Knowledge Attitudes and Practices Report

Shamba Shape Up Series 16



Impact of viewing on smallholder farmers' knowledge, attitudes and practices

Survey Data
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Executive Summary

Shamba Shape Up (SSU) has been broadcast across Kenya for 16 years and is one of Mediae's longest-running and most established television programmes. Broadcast on national TV, the programme uses an edutainment approach to provide practical agricultural information to smallholder farmers and has attracted an estimated audience of two to four million weekly viewers over the past two years. SSU Series 16 had 25 episodes and was broadcast in both English and Swahili between March and September 2026. The English version aired every Saturday at 1:30 p.m., while the Swahili version aired every Sunday at 1:30 p.m.

The Knowledge, Attitudes and Practices (KAP) survey for series 16 was conducted in September 2026 following the conclusion of the series. The survey comprised 614 in-home, face-to-face interviews with smallholder farmers and farm decision-makers across Kajiado, Machakos, Murang'a and Siaya. Eligible respondents were active smallholder farmers with farms ranging from 0.5 to 10 acres who had watched Shamba Shape Up in the last nine months. The survey aimed for equal representation of men and women, with age quotas targeting 50% of respondents aged 18–34 and 25% each aged 35–44 and 45–60.

Key Takeaways

- **Strong audience engagement:** 97% want to watch another series, 65% would highly recommend SSU, and 73% watch with other adults.
- **Reported practice change:** 52% reported changing farming practices; among them, 65% reported higher yields and 56% reported improved income.
- **Livestock management:** 83% of livestock farmers reported changes in animal management. Feeding was the most requested future topic (37%).
- **Biopesticides**: Practical demonstrations and clear evidence of benefits could help build farmer confidence.
- **Climate-smart technologies**: While 81% knew of solar-powered irrigation, only 18% had used it. Half of non-users cited high upfront costs.
- **Mechanisation**: Practical content on farm machinery, equipment options and costs could help farmers assess how mechanisation can improve efficiency and productivity.
- **Emerging technologies**: Awareness of Black Soldier Fly farming stood at 34%, indicating scope for further information and demonstrations.
- **Farm management:** Savings groups and record-keeping remain relevant areas for practical farmer-focused content.
- **iShamba insights:** Farmer enquiries highlight demand for advice on livestock, vaccination, crop pests, irrigation and machinery.
- **Shamba Ni Biz:** 51% recalled the inheritance drama. Among those who recalled it, 45% had discussed inheritance with family, while 12% planned to.

1. Introduction

Smallholder farmers across Kenya are facing an increasingly challenging environment, shaped by climate change, rising production costs, limited access to agricultural inputs and technologies, market constraints, and the need to improve farm productivity and profitability. Access to practical, reliable and accessible agricultural information remains important in supporting farmers to make informed decisions and respond to these challenges.

For 16 years, Shamba Shape Up (SSU) has provided Kenyan farmers with practical, accessible agricultural information through television. By translating technical knowledge into clear, actionable guidance, the programme helps farmers strengthen their knowledge and adopt appropriate practices on their farms. This approach has established SSU as one of Kenya's longest-running and most trusted agricultural television programmes. Building on its success in Kenya, Mediae has adapted the model for Uganda and Zambia, where similar farmer-focused platforms deliver accessible agricultural information and support improved farming practices and livelihoods.

The television broadcast is complemented by a wide network of digital and interactive platforms that extends SSU's reach and provides farmers with additional ways to access and engage with agricultural information. Through iShamba, Mediae's mobile-based farmer information service with more than 550,000 subscribers, farmers receive timely agricultural information directly on their mobile phones. The iShamba call centre, staffed by agricultural experts, further enables farmers to call or send SMS messages to ask questions, seek clarification and receive practical advice on issues raised through the programme and their own farming activities.

SSU content is also amplified through YouTube and social media, where full episodes, short clips, quizzes and other interactive content allow farmers to revisit programme content, explore specific topics and engage with agricultural information beyond the television broadcast.

The Series 16 Knowledge, Attitudes and Practices (KAP) study assesses how farmers engaged with the programme and the extent to which the information presented translated into changes in their knowledge, attitudes and reported farming practices. It also examines the factors that enable or constrain farmers' ability to adopt and apply the practices promoted through the programme.

1.1. SSU Series 16 Partners

The table below presents the partners who supported Shamba Shape Up Series 16, alongside the topics covered through content developed in collaboration with each partner.

These partners represent a mix of research, development and commercial organisations, bringing expertise across key areas of smallholder farming, including climate-smart agriculture, livestock management, financial literacy, land access, mechanisation and sustainable farming solutions.

Partners featured across different numbers of episodes, ranging from 3 to 15 segments. The Shamba Shape Up production team generally recommends a minimum of five segments per partner to ensure sufficient visibility and meaningful coverage of each topic, maximising its potential to influence farmers' knowledge, attitudes and practices.

Table 1: Partners and Topics Covered on SSU Series 16

No.	Partner name	Topic
1	KAPI Limited / Commercial Agriculture for Smallholders and Agribusiness (CASA), implemented by TechnoServe	Bio-pesticides
2	International Center for Tropical Agriculture (CIAT) – Financial Literacy	Financial literacy
3	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) – Youth Programme	Land access
4	CKL Africa Limited	Livestock management
5	Unga Farm Care East Africa Limited	Livestock feeds
6	STIHL East Africa	Mechanisation
7	Climate Smart Forest Economy Program (CSFEP) / Dalberg Catalyst	Bio-based solutions for construction
8	We Effect	Black Soldier Fly (BSF)
9	Global Alliance for Livestock Veterinary Medicines (GALVmed)	Livestock vaccination
10	International Livestock Research Institute (ILRI)	Mastitis prevention
11	Alliance of Bioversity International and CIAT	Climate-smart agriculture
12	Alliance of Bioversity International and CIAT	Solar-powered irrigation systems (SPIS)
13	Alliance of Bioversity International and CIAT	Digital Climate Advisory Services

1.2. SSU 16 KAP Survey Methodology

SSU Series 16 KAP study continued the established approach of conducting in-home, face-to-face interviews among the target population of Kenyan smallholder farmers living in rural settlements. The study covered four counties, Kajiado, Machakos, Murang'a and Siaya, selected to represent diverse agricultural and ecological contexts. Siaya reflects diversified staple farming; Machakos dryland farming with emerging horticulture and dairy; Kajiado pastoral livestock systems alongside irrigated horticulture; and Murang'a intensive agriculture, including dairy and high-value crops such as tea, coffee, avocado and macadamia. The diversity of these counties provides an opportunity to understand how farmers' engagement with agricultural information and their ability to apply recommended practices varies across different production environments.

The smallholder farmers eligible for inclusion in the study were defined as:

- Farmers aged between 18 and 55+, with 50% aged 18–34, 25% aged 35–44, and 25% aged 45–60.
- Actively engaged in farming, with farming contributing to household livelihoods
- Farming between 0.5 and 10 acres
- Growing crops, keeping livestock, or both
- Owners of the land farmed and decision-makers in relation to farming activities
- Having watched Shamba Shape Up for at least the last nine months

Fieldwork was conducted by Aareton Blue from 2 to 11 September 2026 using Computer-Assisted Personal Interviews (CAPI) on tablets through the STG offline/online platform. Interviews were conducted in English or Kiswahili according to respondent preference. The field team comprised 29 personnel across four regional teams, with each team including a supervisor, quality-control officer and four to five enumerators, supported by an overall coordinator. The average interview length was 54 minutes.

1.3. Sample Profile by Gender, Age and Location

To qualify for inclusion in the survey, all smallholder farmers met the screening criteria, and the resultant distribution of the sample by key demographics is shown in the chart below. The achieved sample of 614 respondents largely mirrored the profile of smallholder farmers in Kenya.

The SSU Series 16 sample was evenly balanced by gender. By age, 46% of respondents were aged 18–34, 30% were aged 35–44 and 25% were aged 45–60.

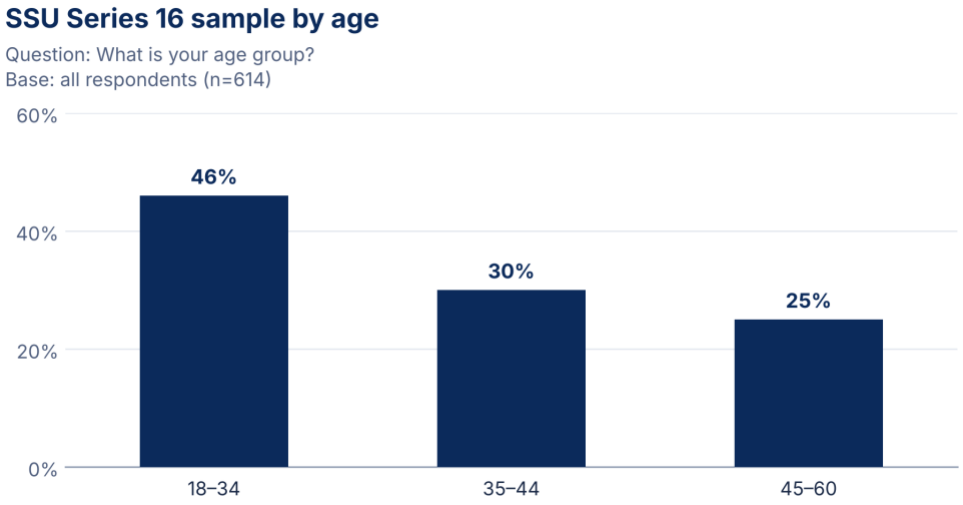


Figure 1: Sample Profile by Age

The sample was purposively controlled by county, with approximately 150 interviews conducted in each of the four study counties. The final distribution was broadly even, with 150 interviews in Kajiado, Machakos, Murang'a and 164 in Siaya. The sample was also structured to achieve a balanced gender profile and controlled for age to ensure representation across the four age groups

1.4. Main source of income

Farming was a significant source of income for all respondents, across the four counties. In terms of farm size, 58% cultivated between 1 and 5 acres, while 29% farmed between 0.5 and 1 acre and 13% farmed between 5 and 10 acres. Farm size varied across the counties. Smaller farms were more common in Murang'a and Siaya, where 47% and 39% of respondents respectively farmed between 0.5 and 1 acre. In contrast, larger farms were more prevalent in Machakos and Kajiado, where 26% and 21% respectively farmed between 5 and 10 acres. Women were slightly more likely than men to farm 1–5 acres (60% vs. 56%), while men were more likely to operate farms of 5–10 acres.

1.5. Decision making

Overall, 43% of respondents reported making farm decisions on their own, while 57% made decisions jointly. Clear gender differences emerged: 58% of men were sole decision-makers, compared with 29% of women, while joint decision-making was more common among women (71% compared with 42% of men).

Decision-making patterns also varied across the four counties. Sole decision-making was most common in Murang'a, while joint decision-making was more prevalent in Kajiado and Siaya. These variations reflect differences in the social, cultural and farming contexts of the study areas. The qualitative findings further suggest that decision-making roles can be gendered, with men tending to have greater influence over major expenditures and livestock sales in some households, while women are more closely involved in day-to-day farm implementation.

