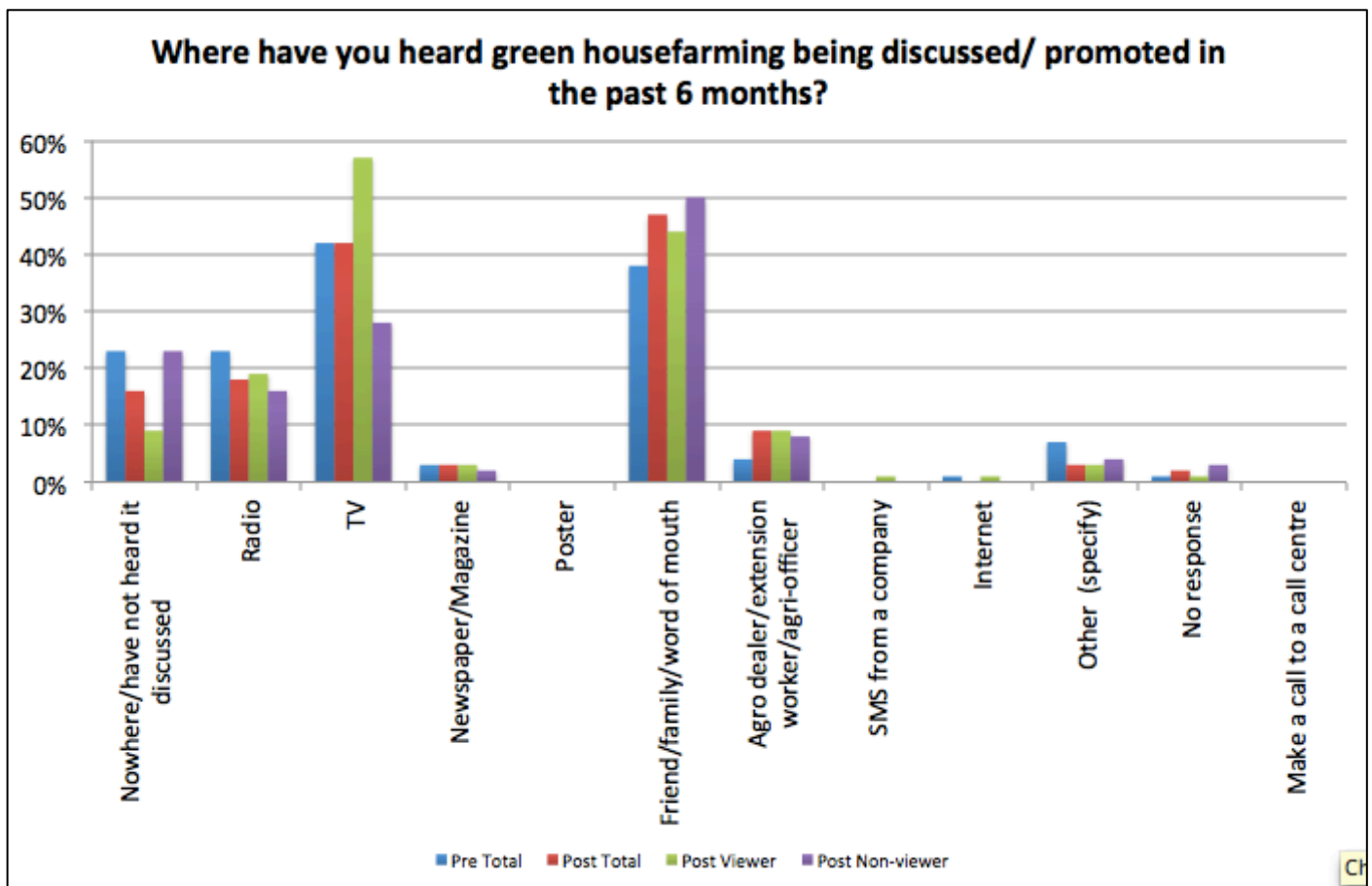
The majority of respondents (89%) spray to control pests inside the greenhouse. Encouragingly, 22% of viewers compared to 10% on non-viewers are aware of the importance of keeping the greenhouse clean.

When asked if they know how to control pests without using chemical sprays, 22% of viewers as opposed to 10% of non-viewers mentioned insect traps.

74% of respondents plant from seed for tomatoes and capsicums with 26% claiming to buy seedlings.

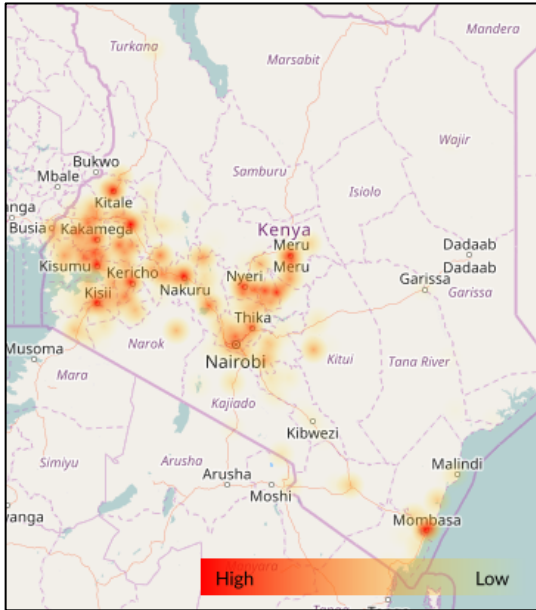
When asked if they knew a seed company that sold good greenhouse varieties of tomato and capsicum, 33% of viewers mentioned Kenya Seed Company, 22% Simlaw and 11% Kenya Highland Seed. 33% of viewers said they did not know any.

With regards to suppliers of pest and disease control products for greenhouses, 11% of viewers mentioned Osho Chemicals, 11% mentioned Real IPM and 33% did not know of any, highlighting the need to continue to raise awareness of seed & seedling suppliers as well as ways of managing pests and diseases.





## SMS traffic



## Post Harvest Loss Management

The program covered farming techniques to optimise harvests while also educating on good storage methods to minimise post harvest loss of maize, green beans, mangoes, cassava, green grams, potatoes & cowpea. We also highlighted the benefits of working together in farmer groups and maize aggregation to enable farmers to get a good price at market.

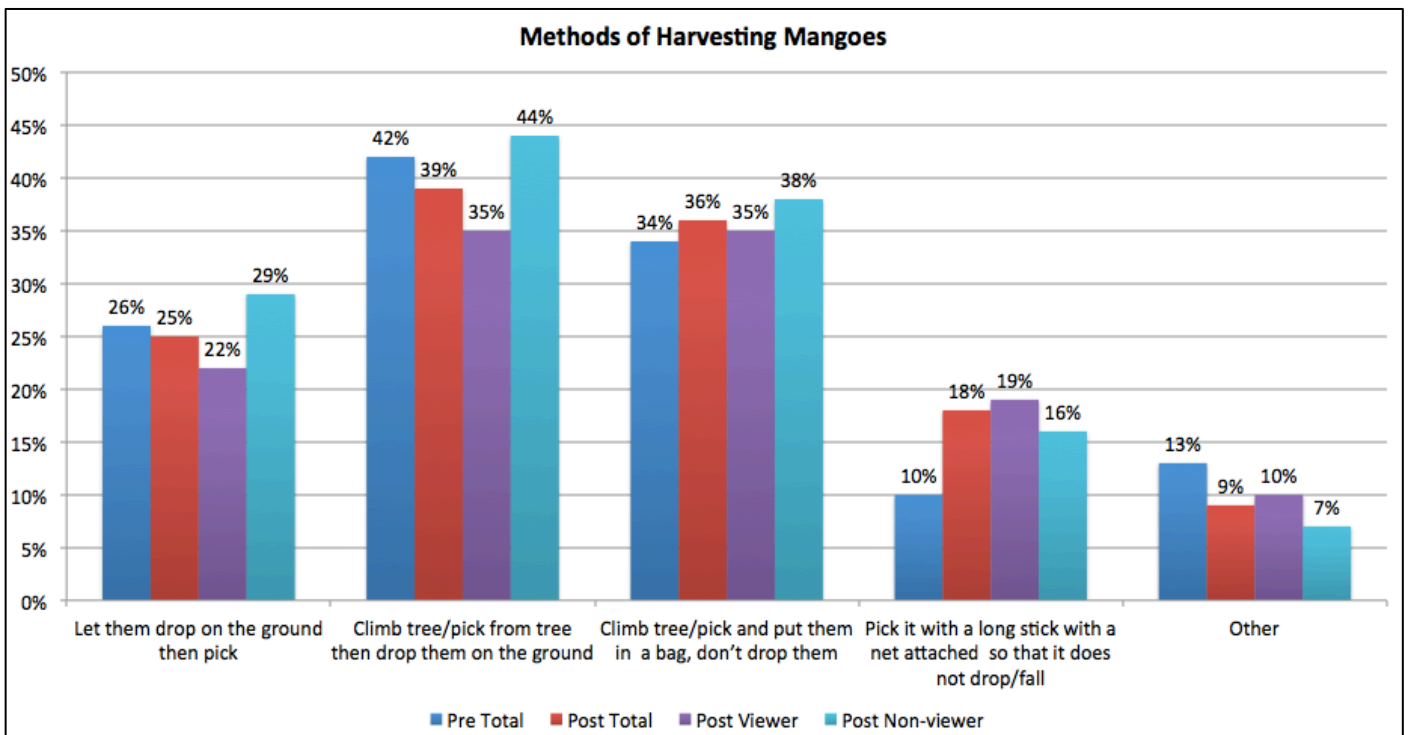
### Mangoes

Approximately half our sample (46%) has mango trees. We observed that our farmers were not aware of keeping the area underneath and around the mango tree clean. Allowing mangoes to fall and rot creates harbouring grounds for pests who then move on to the tree. This message needs to be re-enforced in future programmes.

