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# How radio programs helped cassava farmers manage cassava mosaic disease in Malawi

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**Notes to broadcaster**

Cassava mosaic disease (CMD) is one of the most important cassava diseases in Malawi, and is known as *Khate la chinangwa* in Chichewa, the most common language in the country. CMD reduces the size of leaves and disfigures them (that is, they become twisted). Leaves of infected plants have a green and yellow mosaic pattern. Infected plants produce small roots, especially if they are infected early in the season.

The disease is caused by a virus, and transmitted from an infected to a healthy plant by insects called whiteflies. It is also commonly spread through cuttings from infected plants. There is no chemical control for the disease.

To manage CMD:

Plant cassava materials with no disease symptoms.

Choose planting materials from a clean, disease-free field.

Uproot and destroy symptomatic plants as soon as recognized by burying or burning.

Plant tolerant varieties. In Malawi, these include Sauti, Sagonja, Yizaso, and Chamandanda

This script is about how to prevent and combat cassava mosaic disease. It is based on interviews with farmers and experts.

You might choose to dramatize (role play) the interviews and present this script as part of your regular farming program.

You could also use this script as research material or as inspiration for creating your own programming on cassava disease problems or similar topics in your country.

Talk to farmers and experts who are growing cassava or are knowledgeable about the crop.

You might want to ask farmers:

Do you know cassava mosaic disease?

Do you know how the disease is transmitted?

Do you know how you can prevent the disease from affecting your cassava crop?

And the experts:

Where and how can farmers get clean, disease-free cassava planting materials?

Estimated running time for the script: 20 minutes, with intro and outro music.

SIGNATURE TUNE UP AND HOLD UNDER BELOW

**PRESENTER:** Welcome! Cassava radio doctor is a radio program on managing disease problems in cassava that was aired on Nkhotakota Community Radio in the Central Region of Malawi.

Nkhotakota is one of the districts where people depend on staple foods such as cassava and rice rather than on maize, like the rest of the country. But recently, there have been serious threats to cassava.

SIGNATURE TUNE UP AND CROSS FADE INTO BELOW

**PRESENTER:** I am at Nkhotakota Community Radio to learn more about the Cassava radio doctor program from Edward Kuwacha.

**EDWARD KUWACHA:** I am Edward Kuwacha, the program manager at Nkhotakota Community Radio. For more than five decades, Nkhotakota has been growing and depending on cassava as the staple food. But farmers were facing a number of challenges.

One challenge was the emergence of cassava mosaic disease, a viral disease that threatens cassava farming.

Many farmers grew varieties that are susceptible to cassava mosaic, rather than the new tolerant or resistant varieties.

So yields were decreasing and farmers were at the point of giving up on cassava farming and facing hunger.

**PRESENTER:** What have you done at Nkhotakota Community Radio to serve the farmers in your audience?

**EDWARD KUWACHA:** With our partners, we have been broadcasting a program called, “Cassava radio doctor.”

 Through the programme the Ministry of Agriculture is promoting improved varieties which are tolerant or resistant to cassava mosaic disease and also high-yielding. The program informs farmers about the symptoms of cassava mosaic disease, how it spreads, and how it can be prevented and managed. We introduced and have seen many people adopting Sauti variety and other new varieties, as well as good farming practices.

**PRESENTER:** Can we speak to some of these farmers?

**EDWARD KUWACHA:** Let’s go—I will take you to some farmers.

MUSICAL LINK

**PRESENTER:** I am meeting with a group of farmers near a church in Kalirangwe village, in Traditional Authority Mphonde. What is the name of this farmers’ group?

**JAMES CHALINDA:** The name of group is *Nkhokwe ya kumunda,* which means The Granary in the Garden Club.

**PRESENTER:** Which crops are your staple foods in this area?

**JANET SITIMA:** We have various staple foods, including cassava, rice, sweet potatoes, and maize. But we love cassava most.

**PRESENTER:** How is cassava growing going?

**JANET SITIMA:** We had problems with cassava mosaic disease, but with the coming of the new variety called Sauti, we are coping with the disease, and farming is smoother now.

**MARIA KAMBOLA:** We depend on cassava, but we were about to give up because the old variety called Beatrice was prone to cassava mosaic disease. But now we are growing Sauti, which is high-yielding and disease-resistant.

**BEATRICE CHILONDA:** Sauti is higher yielding than Gomani or Beatrice varieties. Sauti fills a bag from one ridge, while it takes many ridges for Beatrice to fill the same bag.

**PRESENTER:** Why are some farmers still growing Beatrice if it is not high-yielding?

**FEMALE FARMER:** Few farmers are growing Sauti because the variety is new and not many farmers have had a chance to try it yet. But we are multiplying it to spread it to all farmers.

**PRESENTER:** What is the difference between Beatrice and Sauti in terms of resistance to cassava mosaic disease?

**MALE FARMER:** Sauti is resistant to cassava mosaic compared to Beatrice and Gomani, the old varieties. Cassava mosaic attacks these varieties at all stages in their growth cycle. Once infected, their growth slows and the size of the roots is significantly reduced. In severe cases, many plants have nothing, no roots under them.

