

# Pack 111, Item 03

Type: Interview

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**Women farmers use local methods to fight pests and diseases in beans**

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**Notes to broadcaster**

Over the past few years, most bean farmers in Tanzania have experienced much bigger disease and pest problems. This could be due to climate change, changes in farming practices, and many other factors.

This script shows how women farmers in the Kasulu District of the Kigoma Region of western Tanzania are using local pesticides to manage the common pest and disease problems that have been affecting their beans over the past several seasons.

This script is based on actual interviews. You could use this script as inspiration to research and write a script on a similar topic in your area. Or you might choose to produce this script on your station, using voice actors to represent the speakers. If so, please make sure to tell your audience at the beginning of the program that the voices are those of actors, not the original people involved in the interviews.

You could also use this script as research material or as inspiration for creating your own programming on using local pesticides and other pest management methods. Talk to farmers, agricultural officers, and other experts. You might ask them:

* What kind of pest and disease problems do bean farmers face in this area?
* What chemical and non-chemical, preventive, and curative methods have they tried to manage these problems? Which methods have been effective? Which methods have not been effective?
* Are there barriers to using the most effective methods? If so, are there solutions to those barriers?

Apart from speaking directly to farmers and other experts, you could use these questions as the basis for a phone-in or text-in program.

The estimated running time for this item, with signature tune, intro, and extro, is 20 minutes.

Signature tune up THEN under

**Mr. Enos:** Ladies and gentlemen, welcome to today’s program where we are going to learn how women farmers in the Kigoma Region of western Tanzania fight against pest and disease problems in beans by using local methods.

To talk about it, I visited some farmers in Nyumbigwa village in the Kasulu district of Kigoma Region to talk about how they are managing pest and disease problems in beans. I started out by speaking with the extension officer.

 Good morning and thank you for your time. I am here to ask you a few questions about how local women farmers fight the pests and diseases that attack beans.

But first, how do you help bean farmers fight pests and diseases?

**EXTENSION OFFICER:** I visit farmers regularly to identify the kinds of pests and diseases that attack their beans, and then I advise them how to solve the problem.

**Mr. Enos:** How do you advise them?

**EXTENSION OFFICER:** I advise them on the proper use of pesticides and using them at the right time. I also advise them to uproot beans that are infected with diseases so that they cannot spread the problem to uninfected beans, and also on how to use crop rotation to reduce the possibility of crops being attacked by pests and diseases.

**Mr. Enos:** What are the common pests and diseases attacking beans in this area?

**EXTENSION OFFICER:** There are many pests and diseases, but the most common two that are a great problem to farmers are Fusarium wilt disease and a pest named *butotos* in the local Ha language (*kimulimuli* in Swahili, and “firefly” in English). This is a small pest that flies and gives off light during the night.

**Mr. Enos:** Do farmers in the area have access to pesticides?

**EXTENSION OFFICER:** Yes, there are agrovet shops just within the village and in Kasulu town about 10 kilometres from here.

**Mr. Enos:** Do pesticides work for the most important pests and diseases which attack beans in this area?

**EXTENSION OFFICER:** Yes, but only if they are used as prescribed.

**Mr. Enos:** Can farmers afford to buy pesticides?

**EXTENSION OFFICER:** Well, a large percent of farmers say they cannot afford to buy pesticides because they are expensive. Also, for many years, there was no history of pests and diseases attacking beans in this area, so beans were a pest- and disease-free crop. The level of damage from diseases and pests was so low that farmers didn’t notice it. But in the past two or three seasons, beans started to be attacked more strongly. These are some of the reasons why farmers do not buy pesticides. However, I must add that part of the reason that farmers say that they cannot afford pesticides is that they are considering buying pesticides at the beginning of the season when they have little cash. If they bought pesticides in advance—at the end of the season—then they would be more affordable, and farmers would be able to better manage pests and diseases.

**Mr. Enos:** What are the reasons behind beans being attacked by pests and diseases more seriously now?

**EXTENSION OFFICER:** The greatest reason is climate change. The weather conditions many years ago caused beans to be more resistant to pests and diseases. For instance, there was enough rainfall to wash off pests and diseases on bean leaves. But now we experience a very long sunny period even in the rainy season.

Another reason is that farmers intercrop beans in the same field with maize. Maize is a crop that is much affected by pests and diseases, and they affect beans as well.