Around two thirds of viewers have heard of fruit flies – 63% of viewers, compared to 56% of non-viewers. This is a real difference and highlights the programme’s effectiveness in raising awareness. The program advocated spraying and using flytraps, however there is little difference between viewers and non-viewers in terms of practical action taken. The majority of viewers (60%) spray their trees but only 7% claim to have used flytraps.

Marginally more viewers (5%) than non-viewers are aware of Mango Seed Weevil and over half of the viewers who are aware, (57%) spray their trees. Significantly more non-viewers are not doing anything compared to viewers (35% to 27%). The evidence suggests that we have succeeded in getting farmers to recognise the problem and do something about it, however, there are still farming practices that could be improved.

The program has been successful in getting the message across that mangoes should not be allowed to drop on the ground, but there is still work to be done on using the correct stick & net method of picking the fruit.



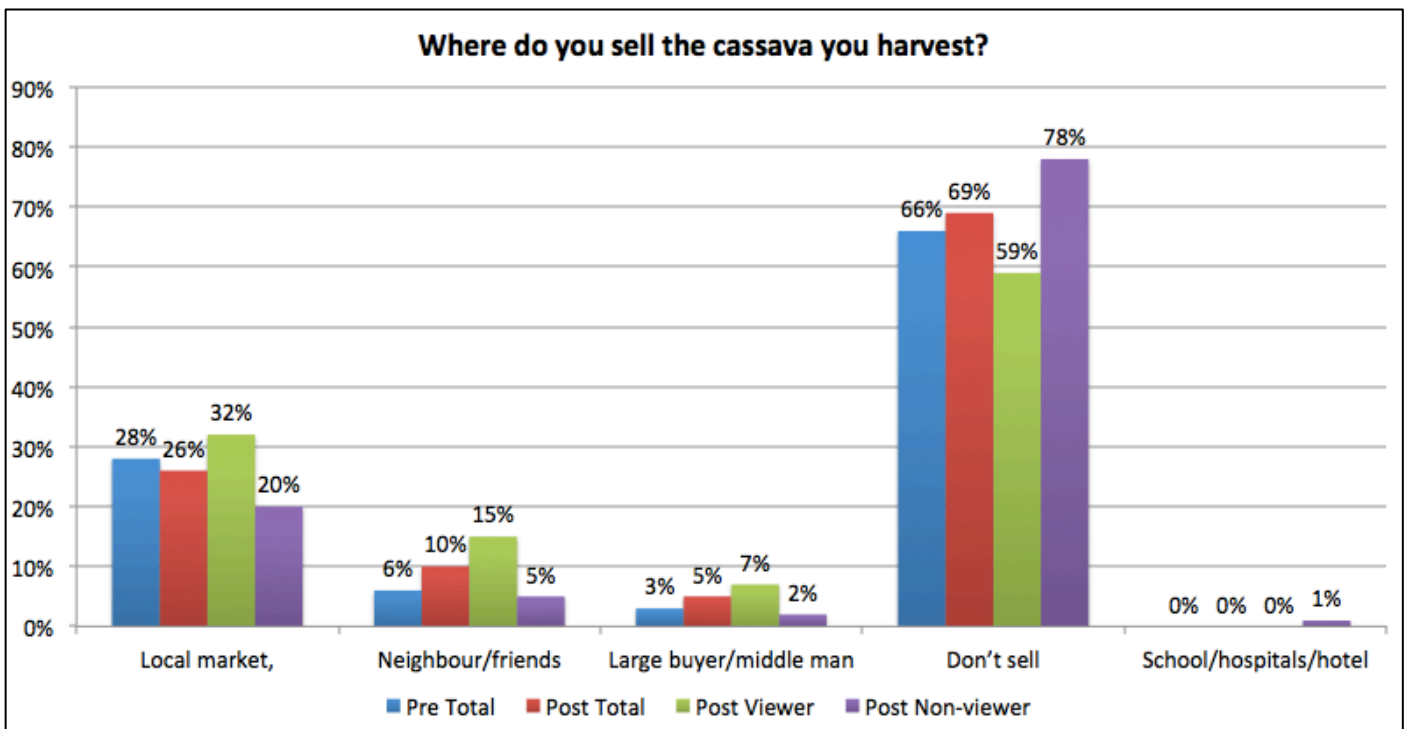
51% of respondents do not sell their mangoes, highlighting the need for more information on market linkages in order to monetize mango farming.

### Cassava & Green grams

36% of viewers grow cassava and 15% of viewers grow green grams.

An important message for cassava is that it has a very short 'shelf life' after harvest. It is therefore important to peel it, wash it, chip it, dry it thoroughly and store correctly as flour.

More viewers than non-viewers claim to sell their cassava (41% to 22%), a strong indication that viewers are better able to make money from their produce, but the survey was not able to shed any light on why this might be the case. However, more needs to be done to facilitate and create awareness on potential market linkages as 77% of viewers claim they are not doing anything to their cassava.



The incidence of green gram growers in the sample was too low to enable any significant analysis. However, we do know from talking to smallholder farmers that green grams have a ready market and the farmers don't see a need to store their produce for long periods of time.

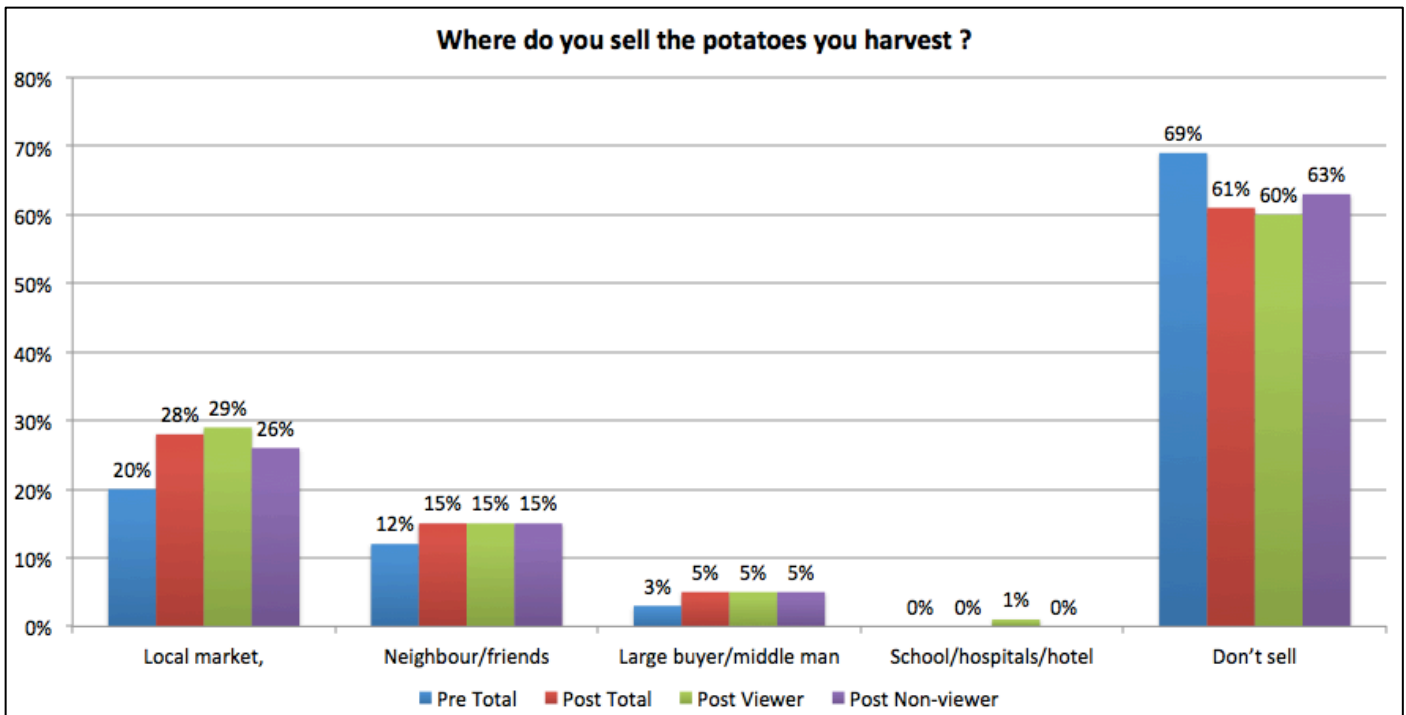
### Maize

See Maize section above (page 28).