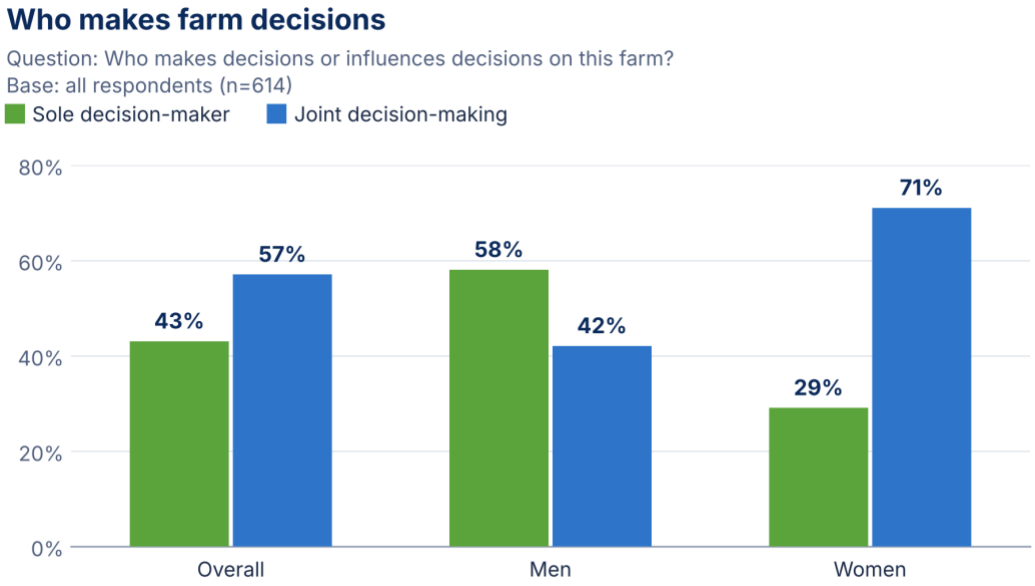


Figure 2: Decision making on the farm

2. Main Findings

2.1. Television viewing

Shamba Shape Up viewership remains predominantly television-based. 51% of respondents mainly watched the Sunday Kiswahili broadcast, while 14% watched the Saturday English broadcast and 38% watched both broadcasts. Only 3% reported accessing SSU online. The preference for Kiswahili was particularly pronounced among older viewers, with 69% of those aged 55 and above mainly watching the Sunday edition.

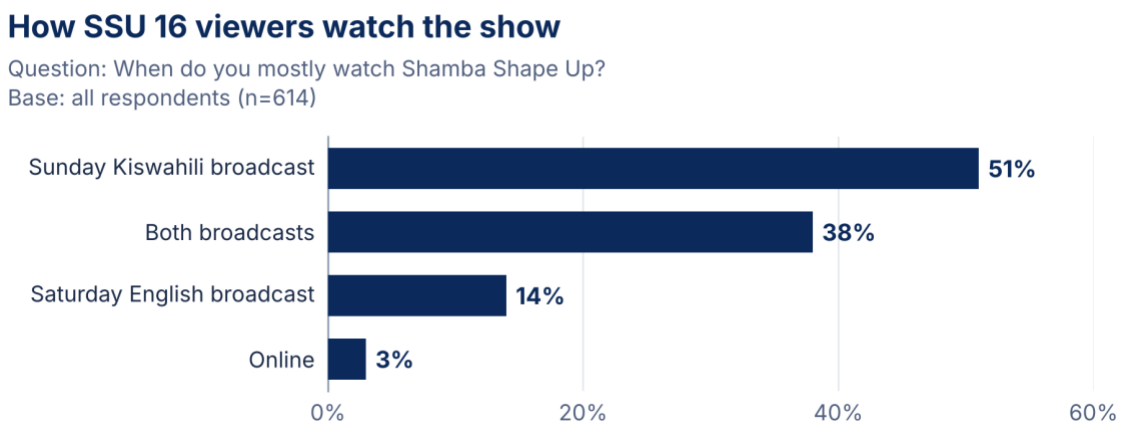


Figure 3: How viewers watch the show

SSU viewing was often a shared activity, with 73% of viewers watching with at least one other adult, compared with 27% who watched alone. The most common arrangement was watching with two other people (29%), followed by one other person (23%), while 13% watched with three other adults and 7% with four or five others. This shared viewing suggests that the programme's potential exposure extends beyond the individual viewer interviewed, while content accessed and shared through digital and social platforms provides additional opportunities for exposure that are not captured through conventional television audience measurement. Co-viewing also creates opportunities for viewers to discuss what they have seen, share experiences and consider how to apply the advice, potentially strengthening the programme's impact compared with watching alone.

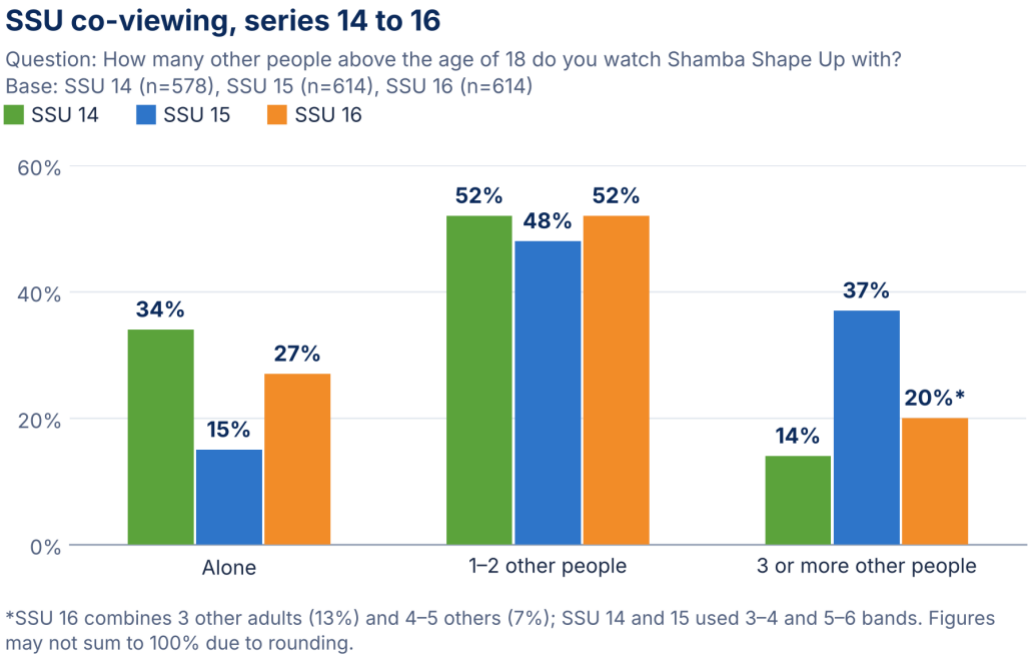


Figure 4: Co-viewing of SSU

2.1.1. Online Viewership

Series 16 episodes were uploaded on Mediae's YouTube channel, Africa Knowledge Zone, and attracted a total of 727,649+ views, highlighting the programme's reach beyond television. Most viewership came from Kenya (83%), followed by Tanzania (8%) and Uganda (6%).

The online audience was relatively young, with 46% of viewers aged 25–34 and 16% aged 18–24. A further 27% were aged 35–44, while 10% were aged 45 and above. Viewership was fairly balanced by gender, with men accounting for 53% and women 47%. These figures highlight the role of online platforms in reaching younger audiences and extending the programme's reach across East Africa.

2.2. Other agricultural programmes watched by SSU 16 Viewers

Beside SSU, the other agricultural programmes watched by SSU viewers were *Kilimo Biashara* on K24 Television (40%) and *Seeds of Gold* on NTV (26%), followed by *Mkulima* and *Ukulima Ujuzi* on KBC Channel 1 (16%), *Pur Gi Ohala* on Ramogi TV (12%), *Mugambo wa Murimi* on Inooro TV (8%), and *Kenya's Gold* on Citizen TV (3%).

2.3. Most trusted sources of information about agriculture

Television remained the most widely trusted source of agricultural information among respondents, with 77% mentioning TV among their trusted sources. SSU was mentioned by 54%, placing it among the leading sources of agricultural information, followed by family and friends (49%), radio (29%), agricultural or veterinary officers (23%) and agro-dealers (23%). The Internet was mentioned by 14%, with YouTube accounting for 7%.

Television remains the most trusted source of farming and agricultural information for Kenyan smallholder farmers, and among the TV programmes available, SSU is the 'most trusted' (91% of respondents)**.** These data illustrate the unassailable position SSU has established in the Kenyan market for being the 'go to and trusted source' of information and advice for the farming sector.

