

# Pack 101, Item 7

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**Ethiopian farmers search for answers to disease problems in enset**

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**Notes to broadcaster**

Twenty million people, or one-quarter of the population of Ethiopia, use enset for food. Southern Ethiopia is well-known for producing enset. Farmers grow the plant in all parts of the region, and enset has a special value to the people.

In 1984, there was a severe drought in Ethiopia. But there were few problems in the south, and enset products were transported from southern Ethiopia to other parts of the country. Though other crops failed, enset resisted the drought and helped many people survive.

Enset is also known as false banana, and its scientific name is *Ensete ventricosum.* It’s a member of the banana family and often confused with its more well-known yellow cousin. But unlike the banana, enset is not grown for its fruit, but for the starchy pulp in its stem and corm, which is the below-ground portion of the stem that looks like a potato.

Enset grows up to 10 metres tall and one metre in diameter, and can yield an incredible amount of food, up to 40 kilos in a single stem.

Researchers have found more than 600 varieties of enset. But Ethiopian farmers are finding that the plant is increasingly subject to diseases, particularly bacterial wilt caused by a bacterium called *Xanthomonas campestris*.

Because farmers need a solution to enset disease, Farm Radio International and other partners are working with local radio stations in southern Ethiopia to broadcast a series of radio programs on enset in order to improve production and find a solution to the disease problems.

This script gives information on enset and the disease problems of enset. It was produced by interviewing farmers, agricultural experts and researchers.

You might choose to present this script as part of your regular farming program, 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 in the script.

You could also use this script as inspiration to research and develop a radio program on enset in your own country.

If you choose to use this script as inspiration for creating your own program about enset, you could talk to extension agents and farmers in your area, and ask the following questions:

* Is enset grown in your area?
* Could enset grow in your area? Are the climate and soil conditions right?
* Are planting materials available for enset?
* Are extension agents aware of the crop in your area?

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

Note: A *kebele* is the smallest administrative unit of Ethiopia. It is similar to a ward or neighbourhood. *Kebeles* are part of *woredas*, or districts, themselves usually part of a *Zone*, which in turn are component parts of the *Regions* of Ethiopia.

Estimated running time for this script is 15-20 minutes, including intro and outro.

**HOST:** Enset, also known as false banana, is a member of the banana family and often confused with its more well-known yellow cousin. But unlike the banana, farmers do not grow enset for its fruit, but for the starchy pulp in its stem and corm, which is the below-ground portion of the stem that looks like a potato.

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Twenty million people, or one-quarter of the population of Ethiopia, use enset for food. Southern Ethiopia is well-known for growing enset. Farmers grow the plant in all parts of the region and enset has a special value to the people.

In 1984, there was a severe drought in Ethiopia. But there were few problems in the south, and enset products were transported from southern Ethiopia to other parts of the country. Though other crops failed, enset resisted the drought and helped many people survive.

We wanted to talk to farmers in enset-growing areas of southern Ethiopia. So we drove 360 kilometres from Addis Ababa, the capital of Ethiopia, to the southern part of the country. Kembata Tembaro Zone is one of the areas in the Southern Nations, Nationalities, and Peoples’ Regional State with a huge potential for growing enset. We left the capital of the Zone behind us and drove westwards towards Azedebo kebele. The area was green with banana and enset plants on our left and right as we drove into a village.

We started a discussion about enset with local residents. Here are some of their voices:

**VOX POP:** “The climate is changing all the time. The crops that our fathers used to harvest have now disappeared. We have lost the existing farmers’ varieties of teff, barley, beans, lemon and other original varieties.”

“We are fearing now lest our enset crop suffer. Enset disease is spreading, and we are trying to fight it just with traditional methods. We need modern disease prevention methods. We are asking for improved varieties.”

Natural sounds then fade

**HOST:** The farmers told us that enset disease is the most important problem they face. The first farmer we interviewed was Yakob Gobena. He answered our questions about growing enset by starting with this problem.

**YAKOB GOBENA**: Enset means everything to us. It is useful both for humans and animals. I want to grow it in an improved way. But now I am facing disease, which is harming the enset. I want a disease-resistant variety.

**Interviewer:** When do you plant enset?

**YAKOB GOBENA**: I used to wait for the rain. But now I dig the planting area a month before the rains begin. That helps me get a good crop.

We used to follow the traditional methods of our grandparents. But now, with teachings from agricultural experts, we dig the planting area in advance and add manure to it. I have also learned a lot from the radio program that is broadcast in our language.