But Sauti always gives us something. It is high-yielding, very tolerant to diseases, and gives us very good and tasty *nsima*. Sauti’s flour is very beautiful like wheat flour, very soft and white.

**PRESENTER:** Has any farmer ever sold this Sauti to starch manufacturers?

**MALE FARMER:** No, not in this area. We have not started selling Sauti for starch because the starch factory is still under construction. Once it is finalized, we will sell some.

**PRESENTER:** There was a program called Cassava radio doctor on Nkhotakota Community Radio. Have you ever listened to that program? If you listened, raise your hands. (PAUSE)

Okay, five farmers raised their hands. Can you tell us what this radio program was about?

**JAMES CHALINDA:** I am Chalinda. This program was one of the best radio programs I have heard because it talked about our main staple food, cassava. We haven’t had a program that specializes on growing cassava for a long time.

In the past, we used to think that *kodi kodi* (cassava mealy bugs) were a disease. But we learnt on this program that cassava mosaic is the disease that is spread by whiteflies that attack our cassava.

 The program also informed us about clinics for our crops—all crops not only cassava—where we can go with a sample of a sick plant, and they will advise us on what type of chemicals to buy, and other farming solutions.

 The program also taught us the advantages of the new variety, Sauti. They mentioned that it is high-yielding and disease-tolerant. Even with climate change and the droughts that we are experiencing these days, we still harvest something with the new varieties like Sauti.

**MARIA KAMBOLA:** We learnt that, if you see infected plants in your garden, we should uproot and bury them.

 The good thing about radio is that even people who are on the road can listen to the radio as they pass by and stop to listen more. They sometimes ask us what program it is. We tell them the name of the program—and when they go home, they start following it.

**PRESENTER:** Let’s talk about cassava mosaic now. How can one manage cassava mosaic? Are there other ways that one can use to prevent mosaic?

**VERONICA MALALA:** We make sure that we grow our improved seed separate from the main garden of old varieties. And always maintain cleanliness, which means weeding our fields and uprooting any plant showing symptoms of CMD.

**PRESENTER:** Do you use these practices with all varieties or only with the improved seed, Sauti?

**BEATRICE CHILONDA:** I only plant Sauti these days.

**VERONICA MALALA:** I plant both Beatrice and Sauti on separate plots, but I only practice these measures with Sauti.

**PRESENTER:** Why do you follow the hygienic practices with the improved seed only and not with Beatrice?

**VERONICA MALALA:** Because we don’t give Beatrice much effort and love. We want it to die a natural death.

**PRESENTER:** But how are you going to manage cassava mosaic if you don’t give the same care to the local varieties?

**DENIS CHIMUTU:** Oh yea, you are right. We should be doing that. Nevertheless, I beg everyone listening today to this program: please follow all hygienic practices with all varieties that we grow so that we can combat the whiteflies and the cassava mosaic.

**MARIA KAMBOLA:** Yes, let’s follow these good practices with all varieties. I know that farmers are still growing old varieties because there are not enough Sauti cuttings for every garden.

**CHIRINDA:** The problem with cassava mosaic started with old varieties. So people stopped planting them, and are now looking for Sauti. But even those who plant Beatrice are now making sure that they remove diseased plants and are slowly adopting the hygienic methods that they follow with Sauti and other new varieties.

**PRESENTER:** Does Sauti become infected with cassava mosaic disease?

**MARIA KAMBOLA:** Yes.

**PRESENTER:** From what I learnt here, cassava mosaic is dangerous. If we continue to harbour whiteflies in old, local varieties, the disease can wipe out the whole garden. So let’s follow hygienic practices with the local varieties

**MARIA KAMBOLA:** We want to request that the Cassava radio doctor program start again because it will help farmers in Nkhotakota to listen and change habits. We also want there to be listening clubs so that we can listen in groups and share information with our neighbours.

**DENIS CHIMUTU:** It would be best if all radio stations in Malawi had a radio program that informed farmers about cassava mosaic disease, not only Nkhotakota Community Radio.

We say this because cassava cuttings come to us from other districts. For example, some Sauti come from Nkhatabay and Karonga. They too should learn how to prevent cassava mosaic from spreading. We should control it together as cassava farmers.

**PRESENTER:** You have been listening to members of The Granary on the Garden group from Pendwe village in the area of Traditional Authority Mphonde. Thanks.

MUSICAL LINK

**STELLIA MANGOCHI:** I am Stellia Mangochi, the crops officer in Nkhotakota. The radio program on cassava mosaic disease started last year in October and is being run by the Ministry of Agriculture with the support of CABI through Farm Radio Trust.

 We know that people in Nkhotakota like eating cassava flour *nsima*, so we thought it was important to promote cassava as a drought-tolerant crop. So we conducted research on the problems that farmers are facing with cassava farming.