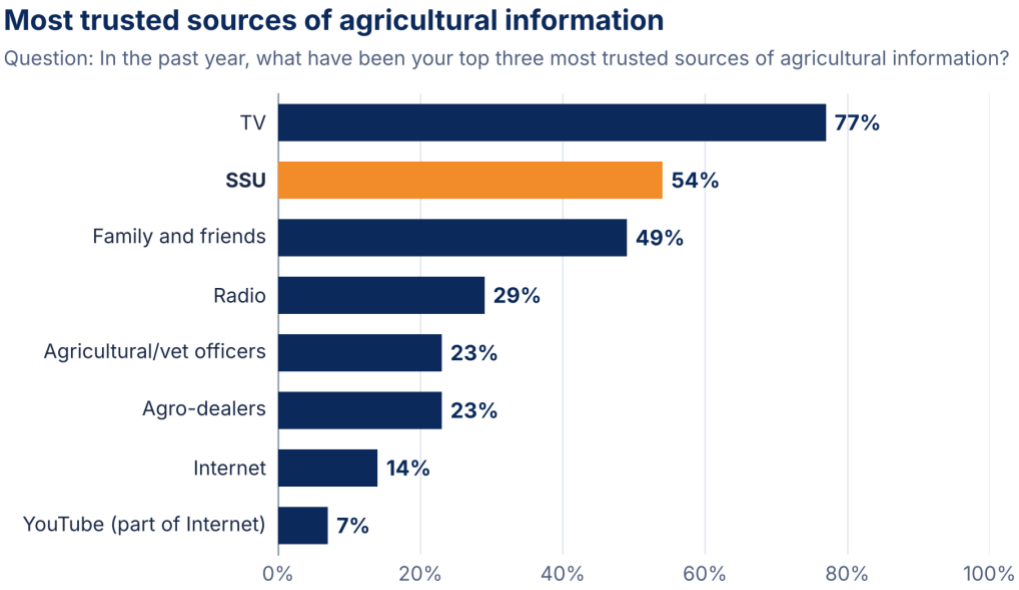


Figure 5: Most Trusted Sources for Agriculture Information

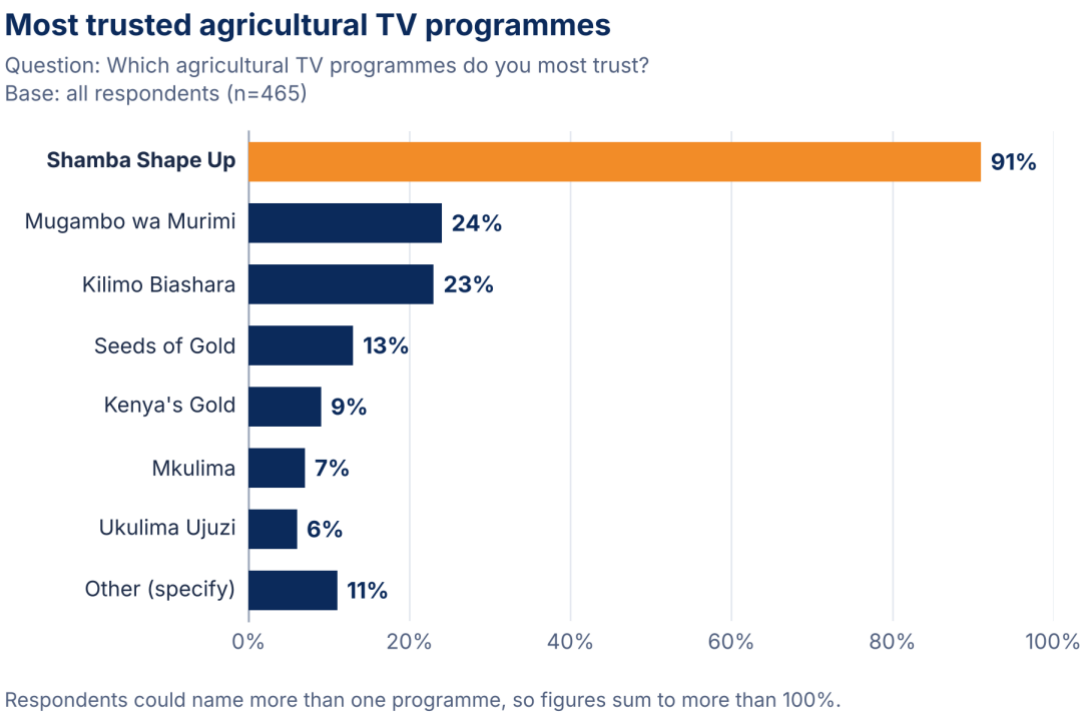


Figure 6: Most Trusted agricultural Tv programmes

2.4. Crops grown, livestock reared and interest in SSU topics

The most important crops grown on farm were maize (88%) and beans (82%), followed by tea (45%), indigenous vegetables (44%), and bananas (31%). For livestock, the most important among this sample of smallholder farmers were chickens (78%), dairy cows (68%), goats (55%), and beef cattle (43%). The crops grown and livestock reared are largely reflected in the topics covered in the current series and those of interest in future SSU series.

When asked which topics covered in Series 16 were most useful, animal feeding emerged as the leading topic at 54%, followed by dairy management at 38%. Livestock vaccination was mentioned by 31%, while climate change adaptation and record keeping were each mentioned by 29%. Usefulness of the topics was consistent across demographic groups and study locations, with no significant differences.

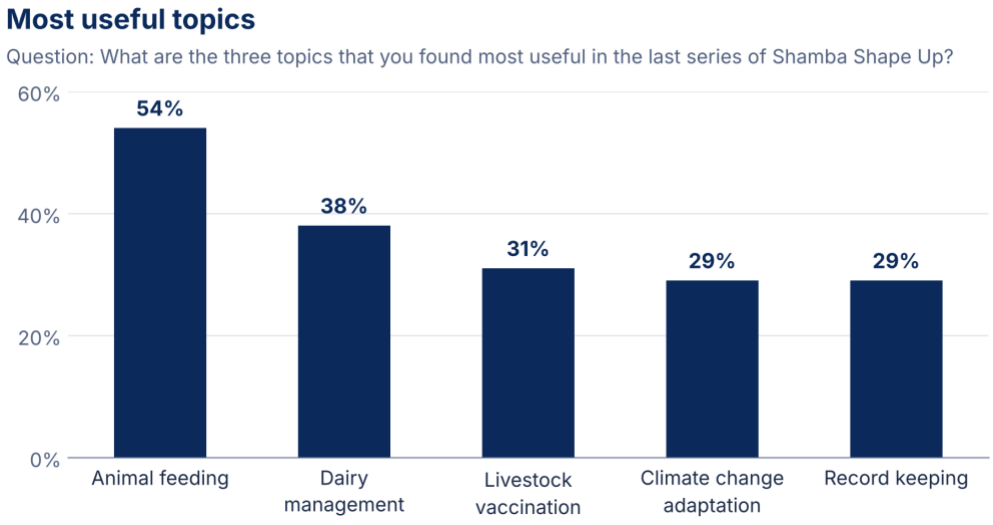


Figure 7: Topics described as most useful

2.5. Changes made as a result of watching SSU 16

Over half of the viewers, 51%, reported making changes on their farms as a result of something they learnt from Series 16. There was little difference by gender in the proportion of viewers who reported making changes to their farms, with 51% of men and 52% of women saying they had acted on something they learnt from Series 16 (see Figure 8).

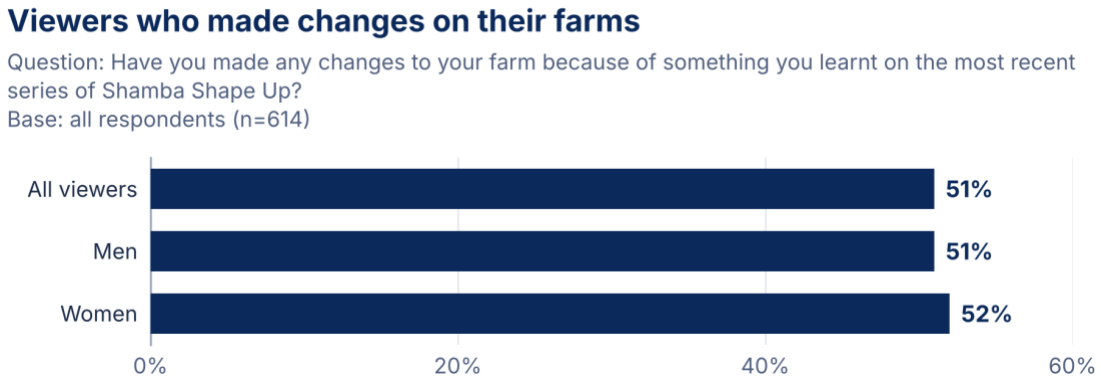


Figure 8: Reported changes

The most commonly reported changes included balanced livestock feeding and correct feeding ratios (20%), livestock vaccination and disease prevention (15%), record keeping (11%), changes to livestock housing (11%), and cleaning and maintenance of animal housing (10%). A further 6% reported changes related to water management and irrigation. Farmers who made changes reported a range of positive outcomes. 65% reported higher yields, 56% improved income, and 53% healthier livestock. 39% reported an increase in chicken egg production and 38% an increase in dairy milk production (see Figure 9).

Among those who did not make any changes, cost was the most commonly reported barrier (48%), followed by not having the opportunity to act (34%). Smaller proportions said they did not understand the content (5%) or did not believe the recommended changes would work (2%). The broader contribution of Series 16 to livelihoods was also positive. When asked whether their income and livelihoods had improved as a result of watching the series, 57% of respondents reported that they had improved “a lot” and 37% “a little”. Overall, 94% reported some level of improvement, while only 6% reported no improvement.

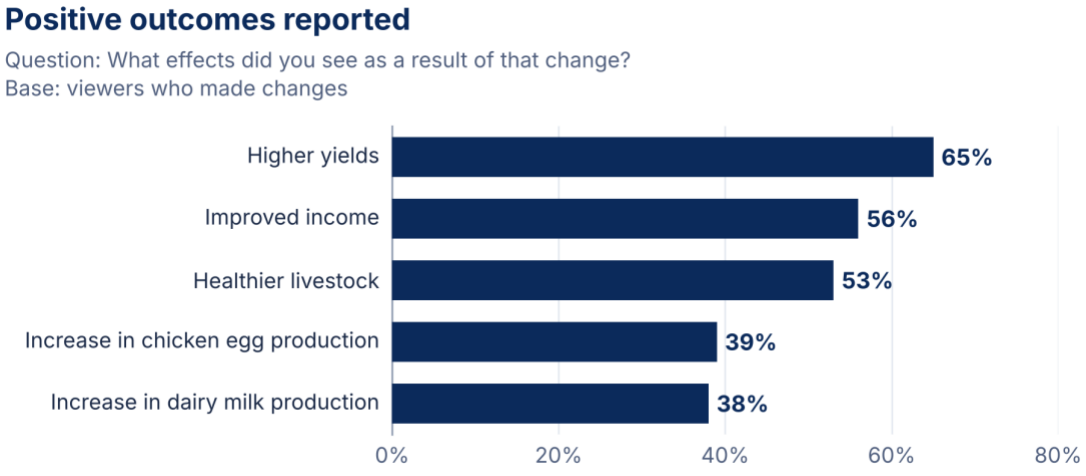


Figure 9: Outcomes reported due to making changes

3. Main Findings: SSU 16 Specific Topics

3.1. Dairy Management Practices

83% of the livestock farmers reported making changes in how they manage their animals after watching series 16. Among those who made changes, the most common were improving animal housing (57%), using mineral supplements (54%), keeping breeding records (45%) and changing how they cared for dry and milking cows (45%). The reported changes span housing, nutrition, breeding and care at different stages of production, suggesting that farmers applied the programme's messages across several aspects of routine livestock management.

More than half of livestock farmers (54%) recalled learning about proper dairy breeding, and the same proportion mentioned the best mineral supplements for their cows. A further 39% learnt how to properly dry off cows, and 36% recalled good calf-management practices. Overall, 82% reported knowing how to care for cows before and after calving.

Despite this knowledge, farmers continue to face challenges in livestock management. The most commonly reported challenges were the high cost of quality feed (31%), limited knowledge of transition-cow management (30%), and difficulty detecting health problems early (22%). Limited access to veterinary or extension services was also reported by 12%. The high reported awareness of care before and after calving sits alongside continued difficulty with transition-cow management. This suggests that general awareness does not necessarily translate into confidence in managing this stage of production.

Deworming was a well-established livestock health practice, with 76% of farmers reporting that they dewormed their animals at least every six months. This included 43% who dewormed every three months and 33% every six months. A further 10% dewormed their animals once a year, while 9% did so only when animals appeared sick and 4% had never dewormed their animals. Frequency varied considerably by county, with quarterly deworming reported by 73% of farmers in Siaya and 62% in Kajiado, compared with 33% in Machakos and 30% in Murang'a.

Among the 17% of livestock farmers who had not changed their management practices, cost was the most commonly reported barrier (48%), followed by not having had the opportunity to act (34%), indicating that the ability and timing to act were important factors in whether learning translated into practice.

