

# Pack 111, Item 5

Type: Interview

April 2019

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**How farmers in Ethiopia manage Fall armyworm**

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**Notes to broadcaster**

Fall armyworm is an insect pest that can cause significant damage to maize. The pest can also damage rice, sorghum, millet, sugarcane, vegetables, and cotton, and many other crops. Fall armyworm is native to the tropical and subtropical regions of the Americas but is spreading quickly to other parts of the world.

This script shows that, although Fall armyworm is capable of significant destruction, there are both traditional and modern ways to effectively manage the pest and reduce the amount of damage it causes.

This script is based on and adapted from actual interviews. You could use this script as research material or as inspiration for creating your own programming on managing Fall armyworm or other important agricultural pests. You might also choose to produce this script as part of your regular farmer 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 involved in the interviews.

Talk to farmers, agricultural officers, and other experts in your area. You might ask them:

* What methods they have used to manage Fall armyworm?
* How they try to prevent their crops from being damaged by the pest.
* Recommendations on effective ways to manage the pest.

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 outro, is 20 minutes.

**NEO BROWN:** Good morning (afternoon, evening). Today, we’re going to talk about how farmers in Ethiopia are trying to manage Fall armyworm and prevent it from causing significant damage to their fields.

**SFX:** UP SOUND

**NEO BROWN:** It’s the dry season in Ethiopia, known locally as *belg*. I traveled to Amhara regional state, which is in the northwestern and north-central part of Ethiopia. Over 85 percent of the people in Amhara are engaged in agriculture. I spoke to farmers and experts in Amhara to find out how they manage Fall armyworm.

Barley, wheat, oilseed crops, sorghum, maize, oats, beans, and peas are crops produced in large quantities in Amhara regional state. But there are a number of pests—including Fall armyworm—that pose a threat to farmers’ productivity. I travelled to Amhara to find out how farmers are managing Fall armyworm and trying to prevent it from damaging their crops.

**SFX:** UP SOUND

**NEO BROWN:** Nega Asefa is one of the farmers I spoke to during my trip. He lives in Yinessa District near the city of Bahirdar. The 32-year-old farmer has four children: two boys and two girls. Here is the conversation I had with him.

Good morning, Nega!

**NEGA ASEFA:** Good morning!

**NEO BROWN:** What sort of crops do you grow on your farm?

**NEGA ASEFA:** I mainly grow maize and finger millet for my family’s consumption.

**NEO BROWN:** I want to ask you about Fall armyworm. First, at what time of the day do you inspect your field to look for Fall armyworm? And what do you look for?

**NEGA ASEFA:** I monitor the field in the early morning hours. I start doing this 15 days after planting the seeds because that’s when the maize plants start to grow. What I look for during my inspection is whether the plants have been eaten by animals and whether there are signs of the plants being eaten by the worm [Fall armyworm caterpillar]. If I do find signs of the worm, then I immediately report it to the relevant authority so that they can provide me with the pesticide I can spray it on my farm.

**NEO BROWN:** How can you tell whether the Fall armyworm is attacking your plants?

**NEGA ASEFA:** I can tell whether the pest has invaded my field by looking at the damage done to the maize plants. The pest starts feeding on the leaves at the top and then proceeds from the growing point downwards. Then the plant becomes all dried up.

**NEO BROWN:** What is your experience using pesticides against the pest? What steps do you take in applying it?

**NEGA ASEFA:** After reporting to the relevant body, agricultural experts provide us with the chemical to spray. They determine the amount of the pesticide we need to use, based on the size of the farmland. Depending on the particular chemical used, we mix the recommended volume of the chemical with the recommended amount of water to spray in the field, in accordance with the instructions given to us by the experts. Of course, we take the necessary safety measures when we handle and spray the pesticide. The agricultural experts supervise us during the process so that we don’t exceed the amount we are supposed to use.

**NEO BROWN:** Thank you for your time, Nega.

**NEGA ASEFA:** You’re welcome!

**NEO BROWN:** I also travelled to the Yigodi district of Bahirdar, in Amhara regional state. There I met with Gebre Abebaw, a farmer living with his wife and six children. T the 66-year-old explained what he is doing to prevent and manage Fall armyworm on his farm.