### Potatoes

Once harvested, potatoes start sprouting in a week or two, therefore in order to get a good price at market, farmers need to be able to store their potatoes without them sprouting. A charcoal store, which is dark and has a temperature of around 4 degrees, enables farmers to store their potatoes up to 4 months.

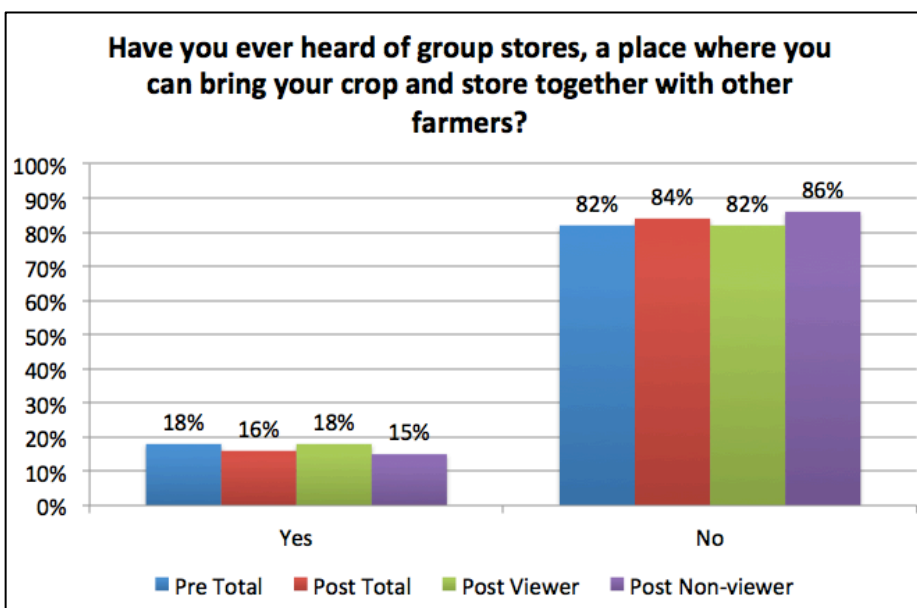
34% of viewers farm potatoes but 60% of them do not sell their produce. We need to educate more on access to markets as the potatoes are not being monetized.



### Group Stores

The program aimed to create awareness of how working together as a group can increase the individual farmer's income as they can use good storage facilities that they would not be able to do on their own. However, the research revealed that awareness and use of group stores is minute. Only 1% of respondents claim to use group stores.

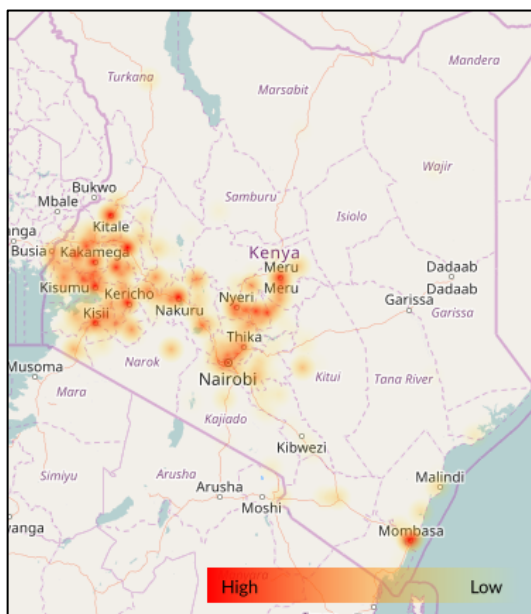
Although the numbers are small, there is some indication of a positive attitude towards group stores, more so amongst viewers than non-viewers with 71% of viewers claiming they are a good idea compared to 60% of non-viewers. The main belief of viewers (35%) is that they can get a better market if they store their produce properly.



SSU has been effective at raising awareness but we need to see which other factors are coming in to play (such as availability of products) with regards to changing practices.

### SMS traffic

The map below shows the areas from where people have sent an SMS for more information or a leaflet on Post Harvest Loss reduction.



### Financial literacy

Previous series' research showed very low levels of record keeping and financial planning amongst farmers. Series 6 continued to educate on financial literacy particularly the importance of keeping written records and helping farmers learn about credit rating and history, to be able to access loans. While some progress has been made with regards to sourcing information and mobile money, financial literacy is an area that needs more exposure in the program.

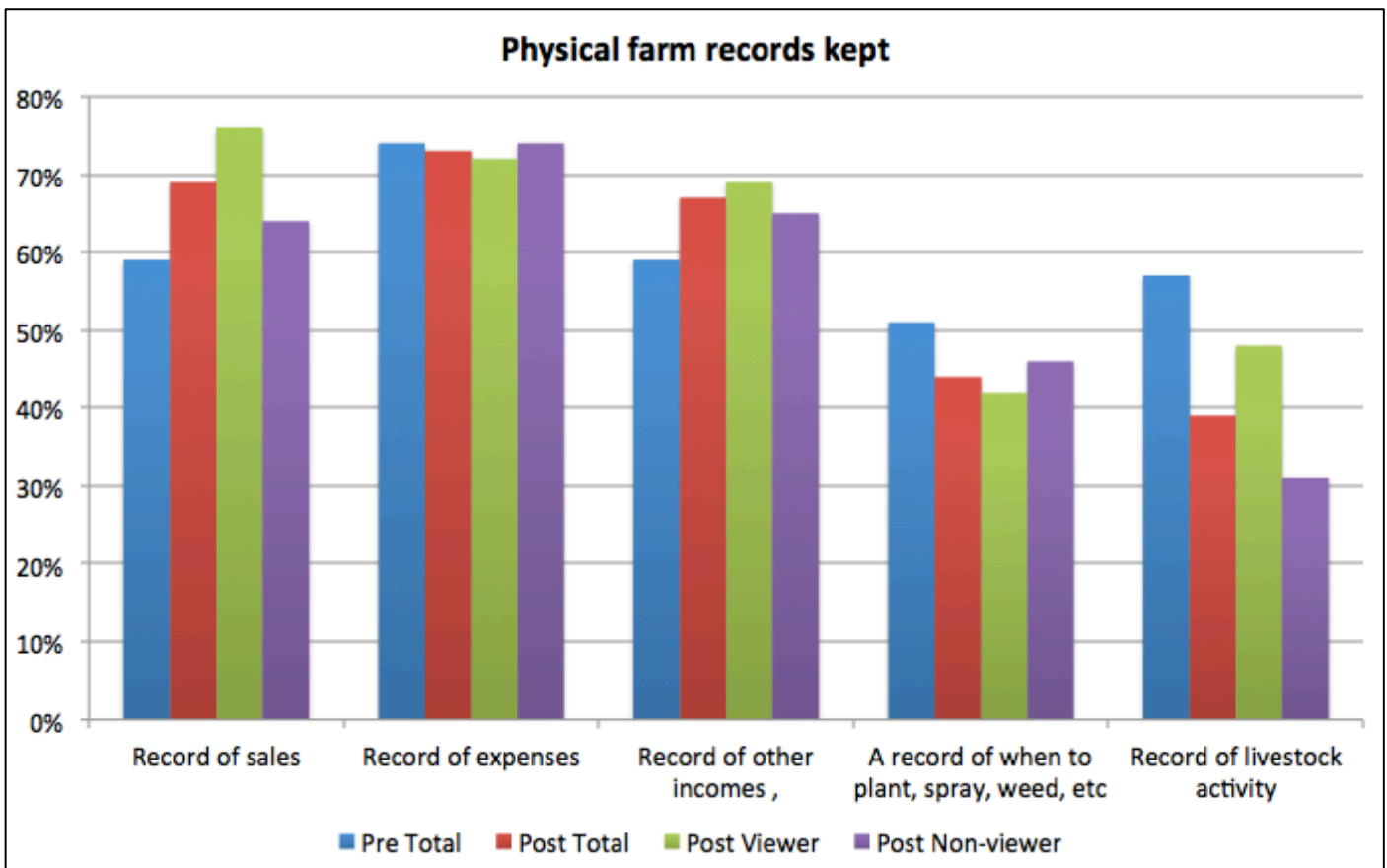
### Summary of topics covered

- Budgeting
- Saving money
- Loans
- Insurance
- Digital Access to capital.