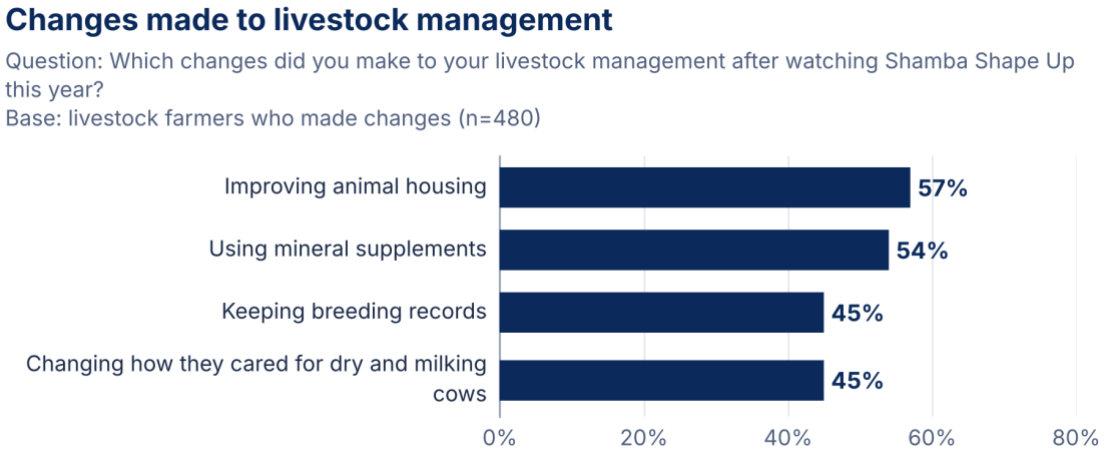


Figure 10: Changes made to livestock management

3.1.1. iShamba Traffic: Livestock management (CKL)

Following the broadcasts, iShamba received 1,984 farmer questions and 336 calls relating to livestock health and management. External parasite control had the most questions (35%; 686), followed by internal parasite control (28%; 552). Dairy cow management accounted for 14% (280 questions), covering nutrition, milk production, breeding, deworming, mineral supplementation, mastitis management and sourcing quality dairy breeds. Chicken management contributed 12% (243 questions), with farmers seeking advice on managing profitable poultry enterprises, particularly layers, improved kienyeji chickens and broilers.

Other enquiries concerned goat and sheep management (4%; 71 questions) and calf and heifer management (2%; 33 questions), reflecting interest in practical guidance across different livestock enterprises. Parasite control accounted for nearly two-thirds of livestock questions, making it the most prominent area of follow-up interest. Alongside the reported deworming practices, this suggests that an established animal-health routine can still generate substantial demand for further guidance.

Table 2: iShamba Engagements on Livestock Management

No.	Topic	No. of Engagements	Percentage
1	External Parasites	686	35%
2	Internal parasites (Dewormers)	552	28%
4	Dairy cow management	280	14%
5	Chicken Management	243	12%
6	Goat & Sheep Management	71	4%
7	General Question	69	3%
3	Mastitis	50	3%
8	Calf & Heifer Management	33	2%
Total		**1,984**	

Livestock management emerged as a key area of reported practice change, particularly in animal housing, nutrition and breeding records. However, feed costs, knowledge gaps and early disease detection remain challenges. iShamba enquiries reinforce the demand for practical advice, creating opportunities for future SSU content on affordable improvements in livestock care and when to seek veterinary support.

3.2. Dairy feeding practices

Dairy feeding emerged as an important area of change among livestock farmers, with 77% reporting that they had changed how they fed their animals in the last six months. Among those who made changes, 79% reported improved animal health, 70% reported increased milk, meat or egg production, 47% reported faster growth rates, and 42% reported lower feeding costs. Improved animal health and increased production were the most commonly reported benefits, suggesting that farmers principally recognised feeding improvements through the condition and output of their animals.

The series also contributed to farmers' knowledge of appropriate calf-feeding practices. When asked what they had learnt about feeding calves, 49% mentioned using the correct feeding ratios and 22% referred to balanced feeding.

A further 12% mentioned feeding according to the animal's stage of growth, while 12% highlighted the proper handling and storage of feeds. Correct feeding ratios were the most frequently recalled lesson, suggesting that specific guidance on feed quantities stood out more strongly than broader messages about balanced feeding, growth stages or feed handling and storage.

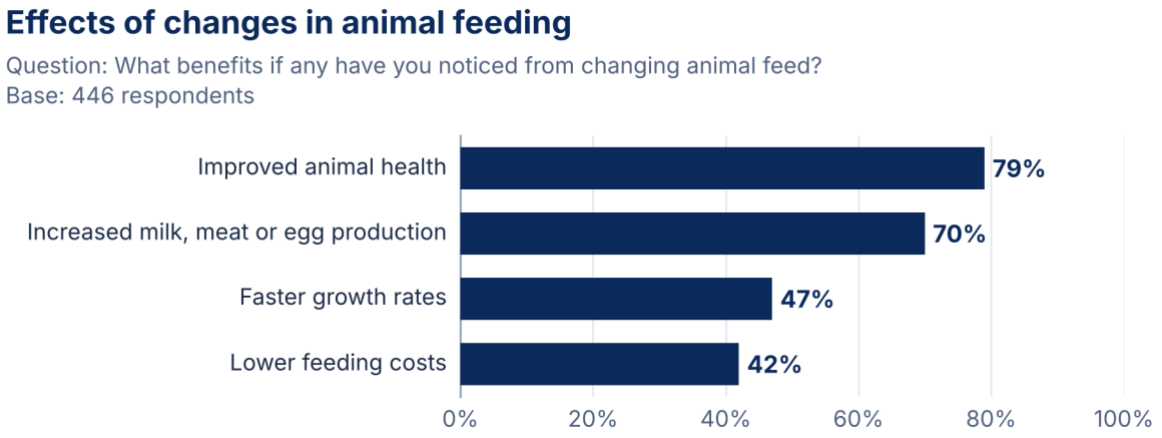


Figure 11: Effects of changes in animal feeding

3.2.1. iShamba Traffic: Animal feeding

Unga Farm Care covered livestock nutrition and feeding, generating 1,331 SMS farmer enquiries and 485 incoming calls through iShamba following the broadcast. Poultry feeding accounted for the largest share of SMS enquiries, with 1,125 questions (84%). These covered chick feeding (400; 36%), layer feeding (288; 26%), broiler feeding (219; 20%) and general chicken feeding (217; 19%). Farmers mainly sought guidance on appropriate feeds and feeding schedules at different growth stages, transitioning between feeds, daily feed requirements, and improving egg production, bird growth and feed efficiency.

Dairy cow nutrition accounted for 144 (11%), with farmers seeking advice on feeding in-calf and lactating cows to improve milk production, as well as calf feeding from birth to maturity. A further 14 questions (2%) focused on goat and sheep nutrition, including feeding dairy goats and improving milk production, growth and reproduction.

Table 3: iShamba Engagements on Animal Feeds

No.	Topic	No. of Engagements	Percentage
1	Chick Feeds	400	30%
2	Chicken Layers Feeds	288	22%
3	Broiler Feeds	219	16%
4	General chicken Feeding	217	16%
5	Dairy Cow Feeds	122	9%
6	General Question (Where to get feeds, Contacts etc.)	33	2%
7	Calf & Heifer Management	22	2%
8	Goat & Sheep Feeding	14	1%
9	Rabbit & Fish Feeding	10	1%
10	Pig Feeding	6	0.45%
Total		**1,331**	

Feed and nutrition remain important concerns for livestock farmers, particularly where costs limit the ability to provide balanced rations. Future content could demonstrate how farmers can balance the purchase of quality feed with affordable alternatives, such as growing their own fodder and making hay or silage to improve feed availability throughout the year.

3.3. Livestock vaccination

Interestingly, livestock vaccination was widely known and practiced by the surveyed livestock farmers. 88% reported being aware of the vaccination, and 82% of these had vaccinated their livestock within the last 12 months. A further 9% planned to vaccinate. The main reasons farmers gave for vaccinating their livestock were to prevent disease (83%), improve livestock health (72%), reduce livestock losses (52%), and improve productivity (45%). Disease prevention and improved animal health were more commonly cited than productivity, suggesting that farmers primarily viewed vaccination as a way to protect their animals. Reducing livestock losses was also an important motivation, linking preventive care to protecting the value of their livestock.

Among the 9% who had not vaccinated their livestock in the last year, cost was the most commonly reported barrier 40%, followed by limited availability of vaccines nearby 29%. A further 13% said they did not know which vaccines their livestock needed or when to vaccinate, while only 4% felt that vaccination was unnecessary. Among farmers who had not vaccinated, cost and local availability were more prominent barriers than the belief that vaccination was unnecessary. This suggests that non-vaccination was more often associated with difficulty accessing or acting on vaccination information than with rejection of its value.

The reported uptake indicates that vaccination is part of animal-health management for many surveyed farmers. However, having vaccinated livestock at least once in the previous year does not establish whether all eligible animals received the appropriate vaccines or completed the relevant schedules. The findings therefore describe participation in vaccination rather than comprehensive vaccination coverage. Further investigation may be necessary to understand which vaccinations are being administered and whether reported practices align with recommended vaccination schedules across the country.

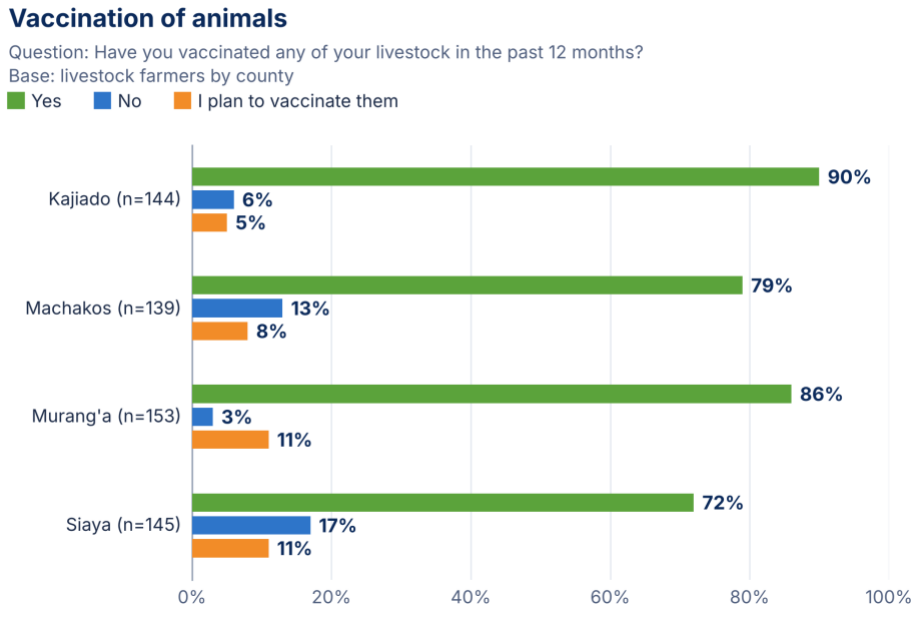


Figure 12: Practices around vaccinating livestock

3.3.1. iShamba Traffic: Livestock Vaccination

GALVmed educated farmers on the importance of livestock vaccination, vaccines for different animal diseases, vaccination schedules and frequency, costs, and where to access vaccines and veterinary services. Following the broadcast of these episodes, iShamba received 672 farmer engagements, i.e. 333 SMS enquiries and 339 incoming calls. Farmers sought information on vaccination against specific diseases, including Foot-and-Mouth Disease (FMD), East Coast Fever (ECF), Peste des Petits Ruminants (PPR) and Contagious Caprine Pleuropneumonia (CCPP). They also wanted to know which vaccines were most suitable for their livestock and the best time or season to vaccinate.

