

Radio-based awareness campaign for agroecological fall armyworm management among smallholder farmers in Uganda



The role of community radios in accelerating innovation dissemination

Community radios play a pivotal role in accelerating the dissemination of agricultural and ecological innovations in Uganda. Their strong local reach, use of vernacular languages, and integration within community structures make them highly effective in bridging information gaps between researchers, extension agents, and farming communities. Stations such as Mega FM, Unity FM, Etop Radio, and NBS FM have established themselves as trusted platforms for knowledge sharing, enabling farmers to access timely, context-specific information on sustainable agricultural practices, pest management, and climate-resilient technologies.

Ownership and access to radio information

In Uganda, radio ownership and access remain notably high compared to neighboring countries. About 75.9% of respondents owned a radio, while among those without one, 89.8% had access through shared use within their households or communities. This indicates that radio continues to be a widely available medium for information dissemination among Ugandan households. These high levels of ownership and access highlight Uganda's strong potential for leveraging radio platforms to enhance communication, information sharing, and rural outreach.

Mapping preferred radio stations for agroecological outreach

In Uganda, radio listenership preferences vary distinctly across districts, reflecting strong local loyalties and the influence of regional broadcasting networks. In Soroti, Etop Radio dominates the airwaves with 56.0% of the audience, underscoring its broad regional reach and trust among listeners. Voice of Teso follows with 24.0%, maintaining a solid but smaller listener base. In Lira, Unity FM leads with 45.0% listener preference, confirming its central role in local communication. Voice of Lango attracts 19.0%, while Q FM, though selected by only 5.0% as a primary choice, holds a notable 21.0% as a secondary preference, suggesting its appeal as an alternative information source. In Gulu, Ruupiny FM (51.0%) and Mega FM (46.0%) are nearly equally popular, indicating strong audience loyalty to both stations and a competitive local radio environment. In Iganga, NBS FM is the clear favorite with 54.0% of listeners, far ahead of Busoga FM (11.0%), reflecting NBS FM's dominant coverage and consistent listener engagement.

Overall, Uganda's radio landscape reveals high district-level diversity, with a few key stations maintaining strong dominance within their respective regions. These findings highlight the importance of locally tailored radio partnerships for effective agroecological outreach and communication with farming communities.

Radio listenership behaviour

Radio listenership patterns vary by station and time of day, reflecting both audience preferences and station programming strengths. Mega FM stands out as the dominant station, with exceptionally high engagement across multiple time slots. It commands 95.7% of morning listenership, 91.3% during lunch breaks, and 52.2% in the evening, making it the most influential outlet for reaching farmers throughout the day. Unity FM also performs strongly during lunch hours (80%), though its evening audience is relatively low (20%), suggesting that its programming aligns well with midday routines but less so with evening listening patterns.

Etop Radio demonstrates a more balanced distribution of listeners across different times, with 37.5% tuning in during lunch and 33.9% in the evening. This suggests steady engagement without strong time-specific peaks. NBS FM attracts a smaller but consistent audience, with its highest listenership during lunch breaks (58.3%), indicating that midday programming remains its strongest slot. Overall, Ugandan radio audiences show the highest engagement during mornings and lunch hours, contrasting with the evening-oriented patterns observed in Malawi and Zambia. Mega FM stands out as the most effective channel for reaching farmers during peak listening times, making morning and lunch broadcasts the most strategic periods for agroecological outreach and farmer education programs.

Household and social listening patterns

In Uganda, radio listening is predominantly a home-based and family-oriented activity, reflecting the strong social and communal fabric of rural households. Most respondents (63.6%) reported that they listen to the radio with their family. This underscores the role of radio as a shared medium for information, entertainment, and learning within the household setting. A smaller but notable share (15.2%) indicated that they listen with

friends or neighbors, highlighting that radio also facilitates social interaction and collective learning beyond the family unit. Only a small fraction (2.4%) reported listening while on the move, such as when traveling to markets or work sites, suggesting that most radio engagement occurs within stationary, domestic environments.

Overall, these findings reveal that radio serves as both an informational and social medium in Ugandan households, making it an ideal platform for family-oriented and community-based communication approaches. Designing agroecological and educational radio programs that appeal to family audiences and encourage group discussion can therefore enhance message retention and collective action among smallholder farmers.

Gender-disaggregated radio listening

Findings from recent research show that men are far more likely to own radios than women. About 86% of men reported owning a radio, compared to just 63% of women, revealing a clear gender gap in who controls this key communication device. However, ownership is only part of the story. When it comes to access, the picture looks much more balanced. Almost nine out of ten men and women said they listen to the radio regularly, even if they don't personally own one. The data show that 64.9% of male respondents and 61.8% of female respondents reported that they *mainly listen to the radio at home with family members*. This shows that radios are often shared within households or communities, allowing both men and women to tune in to important programs whether it's agricultural advice, local news, or health information. Meanwhile, a modest proportion of respondents both men and women reported listening with friends or neighbors, suggesting that radio continues to serve as a tool for community-based learning and social exchange.

Radio audience estimates

During the implementation of the project 'Agro-ecological innovations for smallholder pest management (EcoPM)', four community radio stations - Etop, Voice of Lango, Mega FM, and NBS FM - were engaged to produce a series of four 30-minute programs. The programs covered (1) introduction to agroecological management of the fall armyworm; (2) push-pull technology as a habitat management option; (3) the use of parasitoids as natural enemies of the fall armyworm; and (4) control of the fall armyworm through use of biopesticides.

All programs were broadcast during evening hours, the peak listening period for most audiences. The broadcasts were estimated to have reached 920,233 listeners across Uganda, demonstrating the significant potential of community radio in promoting ecological pest management practices.

Estimated number of audiences who tuned in to listen to the FAW management innovation information in Uganda

Radio station	Audience	Proportion of listeners (%)	Estimated number of audiences based on listenership	Evening listeners (%)	Evening listeners (number)	Farmers who ranked the radio as 1 st or 2 nd (%)	Estimate of audience
Etop radio	5,000,000	53	2,650,000	18.3	484,950	41.9	203,194
Voice of Lango	3000000	70.5	2115000	20.4	431,460	25.2	108,728
Mega FM	4000000	77	3,080,000	21.7	668,360	43	287,395
NBS FM	3,000,000	71	2,130,000	27.9	594,270	54	320,906
	15,000,000		9,975,000	22.1	2,179,040	41	920,223

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