### Use of records on farms

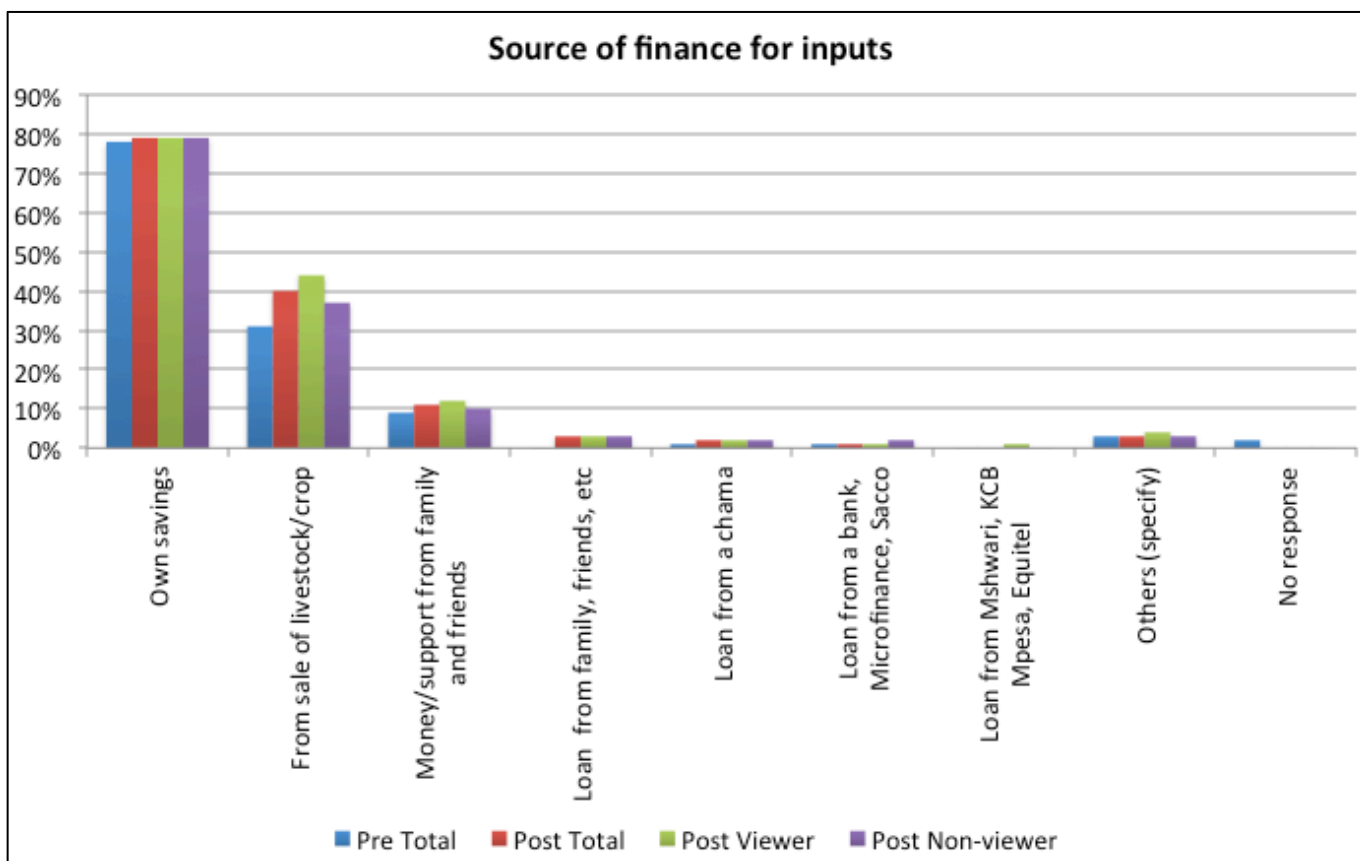
While 20% of viewers claim to have learnt something new in the area of farm records, record keeping remains low with no significant difference between viewers and non-viewers. Only 24% of respondents claim to have a business plan and to keep written farm records.

The majority of records kept are financial (sales, expenses, other income) which is a positive trend but it is also important for farmers to keep records of farming activity as this influences profits.



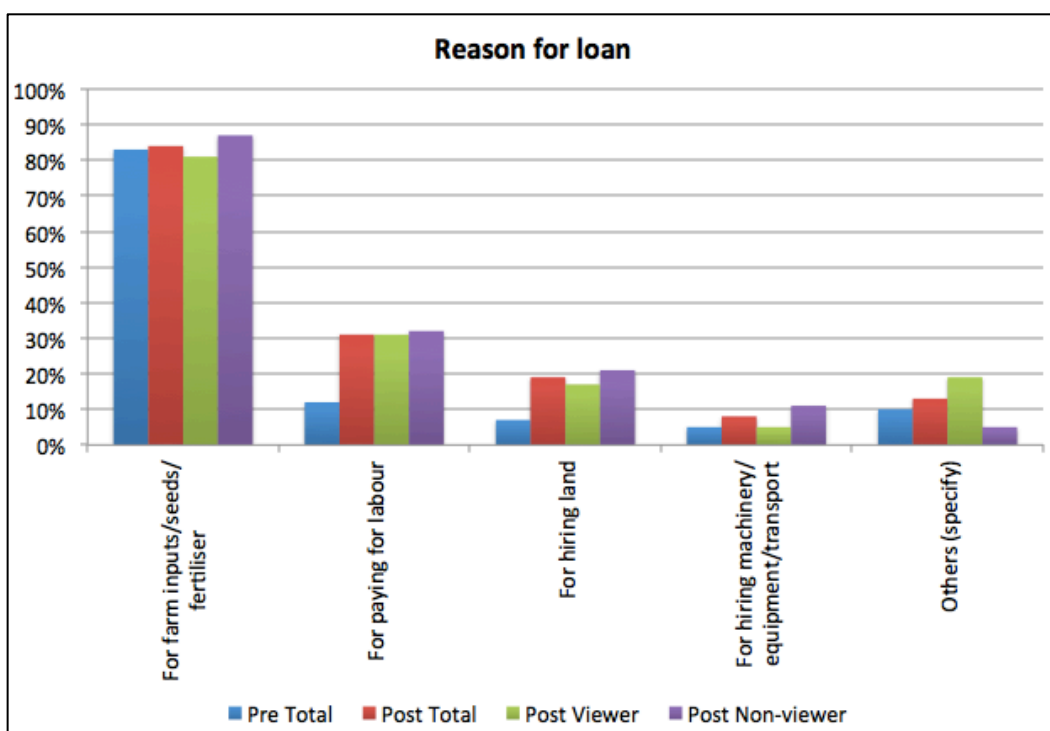
46% of respondents claim to keep a budget for their farms with more viewers (34%) than non-viewers (32%) having it written down, however 67% of viewers still do not have the budgets written down and only 27% claim to always stick to the budget.

44% of viewers compared to 37% of non-viewers buy inputs with money from the sale of livestock or crops, however, savings remain the single most important source of finance for farming inputs.