**Interviewer:** What lessons did you get from the radio program and from the experts?

**YAKOB GOBENA**: They tell us to keep the area clean by removing anything that can help spread of the disease, including the diseased part of the plant, contaminated soil, and contaminated tools.

**Interviewer:** What kind of diseases do you see?

**YAKOB GOBENA**: There is one that wilts the leaves – we call it *gunfan*. There is another which rots the roots. We have learned a natural method of limiting the spread of the disease. We cut and bury the part of the plant that has been affected by the disease. We also properly clean the equipment we use for cutting.

**HOST:** The farmers say that enset stays green during the dry season because it retains so much water in its stem and leaves. Because of that, it not only gives beauty to the environment but also provides a refreshing breeze when the weather is hot. It is a source of food throughout the year, even during droughts.

Enset has deep roots which make it resistant to drought. Also, the parts of the plant that are harvested – the stem and root – are more resistant to bad weather than flowering crops. Ethiopian farmers plant and harvest enset throughout the year, ensuring that they have enough food all year round.

Here is farmer Bekele Segaro.

**Bekele Segaro:** Enset is a crop which is more useful than any other. It is food for our children and feed for our livestock; it is a beauty in our environment; and there is demand for it in the market. We can sell it to buy other things we need.

**Interviewer:** What is the main problem that you face with enset?

**Bekele Segaro:** Enset disease has become a major concern to us. The disease is traditionally known as *boqoqa.* It wilts the leaves and rots the centre of the stem.

**Interviewer:** What traditional methods did you use to manage this disease?

**Bekele Segaro:** We used to cut out the rotten part and discard it in the open. But now we have been told that it can still infect other plants unless we carefully dispose of it and sterilize the tools we have used for cutting.

**HOST:** Amarech Samuel is a farmer who agreed to talk to us after a lot of coaxing. We interviewed her through an interpreter. She speaks in her own language about enset, looking down all the time.

**Amarech Samuel:** Enset is a perennial plant that gives us benefits every day. It doesn’t need watering, and we get benefits from it not only during the rainy season but all the time. When we want to prepare something different for our children to eat, we sell the things we have made from enset and buy what we want. The food that we make from enset gives heat, power and strength to our children.

But a disease is wilting and drying the leaves, and the disease is spreading. It never happened before. Some people blame climate change. The agriculture experts tell us that we haven’t done proper monitoring of the enset plants to control the occurrence and spread of the disease.

An organization called Farm Radio International has organized us into listening groups, and I sometimes listen to the radio program with my neighbours. I believe that the disease will decrease if I do what the experts advise. But it would be good if we had enset varieties that resisted disease.

**HOST:** Enset is considered a crop for women in this area. All the income earned from the sale of enset products is used by women for whatever purpose they choose. Traditionally, no man will ask about this income. Usually, women spend use it for domestic expenses like children’s clothing and household goods.

The farmers that we interviewed said they are getting information about natural disease-preventative methods on the radio. Here are farmers Samuel Selatu, Daniel Dukele, and Getachew Fikre talking about enset.

**Samuel Selatu:** We plant enset early in January in our area. It is now October, so we are now preparing the land for planting. We add manure, which helps retain the moisture in the soil.

**Daniel Dukele:** We have been planting enset since the time of our grandparents. Enset withstands droughts and protects us from hunger. Growing enset has more benefits than any other crop. But now we need to be careful to prevent disease.

**Getachew Fikre** I describe enset as the whip with which we beat hunger, because when hunger occurred in different parts of the country in the past, it never happened here. Enset protects us from hunger. It also has good nutrients that are useful for our children.

Traditional music for a few seconds

**HOST:** It is 3:30 in the afternoon and the weather is hot. We are on our way to a second kebele. Energized by a cool breeze from the enset plantations, we travel the ups and downs of the rural road in less than an hour. We are accompanied by Negussie Alemu, an agriculture expert we met at the first kebele. We are engaged in a vibrant discussion on enset disease and its solutions. Here is Negussie Alemu.

**NIgussie alemu:** The biggest problem the farmers have is bacterial wilt, which affects the stem. We are working hard so that the farmers will properly care for the disease by cutting off the diseased parts of the plant and burying them, and properly sterilizing the equipment they use for cutting. The second way to prevent enset disease is to grow varieties that are tolerant to disease. We help farmers to choose and plant improved varieties.

**HOST:** We arrive at our destination, Zato Shodore kebele. We are now resting under a big tree and talking with Mrs. Woizero Belaynesh Bekele.