**NEO BROWN:** Thank you for taking time to talk to me.

**GEBRE ABEBAW:** You are welcome.

**NEO BROWN:** What is the main source of your income?

**GEBRE ABEBAW:** I grow and sell crops like maize, finger millet, and occasionally chili pepper. Two-thirds of my production goes to the market and we use the rest to sustain the family.

**NEO BROWN:** How do you monitor Fall armyworm in your field?

**GEBRE ABEBAW:** I always monitor my farm in the morning from 7-8 a.m.

**NEO BROWN:** What are the methods you use once you discover that the pest is attacking your crops?

**GEBRE ABEBAW:** In the past, the district agricultural experts gave us training on various topics to prevent the pest from invading the farm. But from experience, spraying pesticides is the most effective way to deal with Fall armyworm. I can tell you that I myself had a generous yield this farming season compared to last season.

**NEO BROWN:** Would you consider methods such as hand picking or planting the types of plants that repel the caterpillars in order to manage the pest?

**GEBRE ABEBAW:** I believe that hand picking is extremely time-consuming. It requires serious dedication on the part of the farmer to routinely handpick the worms. If you skip a day without monitoring and picking the worms, then the effort would be a waste. If I were to consider hand picking, it would have been at the time when there wasn’t such a heavy infestation of the pest. Right now, I prefer the pesticide because it is much more effective.

**NEO BROWN:** Thank you for taking time to talk to me.

**GEBRE ABEBAW:** You are welcome.

**NEO BROWN:** I also traveled to the Southern Nations, Nationalities, and Peoples’ Regional State to find out how farmers there manage the pest. I talked to Harbe Tafesse, who mainly grows maize. The 37-year-old has seven children and lives in the Dore Bafenno district in Gibrina village, in southern Ethiopia. Let’s listen to her talk about managing Fall armyworm.

**NEO BROWN:** Hello, Harbe, how are you?

**HARBE TAFESSE:** I’m fine, thanks.

**NEO BROWN:** Tell me about the methods you use when it comes to managing Fall armyworm in your maize field.

**HARBE TAFESSE:** Back in 2017, I was struggling to stop stem borers from destroying my maize. That is when I received training on how I could plant special plants to repel and trap the pest through the push-pull strategy. This method is also effective against Fall armyworm and I am still using it to protect my maize. I have been able to save my plants from being destroyed by Fall armyworm, and I had a better yield than before I started using push-pull—when there were pests attacking my maize.

**NEO BROWN:** Please explain exactly what the push-pull method is and how you apply it in your farm.

**HARBE TAFESSE:** I received the seeds of two kinds of plants from the International Centre of Insect Physiology and Ecology in Ethiopia. Following the training I received from the centre, I planted desmodium seeds between rows of maize to repel the insect and I planted brachiaria seeds around the border of the maize to attract the pest and to trap the eggs that it lays. By the way, I also use these plants as fodder for my livestock and I have noticed that this helps them produce more milk and helps to fatten them.

**NEO BROWN:** Are there any other methods that you found effective in managing the pest?

**HARBE TAFESSE:** In my experience, the push-pull strategy is the most effective. I found it to be even more effective than spraying the plants with chemicals. In fact, the pesticides could have a negative impact on health and the environment without effectively getting rid of the pest. But these special plants have the added benefit of being usable as animal fodder and they do not pose danger to health or the environment. So I prefer this method.

**NEO BROWN:** Thank you for sharing your farming experience.

**HARBE TAFESSE:** Pleasure talking to you!

**NEO BROWN:** Dear listeners, I also had a brief talk with an expert on crop production and management. Here is what he told me about what is being done to manage Fall armyworm.

**NEO BROWN:** Thank you for talking to me this afternoon.

**EXPERT:** Thank you for taking an interest in our work.

**NEO BROWN:** What initiatives do you undertake in order to create awareness among farmers on how to manage Fall armyworm?

**EXPERT:** When we train farmers, we are placing particular emphasis on prevention. Tillage after the harvest brings the pupae to the surface of the soil, where they dry up as soon as they emerge from their cocoons. Rotating to crops that are not as susceptible to Fall armyworm makes the field less attractive to the pest. We also educate them on the importance of regularly monitoring the field.

Of course, the pest may still appear on their farmland even if they apply these methods. So we teach the farmers to handpick and destroy the pest. We recommend that the farmers monitor their fields twice a week. This constant inspection guarantees that they can quickly identify where the pest is attacking their plants and come up with a solution before it gets out of hand. Once the pest spreads in their maize field, they would have to resort to spraying pesticides. These may be very effective in getting rid of the pest but could be costly and in short supply. It is best to avoid reaching that stage altogether, and that is why we recommend that farmers apply these traditional ways of prevention.