### Loans

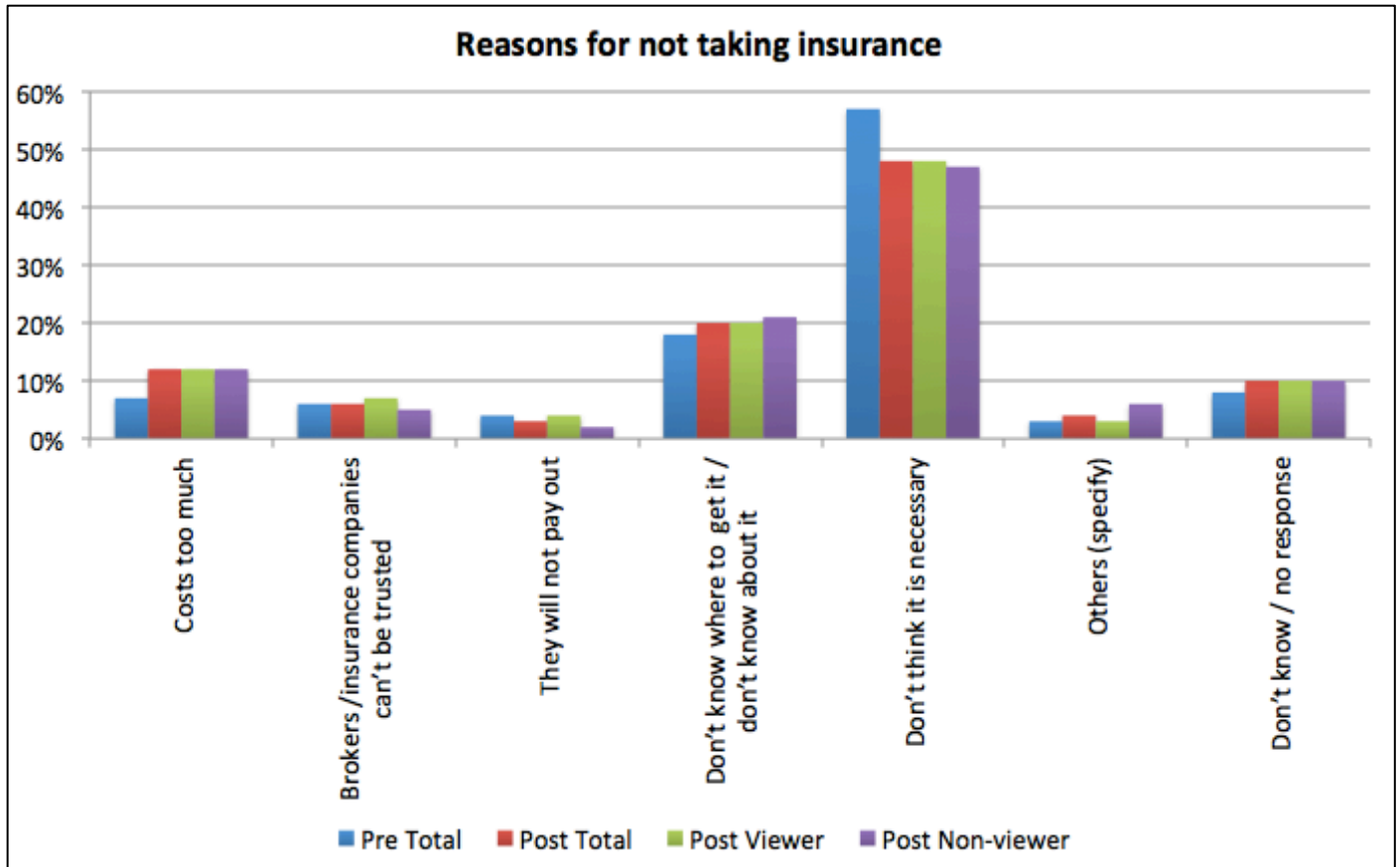
10% of respondents claimed to have taken a loan for their farms in the last 12 months in order to purchase farm inputs, paying for labour, land, equipment and transport.



63% of respondents paid back the loan on time with 31% still paying it off.

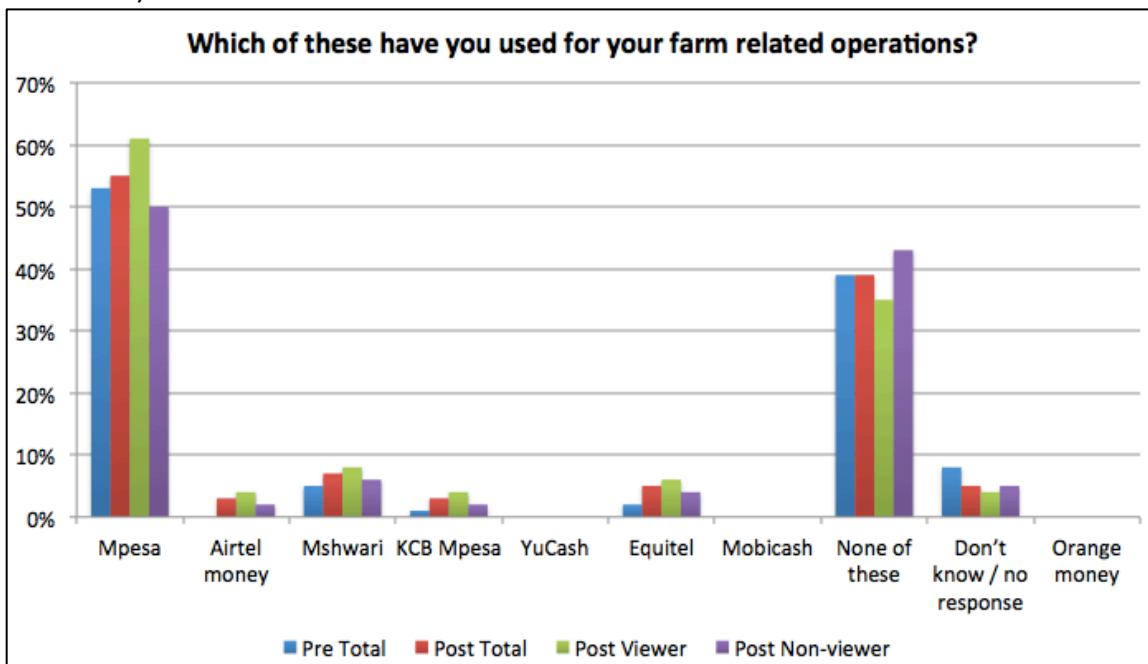
### Insurance

Only 1% of viewers and non-viewers claim to have taken out an insurance policy with just under half the viewers claiming that they don't think it is necessary.