While some farmers reported having vaccinated their cattle against FMD and Lumpy Skin Disease (LSD), others had never vaccinated their animals. The main barriers to vaccination included the high cost and limited availability of vaccines, as well as insufficient knowledge about livestock vaccination. Farmers also sought guidance on where to obtain vaccines and the availability of veterinary services in their areas.

Table 4: iShamba Engagements on Livestock Vaccinations

No.	Topic	No. of Engagements	Percentage
1	What vaccine to give	246	74%
2	Routine vaccination	37	11%
3	Where to get vaccines	31	9%
4	Cost of vaccines	19	6%
Total		**333**	**100%**

The enquiries add detail to the high awareness reported in the survey: farmers wanted to move from understanding the importance of vaccination to knowing which vaccine to use, when to administer it and where to obtain it. High awareness therefore coexisted with demand for specific, practical guidance.

Vaccination presents an opportunity to strengthen preventive animal health practices. Future episodes and iShamba advisory could explain recommended vaccination schedules, the diseases they help prevent and the importance of seeking advice from qualified animal-health professionals.

3.4. Mastitis

Livestock farmers reported a range of mastitis-prevention practices. The most common preventive practices mentioned were washing and drying the udders before milking (68%) and keeping the cow shed clean (61%). A further 40% regularly checked cows for signs of mastitis, while 37% used teat dips after milking. However, 11% reported using none of the listed prevention practices.

When asked how they could tell if their cow has mastitis, 47% mentioned a swollen or painful udder, while 27% said abnormal milk, such as clots, flakes or watery milk. Only 9% mentioned reduced milk production, and 10% were able to identify all three signs. Farmers more commonly recognised mastitis through visible changes to the udder than through changes in milk appearance or production, suggesting that familiarity with the condition did not necessarily extend to recognising its different indicators. The findings highlight a need to strengthen farmers' recognition of the range of mastitis signs, particularly changes in milk appearance and production, to support earlier detection and timely action.

Overall, 55% of the farmers reported having tested their dairy cows for mastitis, while 45% had not, showing that it was an established practice for some but far from universal. Further investigation may be necessary to understand how frequently testing occurred or whether it was routine or prompted by suspected infection.

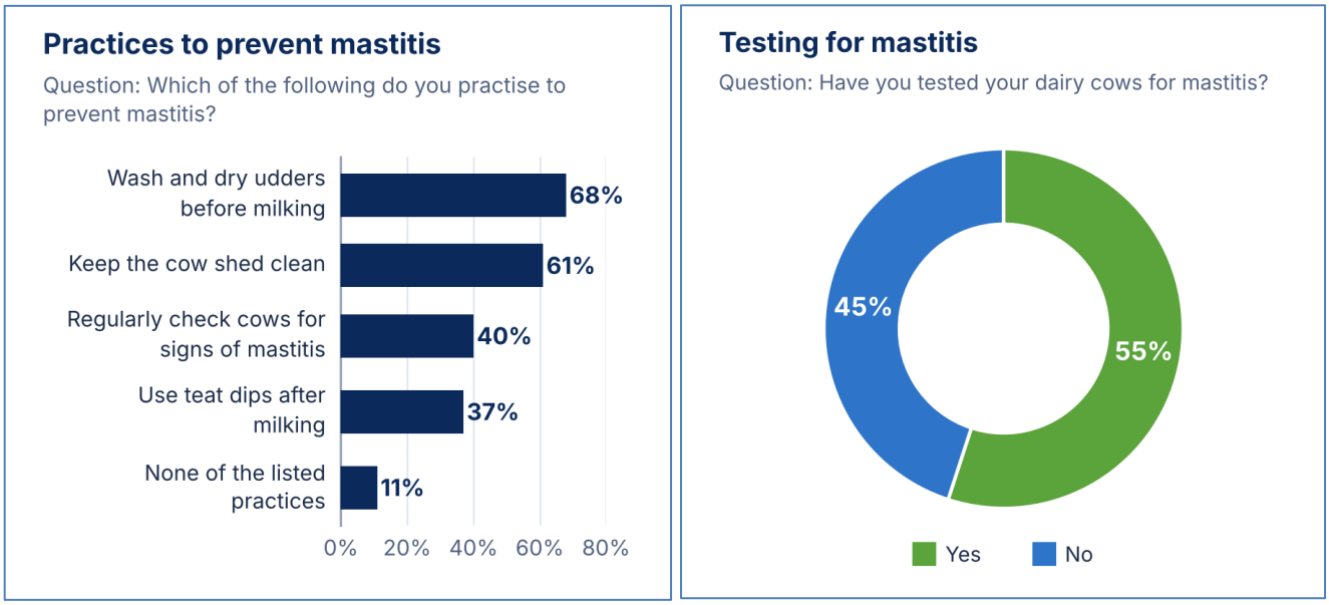


Figure 13: Practices to prevent Mastitis

Mastitis prevention remains an important topic for dairy farmers, given its implications for animal welfare, milk production and farm income. Reported hygiene practices demonstrate engagement with prevention, but do not on their own establish farmers' ability to identify mastitis when it occurs. Future content could demonstrate good milking hygiene, regular testing, early warning signs and appropriate steps to take when mastitis is suspected.

3.5. Biopesticides

Before watching SSU, 43% of farmers had not heard of biopesticides. The main benefits recalled were their effectiveness in controlling crop pests (60%), being safer for farmers and consumers (51%), leaving little or no harmful residues on crops (44%), and allowing farmers to harvest sooner after spraying (43%). A further 31% mentioned that one product can control more than one pest, while 28% recalled that biopesticides can help farmers access supermarkets or export markets.

Perceptions of the effectiveness of biopesticides compared with synthetic pesticides were mixed. 52% considered biopesticides somewhat more effective, including 24% who considered them much more effective. 29% viewed them as less effective and 20% considered them equally effective.

Farmers' feedback suggests that wider adoption of biopesticides may require stronger evidence of their effectiveness alongside practical support. The most commonly cited needs were more information on their effectiveness (52%), recommendations from other farmers (41%), evidence that biopesticides can increase yields (41%), and more demonstrations on how to use them (40%). Lower prices (37%) were also identified as an important consideration. Farmers' responses point to a need for confidence in both the products and their use.

Information on effectiveness, yield evidence, and other farmers' experiences would help them assess potential value, while demonstrations would address practical application.

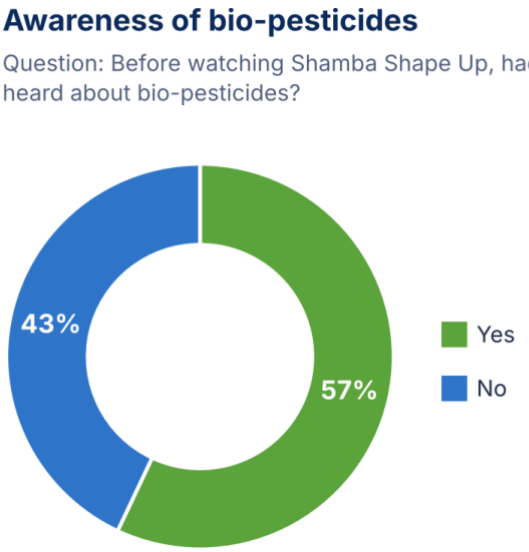


Figure 14: Awareness of bio-pesticides

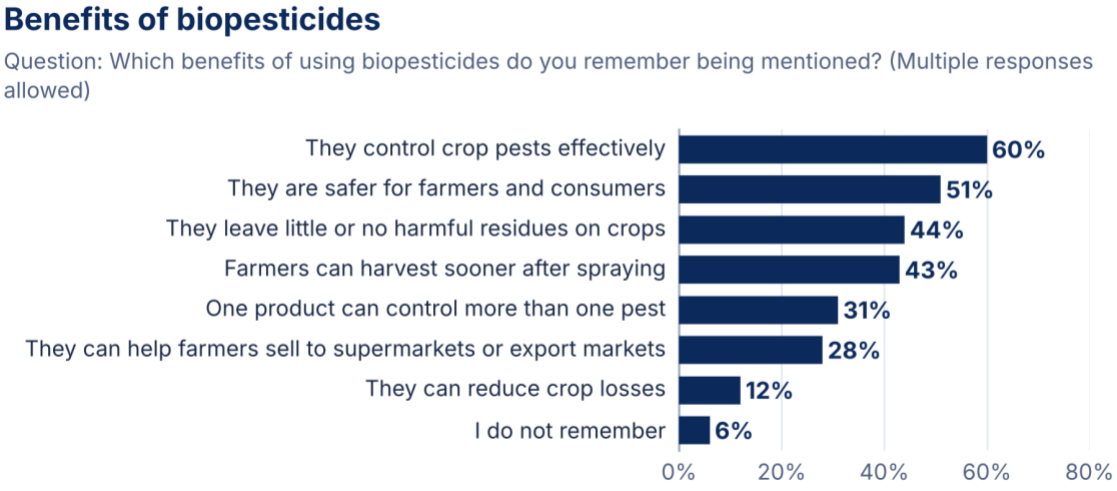


Figure 15: Benefits of bio-pesticides

3.5.1. iShamba Traffic: Bio-pesticides

SMS questions received on biopesticides, pest management and crop protection were 1,881 and 334 calls. Tuta absoluta control had the most enquiries, accounting for 34% (645 questions), followed by aphids, cutworms and mealybugs (17%; 313 questions), Persea mites (13%; 238 questions) and fall armyworm and stalk borer (11%; 205 questions). A further 9% (170 questions) concerned thrips, false codling moth, melon fly, diamondback moth and red spider mites, while 6% (117 questions) related to whiteflies, termites, mealybugs and bean fly.

Broader crop protection accounted for 8% (158 questions), covering pest identification, biopesticide selection, application rates and integrated pest management. Farmers were advised on suitable biopesticides for the specific pest and affected crop and the recommended application rates.

