

# Awareness campaigns through radio for agroecological fall armyworm management among smallholder farmers in Malawi



## The role of community radios to accelerate innovation dissemination

In Malawi, radio remains a powerful and trusted medium for information sharing, particularly among rural communities. Community radio stations, which broadcast in local languages and address locally relevant issues, offer an effective platform for reaching targeted geographical areas. With the advent of ICT innovations such as mobile phones and voice recorders, radio has evolved from a one-way channel into an interactive medium. Farmers and experts can now share experiences, ask questions, and provide feedback in real-time through the same platform. Prior to engaging radio stations, it is essential to assess community preferences, identify the most listened-to stations, and determine optimal listening times to ensure effective audience reach and participation.

## Radio access and time of listenership

In Malawi, access to key communication tools remains uneven. Radio ownership stands at 52.9%, with an additional 55.4% of non-owners having access through neighbors or community stations. This indicates that while radio continues to be a vital channel for information dissemination, a considerable portion of the population still lacks direct access. Radio ownership declined because most community members are now accessing radio messages via mobile phones. Mobile phone ownership is relatively high at 76.1%, suggesting growing potential for mobile-based communication and advisory services. On average, every household owns one smartphone while one in two households holds an analog phone, reflecting moderate phone availability. Among those without a phone, 66.7% had some form of access, mainly through shared use within households or communities. Overall, these patterns underscore both the enduring importance of radio and the expanding opportunities for integrating mobile technologies into agricultural communication and extension strategies in Malawi.

In Malawi, evening hours emerged as the peak radio listening period, particularly in Machinga (47.0%) and Salima (36.1%). Respondents in Mangochi and Mzimba showed strong preferences for both evening and lunchtime listening slots, reflecting flexible listening habits aligned with daily routines. These findings suggest that radio programming in Malawi is most effective during evening and midday periods.

## Preferred radio stations for agroecological outreach

Radio listenership in Malawi demonstrates strong district-level variation, reflecting both national and community-based station influence. In Machinga, MBC Radio 1 is the leading station, attracting 33.0% of listeners, followed by Times Radio at 17.0%, indicating the presence of a reliable alternative audience. In Mangochi, Zodiak Radio dominates with 35.0% preference, while Dzimwe Radio garners 18.0%, likely due to its localized programming and community relevance. In Mzimba, listenership is more evenly distributed, with Zodiak Radio (16.0%) and MBC Radio 1 (15.0%) showing comparable popularity, reflecting balanced competition among national broadcasters. In Salima, Chisomo Radio stands out as the most preferred station, commanding 55.8% of listeners. Although Zodiak Radio records a modest 7.9% as a primary station, its 13.2% secondary preference underscores its continued trust as a reliable alternative information source.

Overall, these patterns highlight the importance of tailoring agroecological outreach through locally trusted and community-aligned radio stations, particularly Chisomo, Zodiak, MBC Radio 1, and Dzimwe, to maximize message reach and engagement across Malawi's districts.

## Household and social radio listening patterns

In Malawi, radio listening is both a household and community-centered activity, reflecting a blend of family and social engagement around information sharing. Nearly half of respondents (47.6%) reported listening to the radio at home with family, highlighting the importance of domestic spaces for information exchange. However, Malawi also exhibits a strong culture of neighbor-based listening, with 21.6% tuning in with friends or neighbors—the highest proportion recorded for this category across all countries. This underscores the social dimension of radio engagement and the role of communal networks in knowledge dissemination.

A notable 10.0% of respondents reported listening while working on the farm, demonstrating how radio serves as an important source of information integrated into daily agricultural routines. Additionally, 7.8% of respondents reported listening while on the move, indicating a modest but meaningful level of mobile access to radio content. Listening in public spaces such as bars, shops, or markets was rare, confirming that most radio engagement in Malawi occurs within family or community settings. Due to these listening patterns, radio programming for agroecological outreach in Malawi emphasized community-focused messaging, family-

oriented content, and evening hour scheduling to reach audiences. Some radio stations repeated the radio programs during lunch hours to cater for those tuning in while working in the field.

## Gender-disaggregated radio listening

In Malawi, radio listening is largely home- and community-based. Most respondents listen at home with family (48.3% men; 47.1% women), confirming radio's central role in household information sharing. Social listening with friends or neighbors is more common among women (24.4%) than men (17.2%), highlighting radio's importance in community interaction and group learning. Women also show higher rates of listening while farming (10.7%), integrating radio into daily agricultural work. Individual listening is limited (around 10%), while listening on the move or in public spaces remains minimal. These patterns suggest that effective outreach in Malawi should emphasize family- and community-centered programming, gender-responsive content, and timing suited to farm activities.

## Radio audience estimates

During the implementation of the project 'Agro-ecological innovations for smallholder pest management (EcoPM)', four community radio stations - Chisomo, Mzimba, Chanco, and Dzimwe - 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 1,068,578 listeners across Malawi, demonstrating the significant potential of community radio in promoting ecological pest management practices.

Estimated number of audiences who tuned in to listen to fall armyworm eco-friendly IPM innovations to combat the fall armyworm in Malawi.

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 <sup>st</sup> or 2 <sup>nd</sup> (%)	Estimate of audience
Mzimba	3,100,000.00	61.2	1,897,200	33.3	631,768	22.1	139,621
Chisomo	4,500,000.00	73.9	3,325,500	36.1	1,200,505	51.5	618,260
Chanco	3,000,000.00	33.3	999,000	47.3	472,527	5.7	26,934
Dzimwe	4,100,000.00	67.7	2,775,700	33.3	924,308	30.7	283,763
	<b>14,700,000.00</b>	<b>59.025</b>	<b>8,997,400</b>	<b>37.5</b>	<b>3,229,108</b>	<b>27.5</b>	<b>1,068,578</b>

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