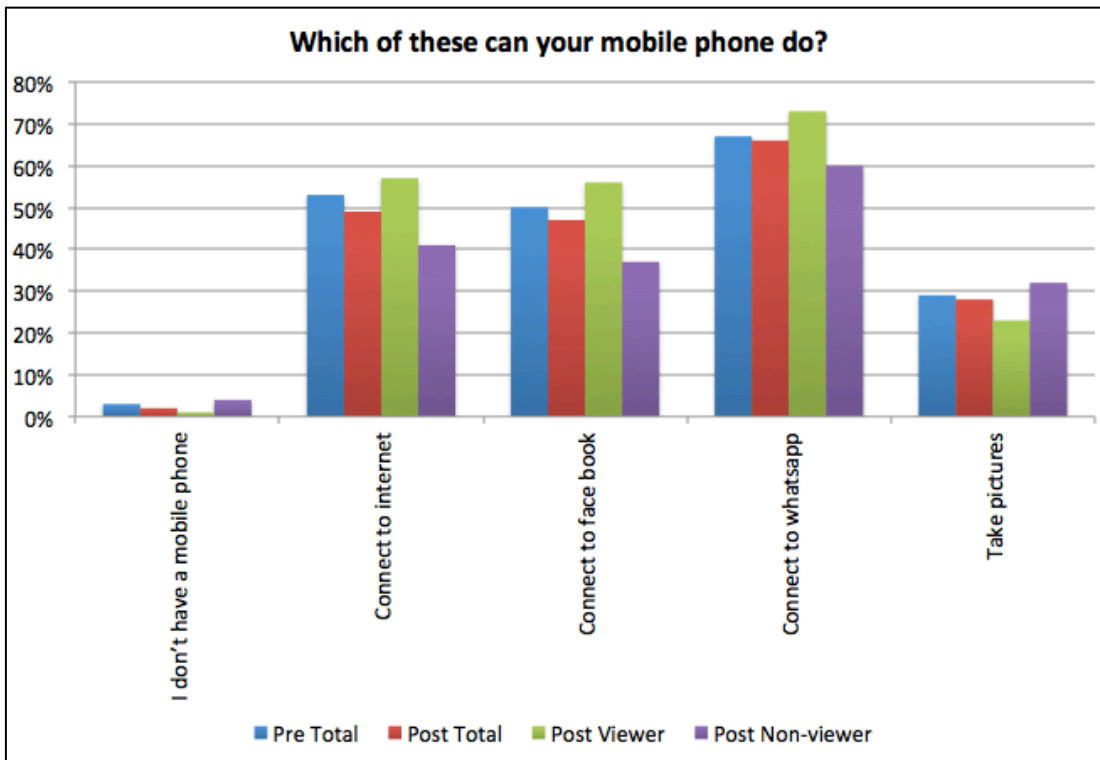


### Digital Access to Capital

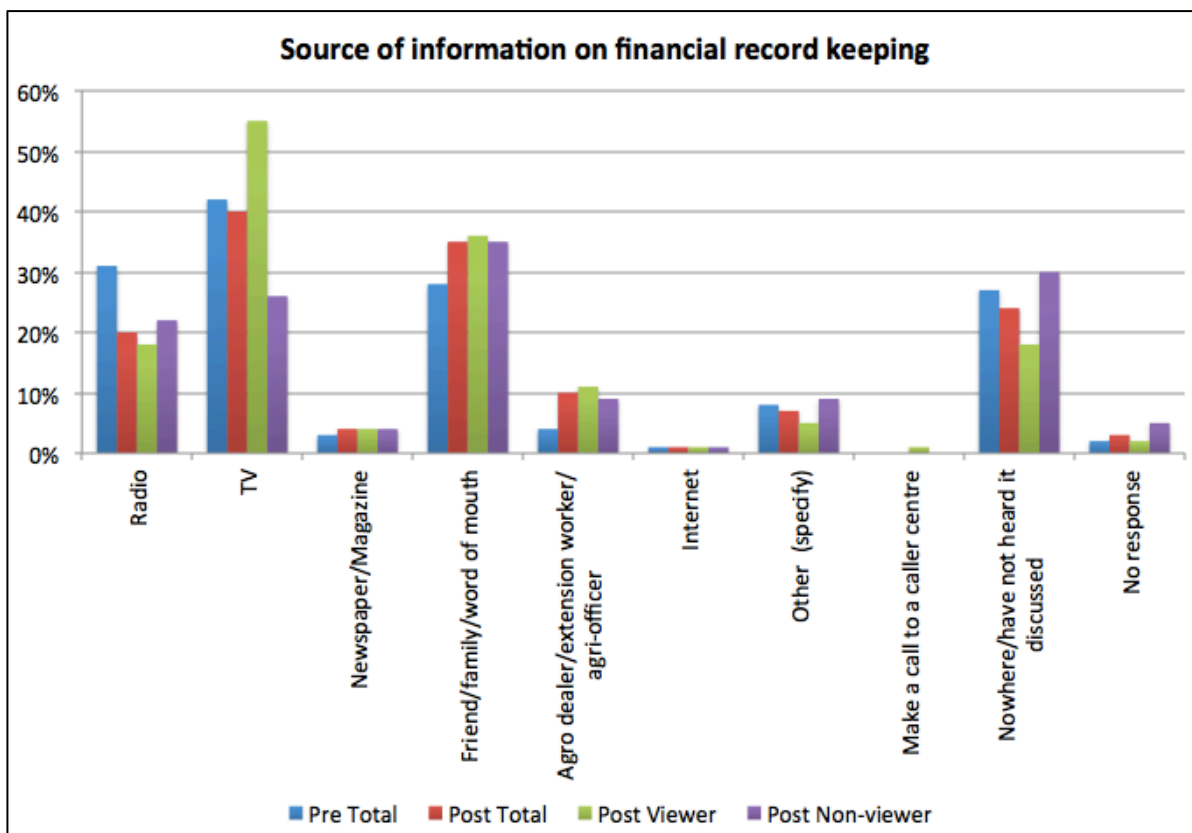
More viewers than non-viewers are using mobile money, particularly Mpesa (61% viewers compared to 50% of non-viewers).



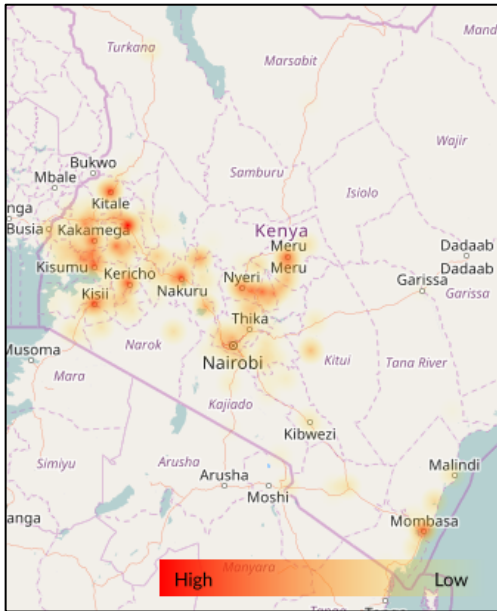




While TV remains the most important source of financial information for viewers, friends and family are also significant.



## SMS traffic



**Solar lights**

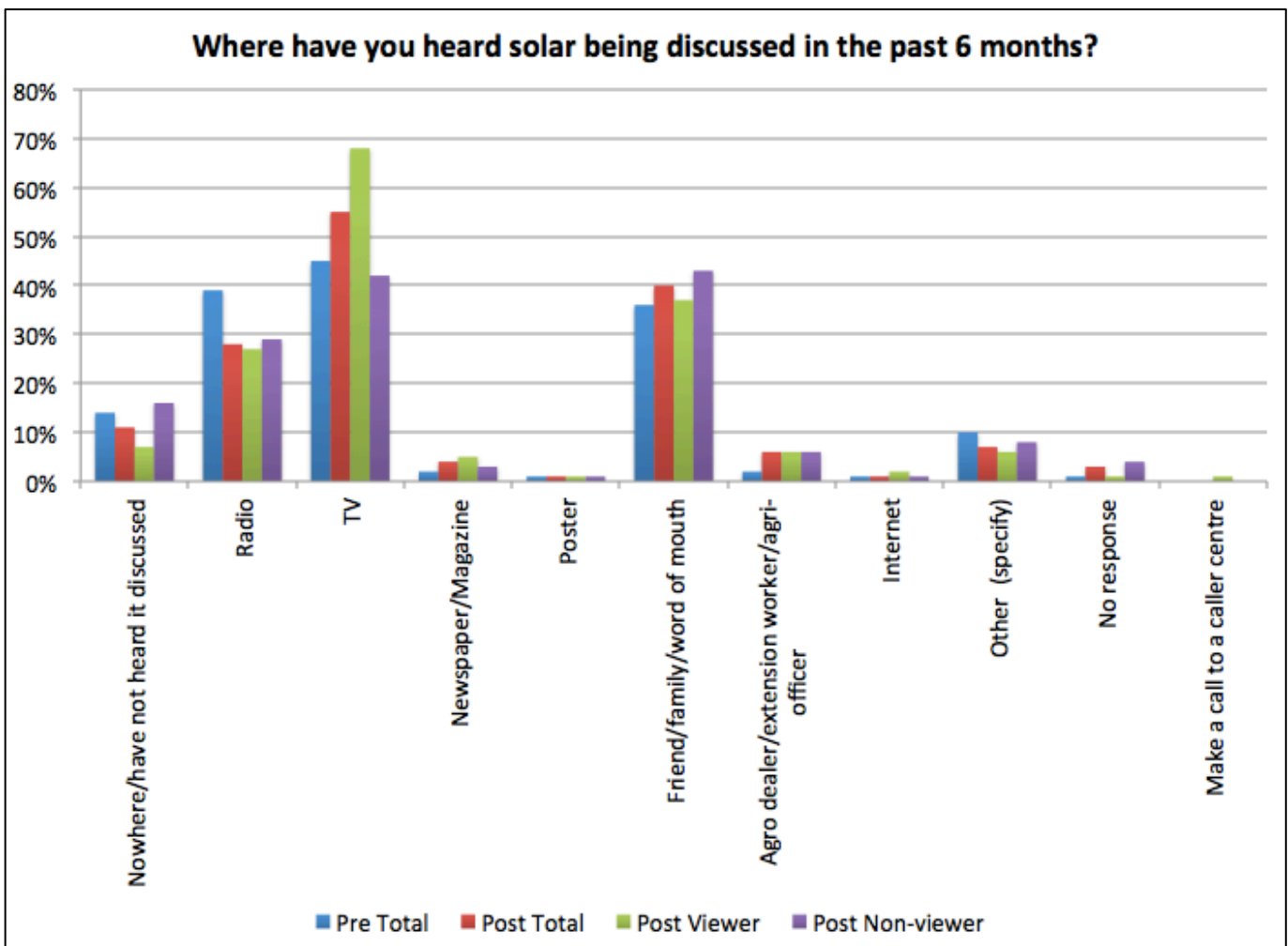
d.light have been partners with SSU for five series. In Series 6, SSU covered the D30 solar home system, which can power 3 lights as well as charge a radio, torch and mobile phone. SSU also covered other portable lights such as the S100 and S300.

d.light is recognised as a major player in the market with 19% of viewers aware of d.light. 28% of viewers have solar lights and of those that do, 25% have d.light and 22% M-Kopa.