**Mr. Enos:** All right. What other methods work for the important pests and diseases that attack beans in this area?

**EXTENSION OFFICER:** Farmers use leaves of a tree called *ntibuhunwa*in the Ha language (*Editor’s note: Tephrosia vogelii*). They grind them and put them in water, and then after some hours, they apply the water on the leaves of both infected beans and uninfected beans.

**Mr. Enos:** How much do they apply in an acre, how do they apply it, and at which stage of plant growth do they apply?

**EXTENSION OFFICER:** There is no clear measurement on how much to use. They just use filtered water to apply. Most of them apply it when they see the effects on crops.

**Mr. Enos:** How well does it work?

**EXTENSION OFFICER:** It seems it works, since farmers are using it even on other crops and in vegetables.

**Mr. Enos:** What are the benefits of using this plant as a pesticide?

**EXTENSION OFFICER:** It is free, available within their area, and easy to prepare and use.

**Mr. Enos:** What are its disadvantages?

**EXTENSION OFFICER:** Scientists have not conducted any tests to find out if there are any negative effects from these local pesticides.

**Mr. Enos:** Thanks a million.

**EXTENSION OFFICER:** Thanks, and you are welcome.

short music break, then fade out

**Mr. Enos:** Dear listeners, I hope that we have learnt a lot from the extension officer. Let me take you to one of the farmers so we can hear from her what she does to fight pests and diseases.

 Good morning. I am Mr. Enos and I want to ask you a few questions about pests and diseases in beans.

What types of bean varieties do you grow?

**FARMER 1:** I have been growing crops for about 15 years now, and for bean varieties, I now grow Lyamungo, Njano, Morogoro, and Maji mara moja. But I grow Lyamungo and Njano in large quantities.

**Mr. Enos:** Do pests and diseases affect all the bean varieties you grow?

**FARMER 1:** Oh! For many years, I have been growing beans, and I never witnessed beans being attacked by pests or diseases. But I have seen these problems in the past two seasons. And the pests and diseases affect all types of bean varieties.

**Mr. Enos:** Which are the main disease and pest problems in your area?

**FARMER 1:** In beans, there is a pest that we call in our mother tongue, *butotos*. It is a pest that flies and gives light during the night. They cause much damage to beans. Also, there are fungal infections that cause bean leaves to dry up and fall off, and turn leaves white.

**Mr. Enos:** How do you fight these pest and disease problems?

**FARMER 1:** I sometimes use chemical pesticides, but I more often use local pesticides.

**Mr. Enos:** Are chemical pesticides available in your area?

**FARMER 1:** Pesticides are available within the village and in Kasulu town, but are so expensive that most farmers including me are unable to buy them. But when I and other farmers have money to buy them, we do. If we don’t have money, we leave.

**Mr. Enos:** Do they work for these major pests and disease problems?

**FARMER 1:** I apply it twice or more, but after a few days, the problem persists, so they are ineffective on these pests and diseases.

**Mr. Enos:** Ok. You said that you also use local pesticides. Which local pesticides?

**FARMER 1:** Yes, I do. I often use leaves of a tree called *ntibhuhunwa* in my language (*Editor’s note: Tephrosia vogelii*). I grind the leaves and mix them with ground pepper, and then I soak them in water for about 24 hours. After that, I filter and use the water as a pesticide to apply not only on beans but also on other crops, especially vegetables.

I also use a plant called *vitembwatembwa*. It has fruits like potatoes. I cut the fruits into small pieces and grind them up, and then I put the ground pieces in water for 24 hours as well. After that, I filter and use the liquid as a pesticide.

**Mr. Enos:** How many litres do you apply in an acre, what method do you use to apply, and at which stage of plant growth do you apply the liquid?

**FARMER 1:** I put the filtered water in a 10-litre plastic container and use a soft broom or a tree branch with small and soft leaves to apply the pesticide on beans.

**Mr. Enos:** This is very interesting. How well do they work?

**FARMER 1:** It works strongly.

**Mr. Enos:** What are their benefits?

**FARMER 1:** They are available in my area, and no money is needed to buy them. They are easy to prepare and use, and they save me the time of going to buy chemical pesticides.

**Mr. Enos:** And what are their disadvantages?

**FARMER 1:** They have some negative effects if misused. For example, they can harm or kill fish if poured in water bodies. In fact, some people were using them for illegal fishing. And if they are not stored safely at home, they may harm children.

**Mr. Enos:** Thank you very much for your time.

**FARMER 1:** Thanks.

**Mr. Enos:** Dear listener, we have heard from one farmer, and now I am taking my bodaboda (motorcycle) to visit the next farmer, who has been growing beans for a couple of years now.

