

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



The role of community radios in accelerating innovation dissemination

Community radios play a critical role in promoting and accelerating the dissemination of agricultural and ecological innovations across Zambia. Their accessibility, localized programming, and use of familiar languages make them effective channels for reaching rural farming communities that often have limited access to formal extension services. Stations such as Radio 1, Modern Voice, Chirundu FM, and Namiyanga Radio have emerged as trusted sources of agricultural information within their respective districts. Community radios in Zambia also encourage participatory communication, enabling farmers to share experiences, ask questions, and provide feedback through call-ins and discussion programs. This interactive approach fosters peer learning and local innovation, reinforcing the adoption of new technologies and sustainable practices.

By bridging the gap between research institutions, extension services, and farming communities, community radios in Zambia serve as vital platforms for inclusive knowledge exchange, helping to scale innovations and strengthen community resilience in the face of agricultural and environmental challenges.

Ownership and access to radio in Zambia

In Zambia, 69.8% of respondents reported owning a radio, indicating relatively widespread access to this traditional communication medium. Among those who did not own a radio, 52.5% had access through shared use within their households or communities. While ownership levels are moderately high, the lower access rate among non-owners suggests that some rural populations may still face barriers to consistent radio information. This underscores the need for complementary communication channels to ensure equitable dissemination of agricultural and development messages across different segments of the population.

Mapping preferred radio stations for agroecological outreach

In Zambia, radio listenership patterns vary across districts, with a few stations consistently maintaining strong audience loyalty. In Chilanga, Radio 1 dominates with 49.0% of listeners, reaffirming its broad popularity and national reach. Radio 2 follows with 12.0%, often serving as a preferred secondary station. In Chirundu, Modern Voice leads with 31.0% audience share, followed by Chirundu FM (18.0%). Radio 1, though not the top choice, maintains 14.0% as a frequent third option, indicating continued trust among some listeners. In Chongwe, Radio 1 again emerges as the most preferred station (27.0%), demonstrating its consistent presence across multiple districts. Similarly, in Kazungula, Radio 1 retains strong appeal with 45.0% of the audience, while Namiyanga Radio follows with 18.0%, reflecting a modest yet engaged listener base. Overall, Zambia's radio landscape shows a mix of national and local station dominance, with Radio 1 maintaining broad influence across districts. These patterns underscore the strategic importance of leveraging both national broadcasters and local community stations to effectively deliver agroecological messages and agricultural extension content.

Preferred radio stations for agroecological outreach in Zambia

In Zambia, radio listenership varies across stations and time slots, with the evening emerging as the peak listening period overall. Millennium FM shows a balanced pattern, with 50% of listeners tuning in during the morning and 50% in the evening, suggesting that the station caters to specific peak times. Modern Voice FM is the strongest overall, attracting consistent listenership "all the time" (35.5%), along with high engagement in the morning (35.5%) and evening (58.1%), making it the

leading channel for continuous and peak-period audiences. Chongwe Radio has a smaller audience, with listenership equally split between mornings (33.3%) and evenings (33.3%). Musotunya FM primarily attracts listeners in the evening (50%), with limited engagement in other time slots. These patterns indicate that evening broadcasts are generally the most effective period to reach Zambian farmers, although stations like Modern Voice FM also maintain strong all-day engagement, offering flexibility for program scheduling. The findings highlight the importance of targeting morning, evening, and peak-work-break times for agricultural and educational radio programming in Zambia.

Household and social listening patterns in Zambia

In Zambia, radio listening is predominantly home-based, with most respondents engaging through family or individual listening sessions. Most respondents (56.6%) reported that they listen to the radio at home with family members, underscoring the household as the primary setting for radio consumption. A relatively higher proportion (18.1%) indicated that they mainly listen alone at home, compared to Uganda and Malawi. This pattern may be linked to wider access to personal radio devices or variations in household dynamics and daily routines. Listening with friends or neighbors accounted for a smaller share, reflecting moderate levels of community-based listening beyond the home. Overall, the findings reveal that Zambian radio audiences engage most within family or individual settings, highlighting the value of designing radio programs that are both household-friendly and personally engaging. Such an approach can enhance learning, reflection, and adoption of agricultural innovations among smallholder farmers.

Gender-disaggregated radio listening

Radio listenership is highest during the evening, with 43.2% of male respondents and 42.5% of female respondents tuning in at that time. Morning listenership is moderate, reported by 21.6% of males and 22.2% of females, while lunch break listenership is relatively low (13.9% of males and 9.9% of females). A small proportion of respondents listen all the time (8.4% of males and 5.2% of females) or only on weekends (2–5%), and 8.5% of females reported not listening at all. These patterns indicate that evening broadcasts are the most effective period for reaching Zambian audiences. Gender differences in listening behavior are minimal, with male and female listenership percentages closely aligned across all time slots. This suggests that radio programs in Zambia can largely target both men and women simultaneously without needing significant timing adjustments, while content can still be tailored to appeal to specific gender-related interests or roles in agriculture.

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