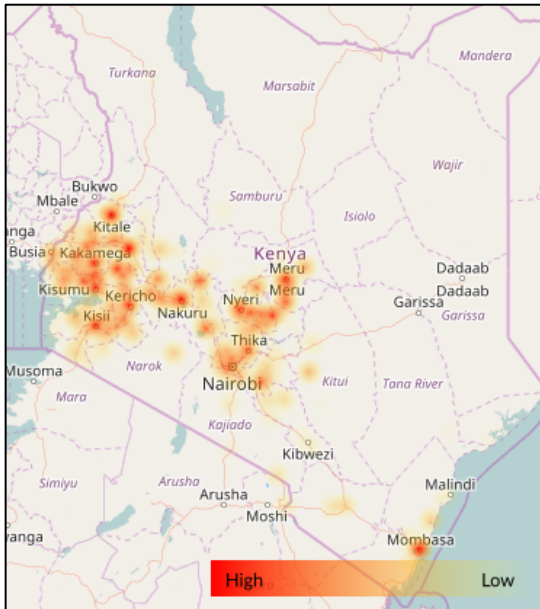
55% of viewers were not aware of any solar light brands compared to 61% of non-viewers.

76% of viewers compared to 68% of non-viewers claim that the major benefit of solar is that it saves money, moreover, 27% of viewers mention the light being better and more powerful than kerosene.

TV is the main source of information on solar products for viewers (68%), followed by Friends/family/word of mouth (37%) while for non-viewers the main sources are Friends/family/word of mouth followed by TV and radio.



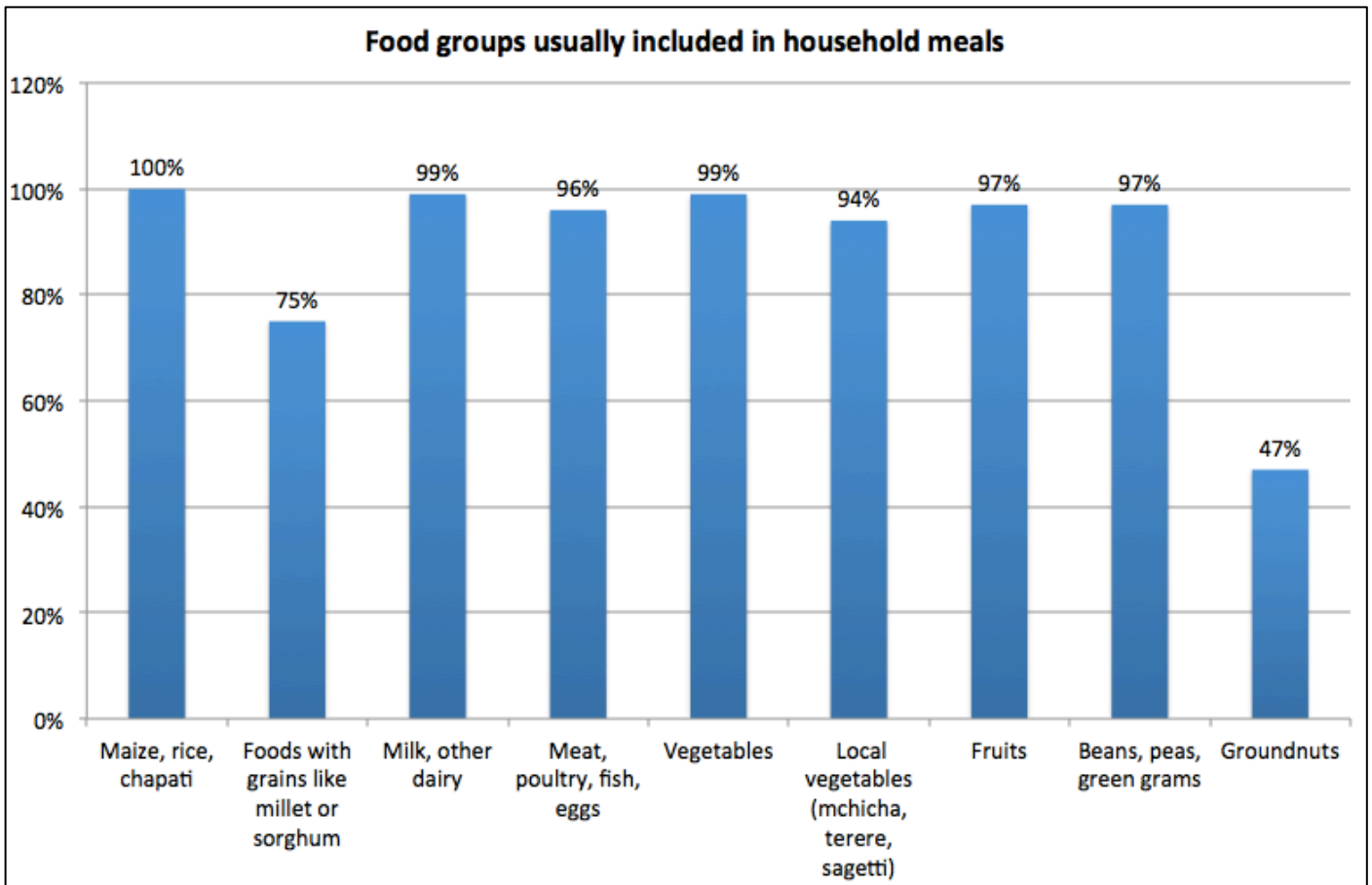
## SMS traffic



### Nutrition

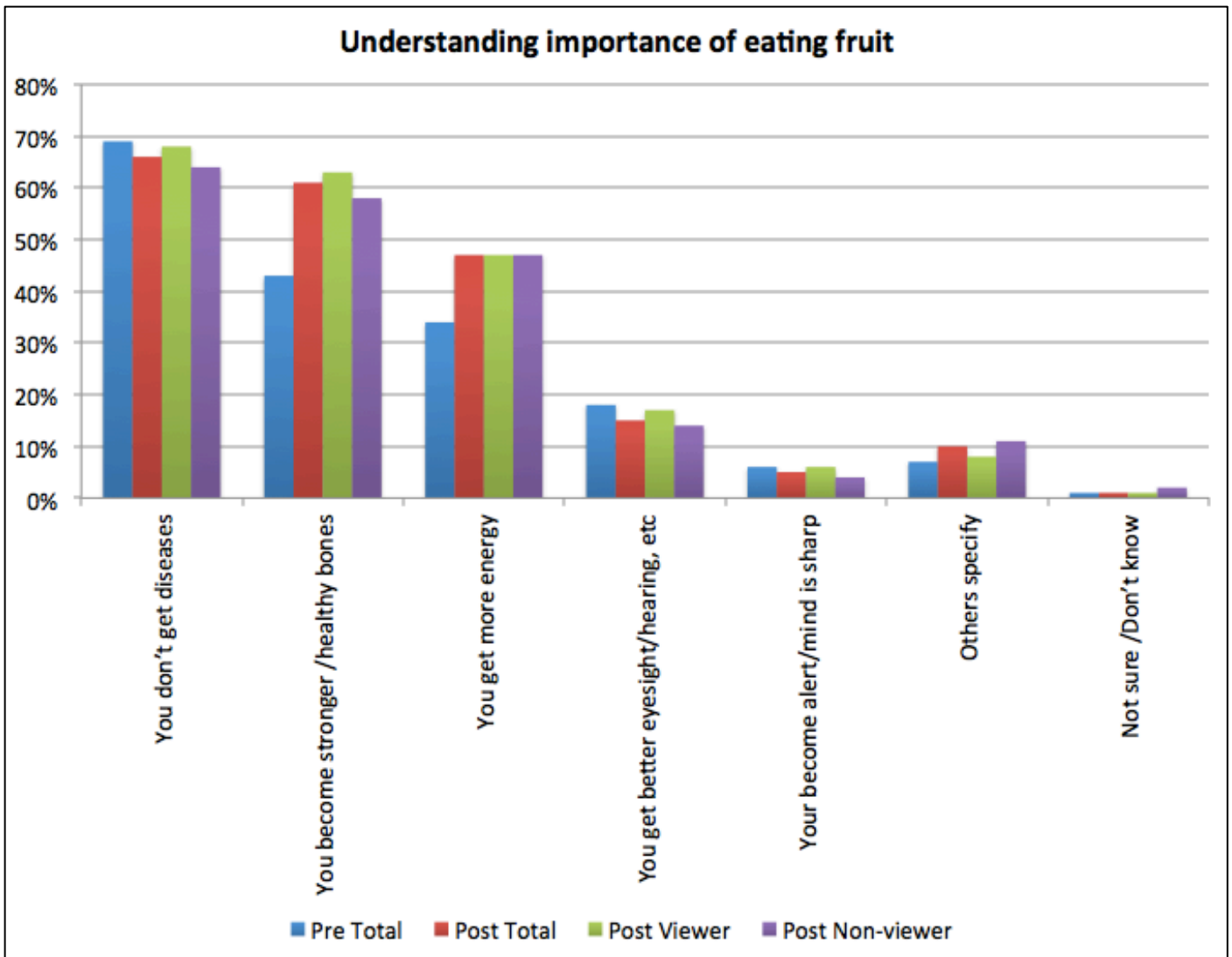
Education on nutrition has been part of SSU since Series 4 where we covered orange flesh sweet potato as a nutrition rich alternative food for families. Series 5 contained more information about nutrition – on growing vegetables, running a kitchen garden and cooking vegetables to keep vitamins and minerals intact. Series 6 continued to educate on the importance of a balanced diet and focussed on mango, baobab, chickpea and pigeon pea as well as kitchen gardens.

