

# Pack 107, Item 3

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**Careful preparation makes its own luck: Land preparation for fava beans**

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**Notes to broadcaster**

Fava bean (called *faba* bean in Ethiopia) is a staple food in the country, and is known as broad bean or field bean in some other countries. This legume contributes to soil fertility by fixing nitrogen, making it useful in rotation with staple cereal crops like wheat or teff.

The average yield for fava bean in Ethiopia is 1,800 kgs per hectare, though some farmers produce up to 4,800 kilos. Ethiopian farmers prefer silt soils or red, sandy soils for growing fava beans. Some of the major challenges to fava bean production in Ethiopia are: insect pests, diseases, inadequate seed, weeds, soil infertility, and waterlogged soils.

This script discusses how Ethiopian farmers prepare their land for the planting season, including preparing compost, measuring for row planting, and ploughing. In Ethiopia, some fava bean farmers plough their fava bean fields three times, though others plough less often.

The script also mentions inoculants, which are sometimes used when planting legumes. These are products that are mixed with seeds at planting time. Inoculants contain living organisms which promote plant growth by increasing the availability of important soil nutrients.

This script is based on actual interviews. You might choose to present this script as part of your farmer program, using voice actors to play the different roles. 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.

Or you may chose to use this script as research material for your own story on land preparation—for beans or any other crop.

Talk to farmers who have had successful fava bean harvests, asking:

* What land preparation practices are most important?
* What are you doing to ensure soil fertility?
* Do you plough your land? If not, why not? If you do, how many times do you plough your land? Why?
* When do you do these practices? How do you know when to begin land preparation?

Estimated running time for this script is 10-15 minutes with intro and extro.

**HOST:** Welcome to (name of radio program). Today, we are visiting Bakelo kebele, a community in the Amhara Region of Ethiopia just outside the capital, Addis Ababa. We will be talking about fava beans, which is appropriate since in Amharic—one of the major languages of Ethiopia—“bakela” means “fava”!

It's the first week of June and it's almost time to plant fava beans. So I'm speaking with Yohannes Kelile and Askale Kasaye about how they are preparing their land. This is a hilly area, where the soil—and what's being grown—varies with each slope.

A small cluster of buildings sits below one hill, beside a paved roadway. Here I meet with farmer Yohannes Kelile, and with the development agent, Negesse Woldemariam.

Yohannes, how much land are you planning to grow fava beans on?

**YOHANNES KELILE:** I will be growing fava beans on one hectare. I also grow barley, wheat, and peas.

**HOST:** What stage of land preparation are you at now?

**YOHANNES KELILE:** We are doing the second tillage now. We will do the third tillage and the planting at the end of June.

**HOST:** What is one tip that farmers growing fava beans should keep in mind?

**YOHANNES KELILE:** It's important to select the land well. Make sure that you use land that last grew wheat or barley. If the land was last used to grow beans, it won't be as productive. This is what we learned from experience.

**NEGESSE WOLDEMARIAM:** Farmers here practice crop rotation. They alternate planting wheat, barley, peas, and fava beans. When peas and fava beans grow, they fix nitrogen in the soil, which is useful to the wheat and barley that grow the following season. Farmers add fertilizer during the wheat and barley growing season, which is useful to the fava beans.

**HOST:** Thank you, Mr. Woldemariam. Yohannes, what did you last grow on the field?

**YOHANNES KELILE:** I grew wheat and harvested in January. Then in February, I did the first tillage. This is the dry season and the soil needs to be exposed to the sun to reduce pests and diseases.

**HOST:** What tool are you using to plough your field?

**YOHANNES KELILE:** I am using the Aybar BBM, or broad bed and furrow maker. I purchased it three years ago because it is good for waterlogged soils. It also saves on the cost of labour. It is quicker and easier to plough.

Before, I had to hire 30 people to plough one hectare of land, paying them each 100 birr [$4.25 US] per day. But now I just need one person to help me for one day each time I want to plough.

**HOST:** The Aybar is a type of broad bed and furrow maker developed in Ethiopia to deal with the waterlogged soils in the country. It creates furrows that help drain water from the fields. Was the Aybar BBM expensive, Yohannes?

**YOHANNES KELILE:** No, I don't think so. It cost 193 birr [$8.20 US].

**HOST:** It’s almost planting time. What variety of fava bean are you planting?

**YOHANNES KELILE:** I am planting a local variety, using seed I saved from last year. If I don't have enough, I will purchase. But I also exchange seeds with other farmers.

**NEGESSE WOLDEMARIAM:** Many farmers exchange seeds. In that way, if their seeds are good for waterlogged soils but they are planting on land that isn’t waterlogged, they can exchange with farmers for varieties that work best for their soil.