**Belaynesh Bekele:** Enset is a staple food. It is particularly good for mothers soon after childbirth. Foods made from enset are always on our table. When our children eat food made from enset, they do not go hungry.

But we are now facing enset diseases that we call *buquqo* and *gunfan* (*Editor’s note:**These are local words for “wilt.”*) We want to use modern methods to prevent them.

**HOST:** The farmers in this kebele understand how enset disease is spread and how to prevent it from spreading. But they want a lasting solution to stop the disease from happening in the first place.

Farmers make three main types of food from enset: *kocho*, *amicho* and *bulla*.

*Kocho* is made by scraping the stem of the plant, and burying the scrapings underground for some months along with some yeast. The scraped and fermented *kocho* is then chopped into pieces. Spices and butter are added to make different types of traditional dishes, for example, breads. *Kocho* can be kept underground for three to four years without spoiling. *Kocho* is usually eaten with finely minced and spiced meat and kale. A four-to-five-old mature enset plant can produce up to 40 kilos of these starchy scrapings.

*Amicho* is made by boiling the tuber. Certain varieties are good sources of *amicho*.

*Bulla* is extracted or squeezed from crushed *amicho* and *kocho*. It is a powder that is used for making porridge. It is a food that is light on the stomach.

By-products of the plant are also used to make carpets, and the by-products and leaves are fed to cattle.

Here is Mearu Genetu, a plant science graduate and agronomist at Kedida Gamila woreda.

**Mearu Genetu**: We have seen that the density of enset plantations has decreased in some areas because of the changing climate, which is leading to some of the plants being diseased. Farmers remove the diseased plants from their fields, making the plantings sparser.

Climate change has brought various diseases which are becoming a challenge to enset farming. But poor crop management is the main way that these diseases are spread. For example, when the farmers plant a new seedling in the same place they removed a diseased enset plant, the new plant will get the disease from the contaminated soil. They have to remove the contaminated soil where the diseased enset was growing before planting a new enset seedling. The contaminated soil itself must be burned.

**HOST:** How do you burn the contaminated soil?

**Mearu Genetu**: You dig a hole and put the contaminated soil along with the diseased part of the enset root in the hole, then set fire to it, cover it, and leave it to smoulder for one day. One week later, you add new soil and manure to replace the lost nutrients, and prepare the ground to plant a new enset seedling.

We are helping farmers manage the disease more effectively. We recommend that they cut and bury the diseased parts of enset plants and clean the equipment they use for cutting. We are receiving drought- and disease-resistant enset varieties from the farmers themselves, and we are encouraging them to share these varieties amongst themselves.

Sometimes we sell varieties which were developed through research. Currently, we are emphasizing disease prevention by working together with Farm Radio International and the Areka Agricultural Research Centre. We have developed a radio program that spreads our extension activities. Information on disease prevention, and on how to grow and prepare enset reaches the farmers twice a week. Our workers would find it difficult to deliver this information face-to-face even once a month.

**HOST:** Farmers in Southern Ethiopia have made the radio program their main source of information for the prevention of the spread of enset disease. They have also asked for other methods of preventing the disease, especially effective chemicals and drought- and disease-resistant varieties.

We visited Areka Agricultural Research Centre, which coordinates enset research in Ethiopia. Ashenafi Mekonen has been a researcher at the centre for the past seven years. He knows the value of enset to farmers and its many benefits. He explained to us what the centre is doing to prevent the spread of the disease.

**Ashenafi Mekonen:** Areka Agricultural Research Centre has developed six varieties that have been approved and released to farmers. We are also promoting another farmers’ variety called *Mazia*, which is highly tolerant to the disease. We are working to ensure that this variety is widely distributed.

**HOST:** Dear listener, we hope that you have learned something about enset and its importance to Ethiopian farmers. If you have any comments and suggestions, please do not hesitate to forward to the radio station. Next week, we will present another topic. Until then, good bye.

## Acknowledgements

Contributed by: Haile Kassaya,

Reviewed by: Ashenafi Mekonen, Agricultural Extension Researcher at Areka Research Center

**Sources of information**

Interviews with:

Farmers:

* Yakob Segaro, October 26, 2014
* Amarech Samuel, October 26, 2014
* Getachew Fikre, October 26, 2014
* Samuel Selatu, October 27 2014
* Daniel Dukele, October 27, 2014
* Belaynesh Bekele, October 27, 2014

Agronomists:

* Nigussie Alemu, October 28, 2014
* Mearu Genetu, October 28, 2014

Researcher:

* Ashenafi Mekonnen, November 5, 2014

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