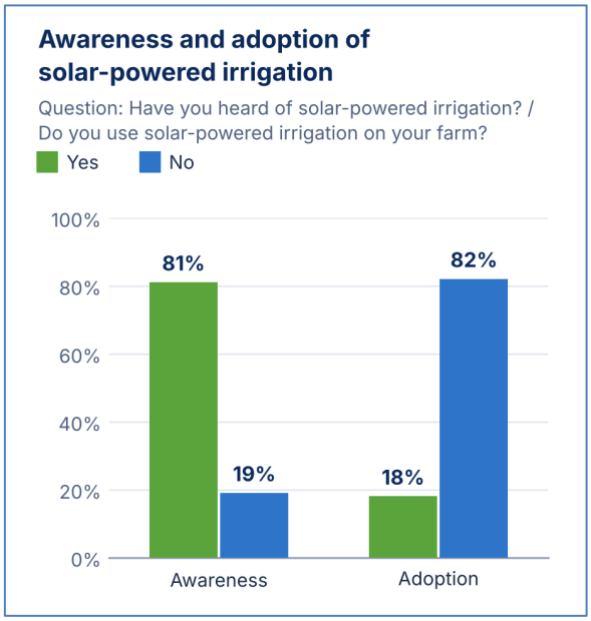
Table 5: iShamba Engagements on Bio-Pesticides

No.	Topic	No. of Engagements	Percentage
1	Tuta Absoluta	645	34%
2	Aphids/Cutworms/Mealybugs	313	17%
3	Persea mites	238	13%
4	Armyworm/Stalk borer	205	11%
5	Thrips/False Codling Moth/Melon fly/ Diamondback Moth /Red spider mites	170	9%
6	General questions on pests, application rates	158	8%
7	Whiteflies/Termites/Mealybugs/Bean fly	117	6%
8	Questions on KAPI (What is KAPI, contacts, where to find KAPI)	35	3%
Total		**1,881**	**103%**

Awareness of biopesticides provides a foundation for further learning, but farmers need clear guidance on how and when to use them. Future SSU episodes could demonstrate application methods, explain expected benefits and limitations, and share practical advice on managing crop pests safely and effectively. Demonstrations could also address farmers' concerns about effectiveness, supported by practical examples and evidence of results under local farming conditions.

3.6. Solar-powered Irrigation

Solar-powered irrigation showed a clear gap between awareness and adoption. While 81% of the viewers had heard of the technology, only 18% reported using solar-powered irrigation on their farms. Among farmers already using solar-powered irrigation, the main benefits reported were reduced dependence on fuel or electricity (45%) and lower irrigation costs (33%). A further 16% highlighted savings in time and labour.



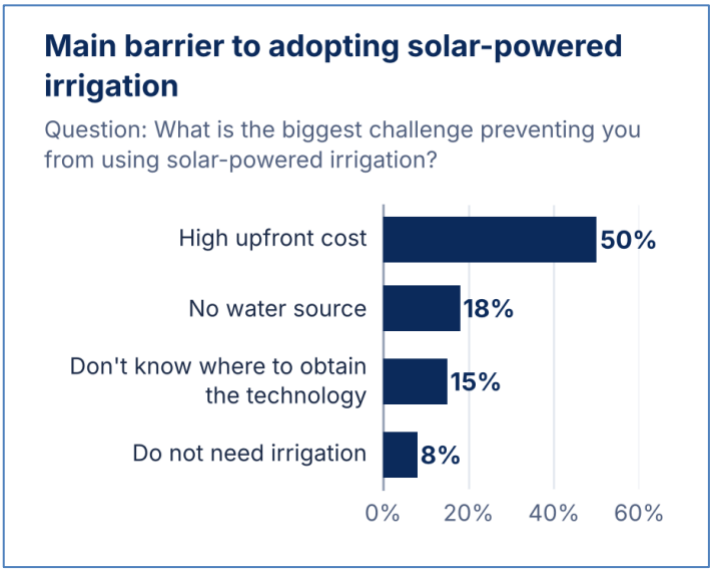


Figure 16: Awareness vs adoption of solar-powered irrigation I Figure 17: Main barriers to adoption

Cost was the main barrier to adopting solar-powered irrigation. Those not using the technology said the high upfront cost was the primary challenge (50%). Other barriers included not having a water source (18%), not knowing where to obtain the technology (15%), or not needing irrigation (8%).

3.6.1. iShamba Traffic: Solar Powered Irrigation Systems (SPIS)

iShamba received 724 engagements related to solar powered irrigation systems, comprising 448 SMS enquiries and 276 incoming calls. Most of the enquiries, 71%, were on solar pumps, with farmers seeking information on where to purchase them, their efficiency and general product details. A further 27% focused on the cost of purchasing a solar pump, highlighting affordability as an important consideration for farmers interested in adopting the technology.

Table 6: iShamba Engagements on SPIS

No.	Topic	No. of Engagements	Percentage
1	Solar pumps: purchase locations, efficiency and general product details	514	71%
2	Cost of purchasing a solar pump	195	27%
3	Other / unclassified enquiries (balance)	15	2%
	Total	**724**	**100%**

Solar-powered irrigation presents an opportunity to reduce dependence on fuel and electricity, but high upfront costs remain a significant barrier to adoption. Questions about suppliers, pump efficiency, product details and purchase costs suggest that some farmers were exploring the practicalities of acquiring a system. These enquiries add depth to the awareness figures, showing interest in assessing equipment and affordability.

Future SSU episodes could demonstrate the costs and potential savings associated with different systems, explain the water-source and site requirements, and help farmers assess whether the technology is suitable for their farms. iShamba advisory could also provide information on suppliers, available financing options and the practical considerations involved in investing in solar-powered irrigation.

3.7. Digital Climate Advisory Services

34% of farmers reported using Digital Climate Advisory Services (DCAS), either regularly (17%) or occasionally (17%). 26% do not currently use any DCAS but expressed interest in doing so. 39% reported not using the services at all. Among the DCAS users, 52% accessed the services at least weekly, while 30% used them monthly and 18% only when they had a specific farming problem. The most commonly used services were WhatsApp farming groups (48%), Facebook farming pages or groups (41%), and YouTube farming channels (37%). Dedicated agricultural services mentioned include iShamba (21%), M-Farm (17%), the KALRO App (15%), and the Kenya Meteorological Department website (13%).

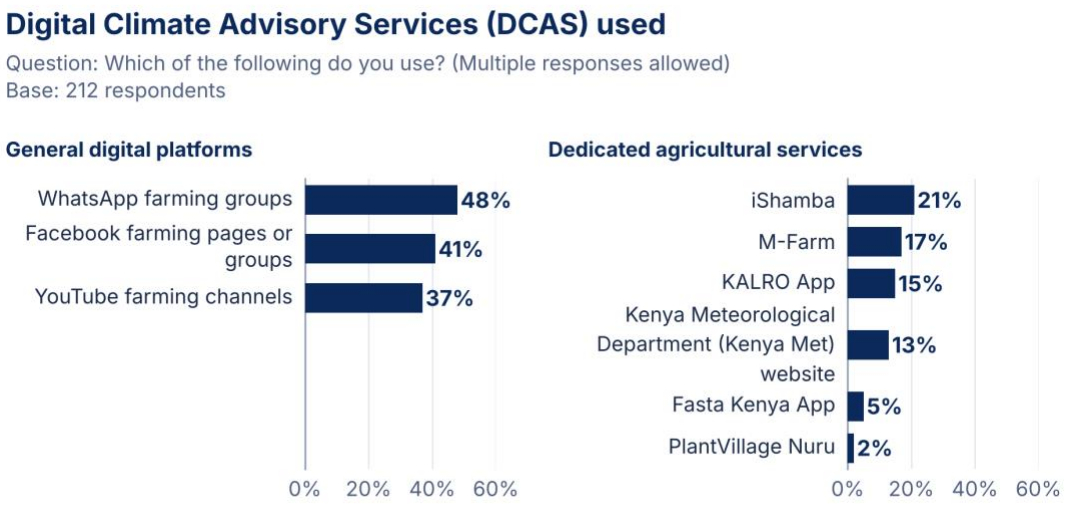


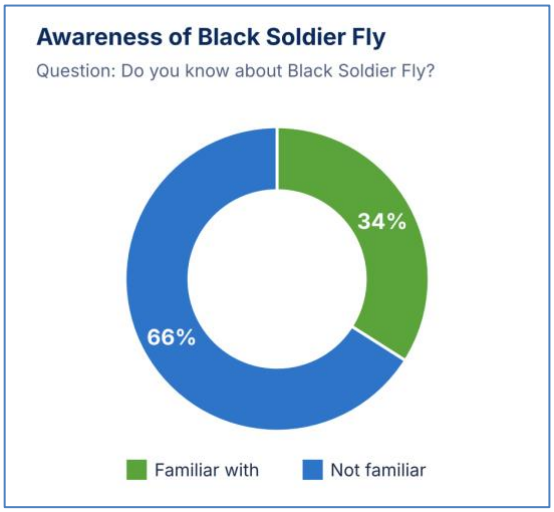
Figure 18: Digital Climate Advisory Services used

Digital climate advisory services offer an opportunity to help farmers make more informed decisions in response to changing weather conditions, but awareness and use remain uneven. Future SSU episodes could demonstrate how to access and interpret weather forecasts and climate information, and how to apply these insights when planning planting, irrigation and other farm activities.

3.8. Black Soldier Fly

Awareness of Black Soldier Fly (BSF) farming was relatively low, with 34% of farmers reporting familiarity with it. Among those surveyed, 11% were currently using BSF or its products, while 24% had used them previously. However, 43% had not yet used BSF but intended to, suggesting potential for wider adoption. The main barriers were limited knowledge of how to use BSF (34%), lack of local availability (29%), and perceptions that it was too costly or difficult to produce (23%).

Among farmers familiar with BSF, the most commonly recognised benefits were reducing feed costs (67%) and providing good manure for crops (67%), followed by producing nutritious animal feed (63%). A further 37% recognised its role in recycling organic waste.



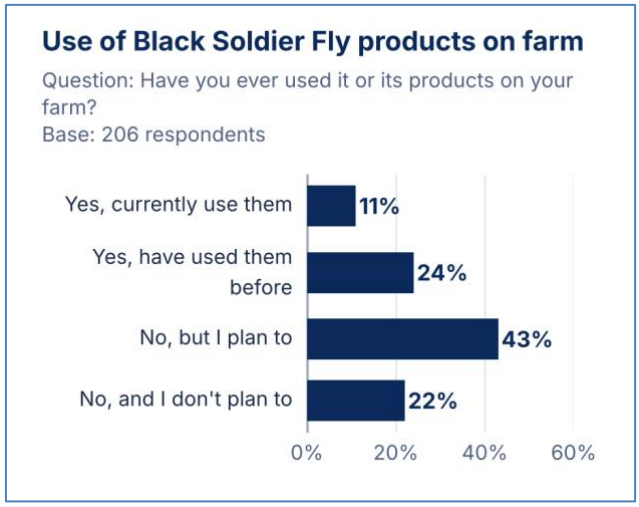


Figure 19: Awareness and use of Black Soldier Fly I Figure 20: Use of Black Soldier Fly products

While Black Soldier Fly farming offers potential to reduce feed costs, recycle organic waste and produce manure, interest in BSF coexisted with uncertainty about how to use it, where to obtain it and what production would involve. Future SSU episodes could demonstrate production methods, resource requirements and practical applications, helping farmers assess the feasibility and potential benefits of adoption. Additionally, previous use was more commonly reported than current use; understanding why farmers stopped would help distinguish initial experimentation from sustained adoption and identify the support needed.

3.9. Timber Construction and Mycelium-based Insulation

Interest in timber as a building material was high among viewers, with 84% saying they were either very likely (43%) or somewhat likely (41%) to consider using timber to build or improve their homes. For 37%, watching SSU increased their likelihood of using timber, while 42% said they already had a positive view of timber. Among the 94 respondents asked about barriers to using timber for construction, the main concern was potential damage from termites or weather (46%).

Other barriers included the perceived high cost of timber (17%) and difficulty finding skilled 'fundis' (technicians) to build with timber (11%). Smaller proportions cited cheaper alternative building materials (10%) and concerns about the durability of timber houses (10%). The concerns around building with timber may indicate that this area needs further consideration in future programming or messaging around the issue.