**PRESENTER:** What problems did you find?

**STELLIA MANGOCHI:** We found that the cassava mosaic was the main problem.

**PRESENTER:** What practices do you recommend on the radio program?

**STELLIA MANGOCHI:** We are promoting cassava varieties that are resistant to the disease, such as Sauti and Sagonja. We also tell farmers to plant mature cuttings that are more than eight months old, clean and not bruised. Seed must be clean because there is no treatment for cassava mosaic.

**PRESENTER:** Are there any preventive methods for cassava mosaic virus?

**STELLIA MANGOCHI:** The preventive treatment for cassava mosaic is simply to use resistant or tolerant varieties such as Sauti, and to make sure that all the diseased plants are uprooted and buried.

Some farmers use neem to repel the whiteflies, though this practice has not been scientifically tested.

**PRESENTER:** Doesn’t that kill the seed?

**STELLIA MANGOCHI:** No, because the water drains out quickly and is at the right temperature. We recommend that they plant this treated crop the same day, before whiteflies can infect it again. The seed should stay in the hot water for not more than five minutes. After removing the cuttings from the hot water, place them on a clean mat, or put them in any well-ventilated place for cool air to pass through.

MUSICAL LINK

**PRESENTER:** I am with the producer of the Cassava radio doctor program, Victor Asumani. What was the most enjoyable time that you experienced as a producer of this program?

**VICTOR ASUMANI:** The program offered incentives to listeners who sent feedback. We gave out hoes, phones, and other small gifts. The happiest moments for me were when the program generated a lot of feedback on what listeners learnt—it showed that many people are listening.

**PRESENTER:** What was the message you most enjoyed sharing with farmers?

**VICTOR ASUMANI:** I am happy that I told the farmers that mosaic is dangerous, but can be managed by following good farming methods such as good hygiene and using improved varieties. In addition, many farmers were demanding new varieties, and asking us where they could find them, and the agriculture advisers confirmed the rise in demand for the new varieties.

MUSICAL LINK

**PRESENTER:** I am at Chota village, speaking with a farmer, Mrs. Jeany Kamanga. Mrs. Kamanga, have you ever listened to Cassava radio doctor on Nkhotakota Community Radio?

**JEANY KAMANGA:** No, I have not listened to the radio program, but I used to receive SMS about the program. The messages were about the main issues being discussed on the program.

**PRESENTER:** Wonderful. Tell me more about the messages that you received.

**JEANY KAMANGA:** One message said that we should be moving around in our gardens occasionally to look for infected plants. If we find infected plants, we should uproot or remove all infected parts and dry them away from the field.

**PRESENTER:** Did you try it?

**JEANY KAMANGA:** Yes, I did try it, removing all the infected plants in my garden.

**PRESENTER:** What results did you notice?

**JEANY KAMANGA:** When I returned at a later day, I noticed that all my cassava plants were healthy, with no trace of diseases. I was very happy. Previously, the diseases were spreading to the whole garden.

**PRESENTER:** Did you tell anyone about your experience?

**JEANY KAMANGA:** I told many other farmers in meetings that they need to remove all the infected parts or uproot the diseased plants and dry them.

**PRESENTER:** Thank you, Mrs. Jeany Kamanga.

MUSICAL LINK

**PRESENTER:** I am with a farmer whom I met in Chota. Where are you from, and what is your name?

**LIPENGA KHOMA:** I am Lipenga Khoma from Kawelama village. I too subscribed to the SMS part of the radio program. The message that I remember reading and adopting is about resistant varieties such as Sauti and Sagonja. I started planting Sauti and it is indeed tolerant.

I also tell other farmers. I like the SMS because it comes direct to you, even if you forget to listen to the radio program because of other activities.

**PRESENTER:** Where did you find the seed for new varieties?

**LIPENGA KHOMA:** The Ministry of Agriculture is distributing it, so I asked for some to plant and they gave it to me.

**SIGNATURE TUNE UP AND HOLD UNDER BELOW**

**PRESENTER:** You were listening to a program about the Cassava radio doctor program which was broadcast on Nkhotakota Community Radio. I’d like to acknowledge Catherine Mloza from Farm Radio Trust for making this radio program possible.

You were with me (name of broadcaster), on (name of radio station). Until next week, I say, “Please use clean and mosaic-resistant improved varieties to combat cassava mosaic disease.”

## Acknowledgements

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**Sources of information**

Interviews:

Edward Kuwacha, Nkhotakota Community Radio,

Stella Mangochi, Crops officer, Nkhotakota District Agriculture Development Office Farmers of The Granary of the Garden group, including: Everest Chikhugu, Elisi Sitima, Beatrice Chilonda, Veronica Malala, William Sitima, Denis Chimutu, Agness Chateka, James Chalinda, Maria Kambola, and Ephraim Mulauzi.

Farmers from Chota: Jeany Kamanga and Lipenga Khoma.

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