There was a time when the spread of the pest was accelerating. At that time, together with the farmers, we used pesticides which effectively killed the pests and brought the spread of the pest under control.

**NEO BROWN:** Which method of managing the pest would you recommend to farmers?

**EXPERT:** The first step if farmers encounter the pest on their field is to apply cultural methods. This is recommended because it saves money and only requires household labour. A farmer’s family can monitor the field, and easily eradicate the pest at an early stage before it destroys the crops. Some farmers spray livestock urine three or four days after the seeds start to sprout, though there been no research undertaken to test whether this method is effective.

**NEO BROWN:** Are there any other cultural practices that can help manage Fall armyworm?

**EXPERT:** Yes. Farmers can control FAW while the caterpillars are feeding in the whorl by applying various substances to the whorl, includingneem extracts, sand, ash, urea, and local alcohol. This is an especially good practice in situations when the FAW infestation occurs only in a small part of the field and it is impractical to spray the whole field. Encouraging local inventions to control FAW is a key recommendation from the government of Ethiopia. Using pesticides should be the last option.

 With pesticides, there is a possibility that farmers will not use the correct amount due to lack of awareness. This has dire consequences on both the health of the farmer and the crop, particularly in cases of prolonged usage. We have come across farmers who have issues with their eyesight as well as throat irritations from inhalation of the product that they spray on their crops.

**NEO BROWN:** There are farmers who seem to prefer pesticides instead of the cultural ways of managing the pest because they believe that these are too time-consuming and require a lot more labour than spraying pesticides. And when they do use pesticides, it is not always guaranteed that they will follow the necessary safety rules. How do you address this issue?

**EXPERT:** The problem we are experiencing is lack of awareness. Some farmers tend to put off monitoring their field until it is too late to do anything but spray pesticides. They put off conducting the necessary inspection for various reasons: farmers don’t work in the field during religious holidays, and sometimes they are busy harvesting other crops such as teff and finger millet. So to keep up with the fast spread of the pest, they turn to chemicals. They are not aware that, although the chemical is effective, they also risk health issues.

What we are doing to address health risks is providing training to farmers on appropriate protective gear, and on taking note of the wind direction during spraying. We inform them about the “do’s” and “don’ts” of chemical usage. But there are still cases where farmers’ health is affected because they are not able to purchase protective gear such as gloves, masks, and so on. Some also skip wearing protective gear and underestimate the consequences. So we still have a long way to go when it comes to creating awareness among farmers.

**NEO BROWN:** Thank you. Do you have any final words to add?

**EXPERT:**  I should mention that using good agricultural practices is an absolute requirement for good management of Fall armyworm. Good agricultural practices lead to vigorous, healthy plants which are better able to withstand damage from Fall armyworm. For example, if the land is not well-prepared, you may not get uniform germination, and soil can be waterlogged. It’s also important to provide balanced nutrition through organic and inorganic fertilizers, and use an integrated pest management approach to pest control. It’s good advice for farmers to implement good agricultural practices from land preparation all the way to harvesting.

**NEO BROWN:** You have been listening to your farmers program. Today, we presented stories about how farmers in the Amhara and the Southern Nations, Nationalities, and Peoples regional states of Ethiopia are managing Fall armyworm and striving to prevent the pest from damaging their farm. Thank you for tuning in. Don’t forget to join us same time next week to listen to another interesting edition. ‘Til then, have a productive week!

## Acknowledgements

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**Sources of information**

Gebre Abebaw, farmer, Yigodi Kebele (lower district), Bahirdar area, Amhara regional state, January 18, 2019

Nega Assefa, farmer, Yenessa Kebele (lower district), Bahirdar area, Amhara regional state, January 18, 2019

Harbe Tafesse, farmer, Dore Bafenno district, Hawassa, Southern Nations, Nationalities, and Peoples regional state, July 10, 2018

Melese Ashagre, expert on crop production and management (agronomist), Agricultural Office in Bahirdar area, Amhara regional state, January 18, 2019

*This work was created with the support of the USAID Feed the Future Ethiopia Value Chain Activity as part of the project, “ICT-enabled Radio Programming on Fall Armyworm (FAWET).”*