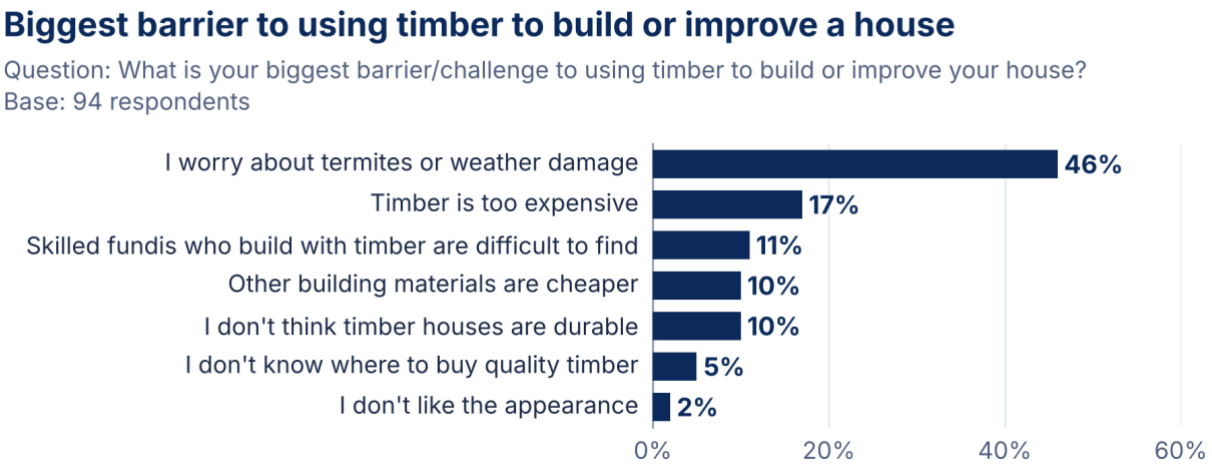
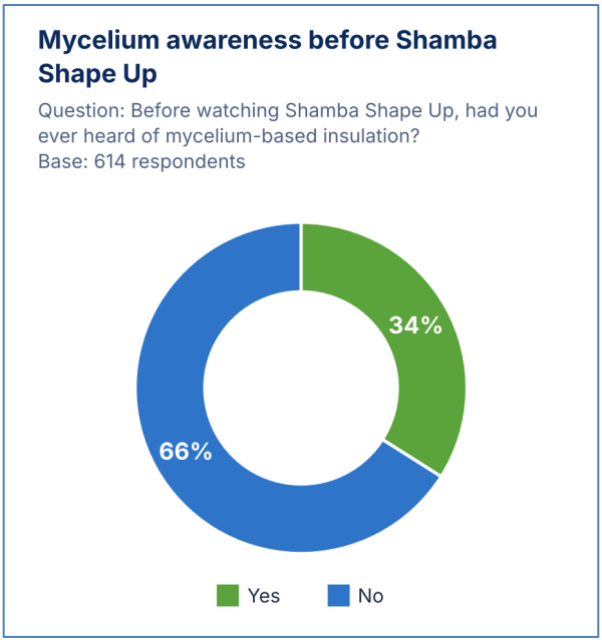


Figure 21: Biggest barrier to using timber to build or improve house

Mycelium-based insulation had relatively low levels of prior awareness, with 34% of viewers reporting that they had heard of it before watching SSU. Despite this, 60% expressed some likelihood of considering it for insulation after watching the episodes, with 43% somewhat likely and 17% very likely to do so. Cost was the most commonly cited barrier (33%), followed by uncertainty about the technology 27% and limited knowledge of where to purchase it 16%. Interest in mycelium-based insulation was more often tentative than strong. This suggests openness to an unfamiliar material, while concerns about cost, performance and sourcing remained important to deciding whether to use it.



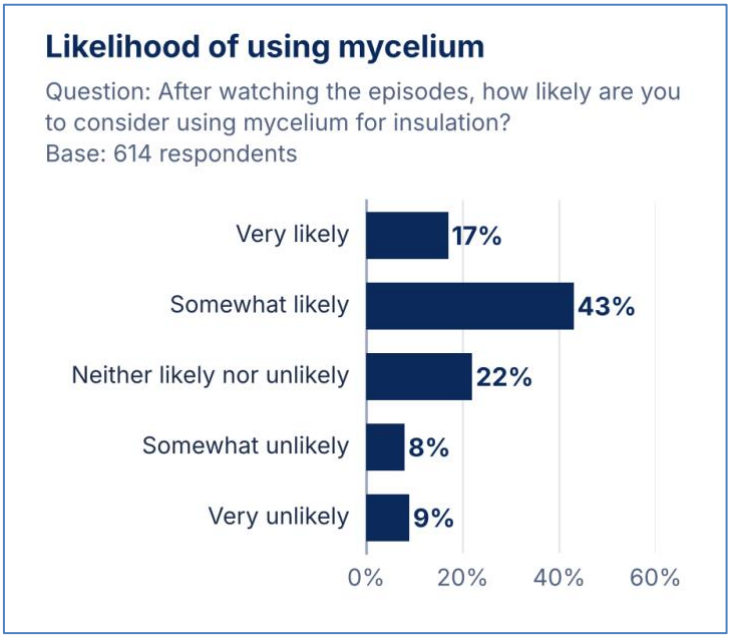


Figure 22: Awareness of mycelium
Figure 23: Likelihood of using mycelium

Alternative construction materials offer opportunities for more sustainable building, but questions around cost, durability and suitability may limit adoption. Future content could demonstrate appropriate applications, explain benefits and limitations, and provide practical guidance on costs, sourcing and maintenance.

3.9.1. iShamba Traffic: Bio-based construction solutions (CSFEP)

iShamba received 616 SMS enquiries following the broadcast of features on timber construction and mycelium-based home insulation. 51% of these were on the best tree varieties to plant in different areas to meet future timber needs. A further 32% were on mycelium-based insulation, with farmers interested in making their homes warmer at night and cooler during the day, particularly those living in iron-sheet or timber houses without ceilings or fibreboards.

19% of enquiries related to timber construction. While some farmers viewed timber as an attractive and practical building material and expressed interest in constructing timber homes, others raised concerns about construction and maintenance costs, termite infestation, weather damage, durability and fire risks. Environmental considerations, particularly deforestation and forest conservation, also influenced farmers' perceptions of timber as a building material.

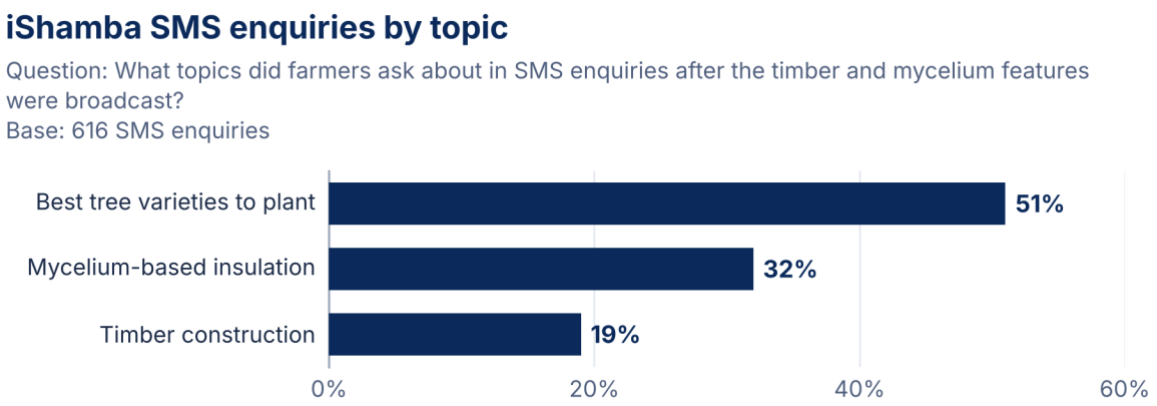
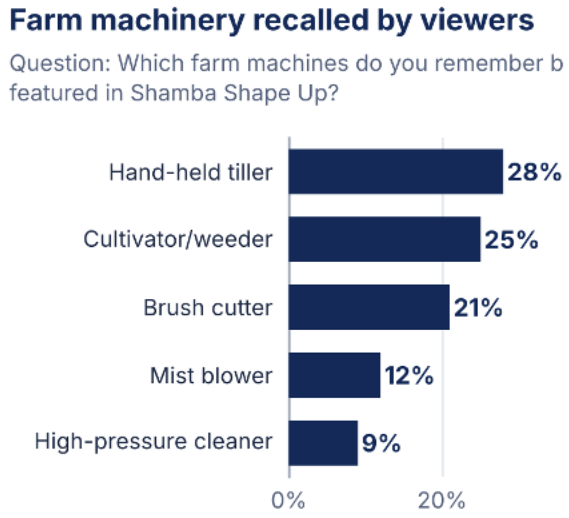


Figure 24: iShamba SMS enquiries by topic

The findings suggest that timber and mycelium require different forms of explanation. For timber, demonstrations involving qualified practitioners could address material selection, treatment and maintenance, responding directly to concerns about durability. For mycelium, completed installations supported by verified information on performance, safety, costs and availability could help viewers assess suitability. Evidence of how both materials perform over time would complement the initial interest generated by the broadcasts.

3.10. Farm Machinery and Mechanization

The hand-held tiller was the most frequently recalled machine, mentioned by 28% of viewers, followed by the cultivator/weeder (25%), brush cutter (21%), mist blower (12%) and high-pressure cleaner (9%). Farmers primarily associated machinery with practical benefits, particularly saving time (31%) and reducing labour (30%), while 19% identified increased productivity and 13% improved quality of work. Time and labour savings were more frequently recognised than productivity or quality improvements, suggesting that machinery's most immediate appeal lay in making farm tasks quicker and less demanding. Interest in acquiring farm machinery was also relatively high, with 66% of respondents saying they were either very likely (29%) or somewhat likely (37%) to buy farm machinery in the next 12 months. Only 15% were unlikely to do so, while 19% were undecided.



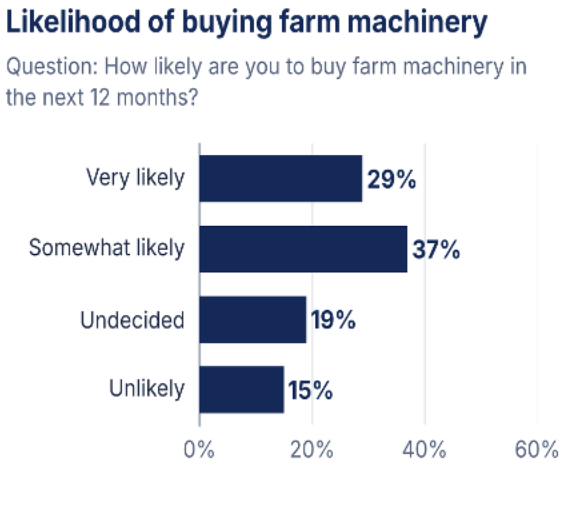


Figure 25: Farm machinery recall

Figure 26: Likelihood of buying farm machinery in next 12 Months

3.10.1. iShamba Traffic: Farm tools

iShamba received 5,131 SMS questions and 671 incoming calls relating to the farm tools featured in the broadcast. The largest share of the SMS questions (32%) was on the Lipa Part-Part payment option, indicating strong interest in flexible payment arrangements for farm equipment. The brush cutter was the most popular tool, accounting for 23% of the questions, followed by water pumps (15%), sprayers (14%) and tillers (12%). A further 206 questions (4%) covered other tools, including chainsaws, tea pruners and earth augers, alongside requests for contact details of authorized dealers. Payment arrangements generated more questions than any individual tool, indicating that farmers were considering how to acquire equipment as well as what it could do.