SOUND OF MOTORCYLE STARTING, FADING, THEN STOPPING.

**Mr. Enos:** Good afternoon.

**FARMER 2:** Good afternoon.

**Mr. Enos:** I am Mr. Enos and I am visiting you to ask a few questions about how you fight pests and diseases that attack beans.

What types of bean varieties do you grow?

**FARMER 2:** I grow Njano and Lyamungo in large quantities.

**Mr. Enos:** Ok. Do pests and diseases affect all bean varieties you grow?

**FARMER 2:** Njano is mostly affected, and Lyamungo is more resistant to pests and diseases. But if one does not plant it on time, it can also be affected.

**Mr. Enos:** Which are the main disease and pest problems in your area?

**FARMER 2:** I just know them in my mother tongue of Ha. There is *butotos* (*kimulimuli* in Swahili and firefly in English), which flies and gives off light at night. Another is *kalabhutahe*, which has a big impact on maize and I have seen them in beans too.

I don’t know the names of the diseases, but I find bean leaves drying up as if they have been burnt with hot water. I also see leaves changing colour from green to yellow and dropping down, and also the leaves become white due to fungal infection.

**Mr. Enos:** How do you fight these pest and disease problems?

**FARMER 2:** The problems just started two seasons ago. Before that, beans were not attacked by either pests or diseases. I did not put much effort into overcoming the problem since they just affected a small portion of my bean farm. I tried to apply the chemical pesticides that I often use on maize.

**Mr. Enos:** Do they work with these major pests and disease problems?

**FARMER 2:** Not really. They work on pests like *butotos* but they don’t kill *kalabhutahe*. Let me tell you what this name means: it means *“*Wash your hands and leave*,”* meaning that the farmers don’t have any ways to fight against it, so we just leave it. So *kalabhutahe* is the greatest catastrophe that attacks beans.

**Mr. Enos:** Are pesticides available in your area?

**FARMER 2:** Yes, they are available within the village and in Kasulu town.

**Mr. Enos:** Can you afford to buy pesticides?

**FARMER 2:** Actually, they are very expensive, so I just buy according to my capacity, and when I don’t have money, I just leave them.

**Mr. Enos:** What other methods are useful for these pest and disease problems?

**FARMER 2:** I don’t have any other alternatives. But I have heard from my neighbour who uses leaves of a tree we call *ntibhuhunwa* (*Editor’s note*: *Tephrosia vogelii*) in the Ha language, that it helps to combat the problem. But I have never used it, though I wish to try it next season.

**Mr. Enos:** How well does it work?

**FARMER 2:** I am not sure about its effectiveness, but I think it works. I used to hear that the tree was used in illegal fishing. So if it killed fish and other aquatic animals in water bodies, I hope that it will help to kill *kalabhutahe* and other pests.

**Mr. Enos:** What are the benefits of local pesticides like this?

**FARMER 2:** Ah! Because I have never used it, I can’t comment much on its benefits. But I can say that they are easily accessed in our area, and that you do not need money to buy them. It is easy to prepare them locally and apply them on beans.

**Mr. Enos:** What are their disadvantages?

**FARMER 2:** I think they can have negative effects on the person applying them if misused. For instance, if they get into eyes, they may irritate or have more effects than that. And they can also pollute water bodies.

**Mr. Enos:** Thank you very much for your time and your contribution.

**FARMER 2:** Thanks.

Sound effect or music, then fade under

**Mr. Enos:** Ladies and gentlemen, this is the end of our program. We heard that women farmers have had mixed success using chemical pesticides, and that farmers say that chemical pesticides are usually too expensive for them to buy, or to buy enough for their whole farm.

 However, we heard from the extension officer that, if farmers could purchase pesticides after harvest when they have more money, pesticides would be more affordable, and farmers would be able to better manage diseases and pests.

 Instead of chemical pesticides, local farmers often use pesticides they make from local plants to fight the common pests and diseases that attack beans in the Kasulu district of Kigoma Region in western Tanzania. We heard that bean farmers in the area have only experienced serious pest and disease problems in the last few seasons, a change which might be due to the changing climate.

 We heard from the extension officer and agricultural expert in the area, and also from a woman farmer who grows beans and uses local methods to fight pests and diseases. Lastly, we heard from another woman farmer.

 We hope you learned many things during this program. Thank you and have a nice day.

## Acknowledgements

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