Respondents claim to have a balanced diet with all food groups being consumed every week.

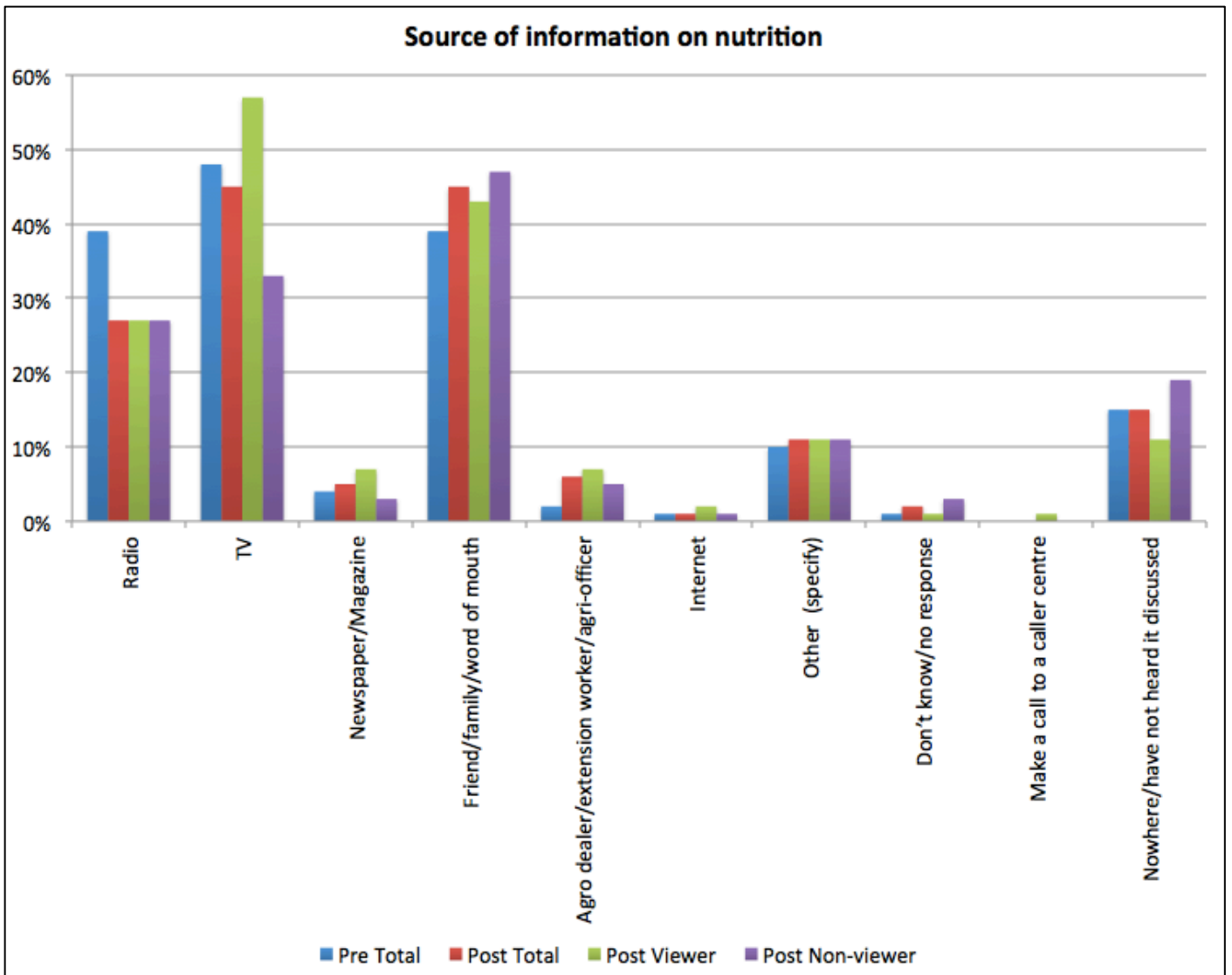


73% of respondents claim to have a kitchen garden with marginally more viewers than non-viewers claiming so (75% viewers, 72% non-viewers)

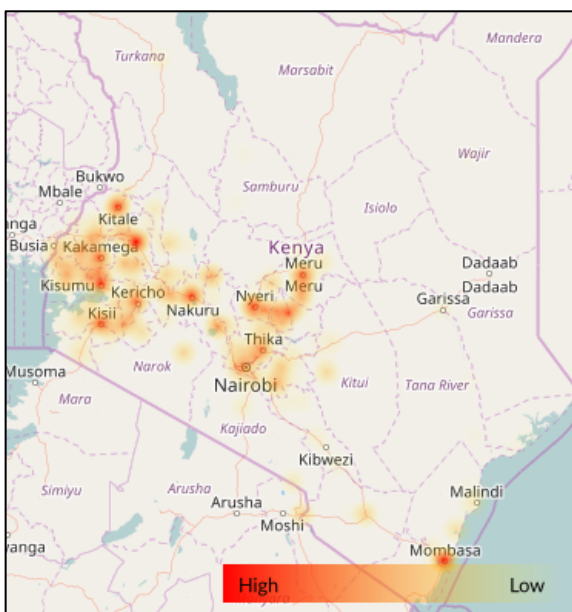
The importance of eating fruit was talked about in the program to get vitamins to ensure a healthy immune system, good vision, energy and overall wellbeing. While the differences are small, they are essentially positive indicating some learning from the program.



Viewers mainly get their nutrition information from TV followed by friends and family. Non SSU viewers use friends & family as their main source, highlighting the importance of word of mouth.



### SMS traffic



## Summary and conclusions

The series has been successful in providing audiences with information they need to improve their farming practices. 80% of viewers learnt something new. 43% of viewers made a change as a result of watching the program, particularly in poultry, dairy, maize and farm records. 77% of those who made a change reported an increase in income.

Shamba Shape Up has one of the largest dedicated agricultural Facebook pages in the region with over 61,000 fans. This is a 20% increase from the Series 5 of the program and signifies growing online impact.

Dairy continues to have one of the highest rates of learning and change second only to poultry. This is a similar pattern for all series, however new to series 6 is that learning about farm management, particularly record keeping is up 7% from Series 5.

46% of viewers claim to have learnt something new about poultry farming from watching SSU. 27% of viewers who are poultry farmers also claim to have made changes as a result of the program

Awareness of soil testing has increased (5% higher than Series 5), however, the rate of adoption remains low. 82% of viewers compared to 68% of non-viewers have heard of soil testing but only 12% of those viewers claim to actually have done a soil test.

The program needs to emphasize the importance of a proactive approach to soil health, continuing to increase awareness but also educating on where to go to get a soil test done. Farmers need a better understanding of the correlation between healthy soil and high yields.

94% of all the respondents grow maize. The majority of all respondents – viewers and non-viewers alike (over 80%) claimed to have planted an improved variety / certified seed which shows that consistent, sustained messaging is a successful way to get farmers to change their practices.

Although viewers have increased their knowledge on how to reduce post-harvest losses, an area to focus on is market linkages as the majority of small holder farmers are not monetizing their production of mangoes, potatoes, green grams & cassava.

While 20% of viewers claim to have learnt something new in the area of farm records, record keeping remains low with no significant difference between viewers and non-viewers. Only 24% of respondents claim to have a business plan and to keep written farm records. While some progress has been made with regards to sourcing information and mobile money, financial literacy is an area that needs more exposure in the program.

Only 1% of viewers and non-viewers claim to have taken out an insurance policy with just under half the viewers claiming that they don't think it is necessary.

More viewers than non-viewers are using mobile money, particularly Mpesa (61% viewers compared to 50% of non-viewers).

Brand loyalty is still a feature of the program as audiences recognise and prefer to buy brands associated with the program.

## Next steps

Shamba Shape Up Series 7 is under production in Kenya and will begin broadcast in early 2017. It will build on the changing knowledge and attitudes to try to ensure more farming practices are improved.