Table 7: iShamba Engagements on Farm Tools

No.	Topic	No. of Engagements	Percentage
1	Lipa Part - Part Payment	1,641	32%
2	Brush cutter	1,172	23%
3	Water Pump	781	15%
4	Sprayer	739	14%
5	Tiller	592	12%
6	General Question	206	4%
Total		**5,131**	**100%**

Farm machinery can help farmers save time and reduce labour, while interest in purchasing equipment is considerable. Future SSU episodes could demonstrate different machines, their costs and maintenance requirements, while iShamba could share information on suppliers and flexible payment options.

3.11. Savings Groups and Farm Records

Savings groups (chamas) were widely used among farmers, with 68% reporting that they belonged to a chama. The main benefits were the ability to save money regularly (39%) and access to loans (30%). A further 16% said chamas supported investment in farming or other businesses, while 15% valued the opportunity to learn from other members. Membership was considerably higher among women 85% than men 52%.

Farm record keeping was also common, although the frequency varied. 57% of respondents updated their records daily (15%), weekly (22%), or monthly (20%), while 15% updated them only when selling produce and 17% did so rarely. A further 11% did not keep any farm records. Among those who kept records, 61% used a notebook or exercise book, making it by far the most common method, while smaller proportions relied on receipts (11%), family members (9%), spreadsheets (4%) or mobile-based tools such as M-Pesa statements and mobile apps (4% and 3%, respectively).

Farmers who reported challenges with keeping records, the main barriers were difficulty maintaining records regularly 32%, not seeing the benefits of record keeping 26%, and lack of time 23%.

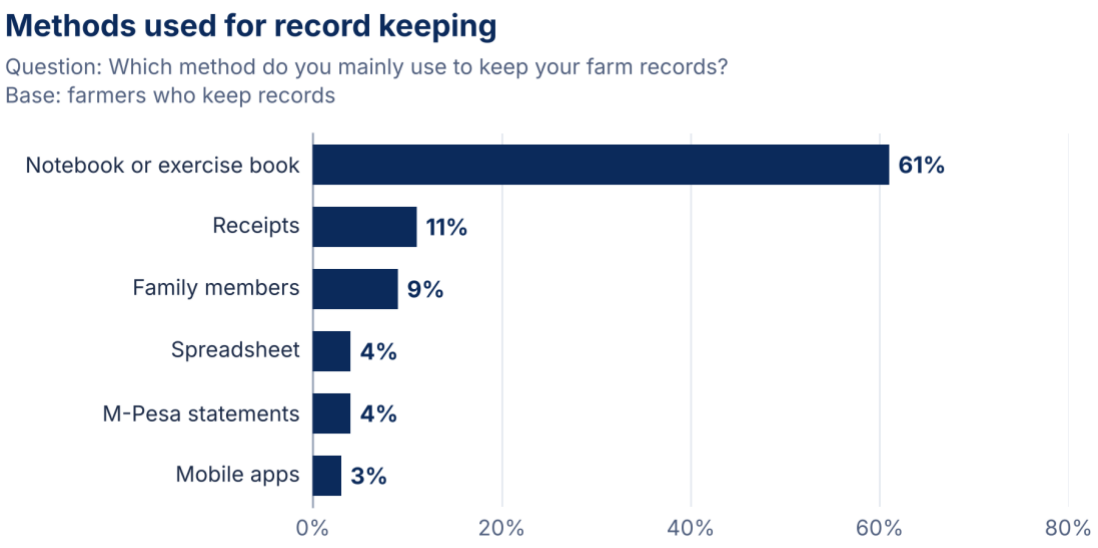


Figure 27: Main way you keep your farm records

Savings groups support regular saving and access to loans, while inconsistent record keeping remains a challenge for some farmers. Future SSU content could demonstrate simple ways to track farm income and expenditure and explain how records support profitability assessments, financial planning and investment decisions.

Shamba ni Biz Mini Drama

4.0. Shamba ni Biz mini drama: Land inheritance

Shamba Ni Biz, a mini drama embedded in the SSU episodes, provided a platform to introduce and reinforce messages around inheritance planning, family conflict resolution, and the inheritance rights of women and children. Over half of the viewers (51%) recall watching Shamba Ni Biz. The themes most frequently remembered were inheritance planning and wills 51%, land leasing, selling and investment 48%, and mediation and conflict resolution within families 45%. A further 34% recalled messages about children's inheritance rights, while 28% remembered the agribusiness theme.

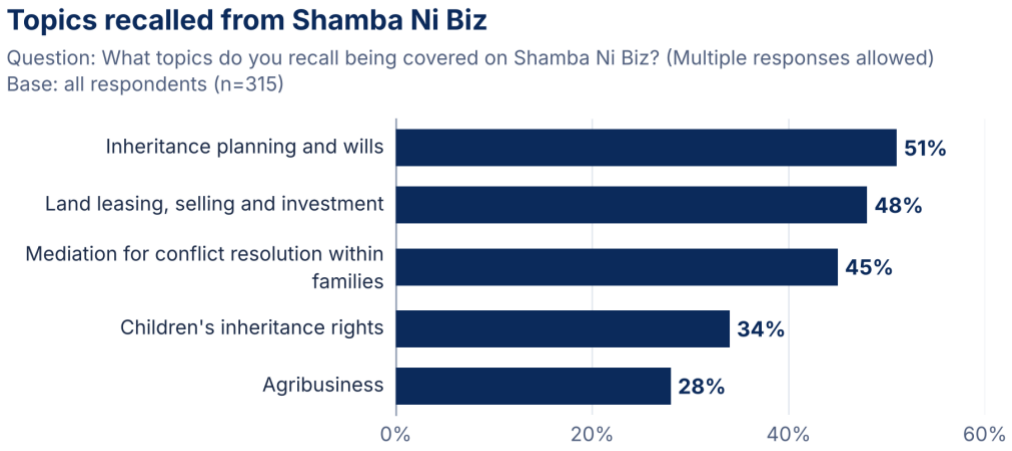


Figure 28. What topics do you recall being covered on Shamba Ni Biz?

The drama also encouraged conversations about inheritance within families. Among those who watched the show, 45% reported discussing inheritance with their families, while a further 12% had not yet done so but planned to. Family discussions were particularly common in Siaya 60%, compared with 42% in Machakos, 38% in Murang'a and 18% in Kajiado.

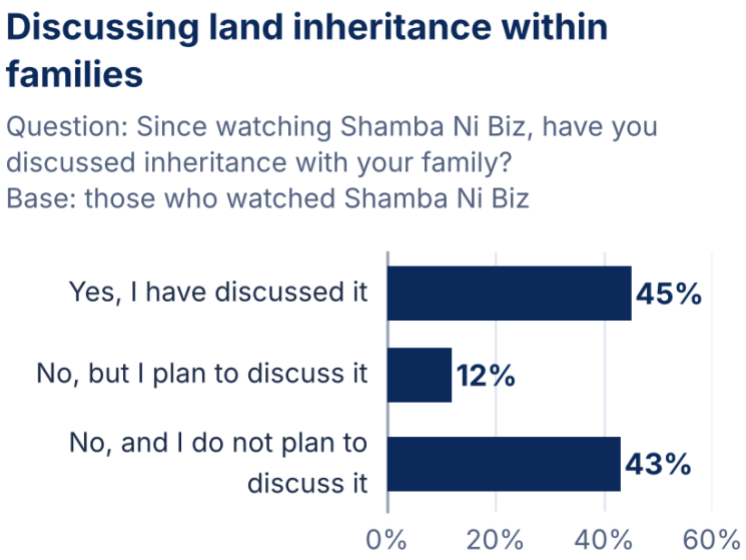


Figure 29. Discussing land inheritance within families. N= 315

Across all respondents, 78% agreed or strongly agreed that all children, both female and male, including those born outside marriage, should have equal inheritance rights. Similarly, 93% agreed or strongly agreed that families should discuss land inheritance before conflicts arise, indicating strong support for early family dialogue around succession. Support for gender equality in land inheritance was also substantial, with 71% agreeing or strongly agreeing that women should have equal opportunities to inherit land.

Taken together, the findings suggest that Shamba Ni Biz provided a relevant platform for introducing and reinforcing messages on inheritance planning, family conflict resolution, and the inheritance rights of women and children. For further insights, see the Focus Group Discussion report.

Conclusion

The Series 16 Knowledge, Attitudes and Practices (KAP) survey reinforces the continued relevance and influence of *Shamba Shape Up* as a trusted source of practical agricultural information for Kenyan smallholder farmers. With 91% of respondents identifying SSU as their most trusted agricultural television programme, 73% watching with other adults, and 97% expressing interest in another series, the findings demonstrate strong audience engagement and the programme's continued potential to reach farming households with actionable knowledge. Importantly, the findings indicate that this engagement translates into reported changes in farming practices.

Just over half of respondents (51%) said they had made changes as a result of watching Series 16, particularly in livestock feeding, vaccination, animal housing and farm record-keeping. Among those who made changes, 65% reported higher yields, 56% improved income and 53% healthier livestock. Overall, 94% reported some level of improvement in their income and livelihoods. While these results are self-reported and do not independently

establish causality, they provide encouraging evidence of the programme's perceived contribution to farmers' knowledge, practices and livelihoods.

The findings also highlight the importance of addressing the practical barriers that prevent knowledge from translating into action. Cost was the most frequently cited obstacle among farmers who had not made changes, while limited access to technologies, inputs and reliable advisory services constrained adoption in specific areas. This was particularly evident for solar-powered irrigation, where awareness stood at 81% but reported use was only 18%, and for biopesticides and Black Soldier Fly farming, where further demonstrations and practical guidance could help build confidence and support adoption.

The findings point to clear priorities for future programming. Livestock feeding and management remain central to farmers' needs, while vaccination, mastitis prevention, climate-smart agriculture, mechanisation, digital climate advisory services, farm records and financial literacy offer further opportunities for relevant, practical content. The volume and nature of enquiries received through iShamba provide an additional source of insight into farmers' information needs and should continue to inform programme development and follow-up advisory support.

Taken together, the Series 16 findings affirm the value of SSU's integrated model of television, digital engagement and direct farmer advisory services. Continued investment in locally relevant storytelling, practical demonstrations, evidence-based recommendations and accessible follow-up support can help farmers move from awareness to informed adoption. By combining trusted mass-media communication with responsive advisory services and partnerships, *Shamba Shape Up* can continue to strengthen its contribution to more productive, resilient and profitable smallholder farming in Kenya.