In this area, the soil can vary a lot from place to place. Plots on the hills, at higher elevation, will have different soils than plots lower down or in the valley. Farmers in this area have plots of land in each of these different areas, rather than only in one place.

**HOST:** Does that make their job more difficult—particularly since farmers have to carry their plough from plot to plot?

**NEGESSE WOLDEMARIAM:** It does make some things more labour-intensive, but it has its advantages. Because some areas are more likely to get rain, or the soil types vary.

**HOST:** So, Yohannes, when it is planting time, how will you plant your seeds?

**YOHANNES KELILE:** Since I am using the Aybar BBM, which creates broad beds, I will broadcast the seeds.

**HOST:** Well, good luck, sir.

Welcome to Mrs. Askale Kasaye, another farmer in Bakelo kebele. You have contributed to the farmer program on fava beans airing on Fana FM in Ethiopia. What advice are you sharing with fava bean farmers?

**ASKALE KASAYE:** Well, first of all, traditionally, we only plough the field once and broadcast seeds. But I was trained by the agricultural bureau, so I know the importance of ploughing three times. It's important to plough three times to kill diseases, weeds, and pests. I also told the radio broadcasters how to make composted manure.

**HOST:** On the ploughing topic, do you also use the Aybar BBM—the new broad bed and furrow maker that is used in Ethiopia?

**ASKALE KASAYE:** No, I am using a traditional plough, but listening to Yohannes, it sounds like the savings are great with the Aybar. We need to hire five people to help us plough the waterlogged land to drain the water. So the Aybar could save us money.

**HOST:** Are you also broadcasting seed?

**ASKALE KASAYE:** No, I will be row planting on my quarter-hectare field this season—although it's my first season planting in rows.

**HOST:** What are the measurements you need to use for row planting fava bean?

**NEGESSE WOLDEMARIAM:**  Farmers should plant rows 40 centimetres apart, with 20 centimetres between plants.

**ASKALE KASAYE:** I can measure this easily with my hand, as 20 centimetres is about the distance from the tip of my thumb to the tip of my forefinger when my thumb is in an “L” shape. When we are doing the third ploughing, I will follow behind the plough, dropping the seed. I will measure for the first few, but eventually I am sure I will be able to estimate the distance. At the end of the row, when we turn and plough the next row, the plough will push soil over the seed in the previous row.

**HOST:** Mr. Woldemariam, are both broadcasting and row planting effective for fava beans?

**NEGESSE WOLDEMARIAM:** Some farmers are using the Aybar BBM, and so they cannot row plant. But this is a good option for waterlogged fields. Other farmers are row planting, and this increases the size of the harvest.

**HOST:** Mrs. Kasaye, tell me more about how you make composted manure.

**ASKALE KASAYE:** I dug a hole measuring four metres by four metres. Inside, I put crop residues, some leftover fodder, and leaves. I also put in cow dung, and I watered it every day for 15 days. Then I mixed it periodically.

**HOST:** When do you start making the compost?

**ASKALE KASAYE:** I don't want it to lose nutrients, so I begin at the end of February or the beginning of March, and keep it for only three months. I will spread it on the field first just before the third ploughing, so that when we plough, it will be mixed in.

**HOST:** Mr. Woldemariam, are there other practices farmers should adopt to ensure good soil fertility for fava beans?

**NEGESSE WOLDEMARIAM:** Farmers in this area are doing everything they can to improve their soil fertility. When they grow wheat and barley, they use chemical fertilizers like NPS and urea. NPS is a blend of nitrogen, phosphorus, and sulphur.

With fava bean, farmers are using composted manure, NPS, and inoculants. In other places in the country, farmers are also using blended fertilizer—which is fertilizer blended particularly for the soil needs in their area. The farmers here have heard of blended fertilizer and they want to use it, but there's none available at the moment.

These farmers are well educated about farming practices and have diversified businesses, with dairy cows, irrigated vegetable farming, and also the barley, wheat, peas, and beans rotation that you heard about. I think these farmers are doing well.

**HOST:** Well, thank you all for sharing your knowledge. I do wish you the best in the fava bean growing season.

## Acknowledgements

Contributed by: Kathryn Burnham, Resource Production, Distribution, and Evaluation Coordinator, FRI

Reviewed by: Mlesse Temesgen, General Manager, Aybar Engineering PLC, Addis Ababa, Ethiopia

**Sources of information**

Interviews:

Yohannes Kelile, farmer in Bakelo kebele, Amhara Region, June 9, 2017

Askale Kasaye, farmer in Bakelo kebele, Amhara Region, June 9, 2017

Beyene Eshete, farmer in Bakelo kebele, Amhara Region, June 9, 2017

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Dawit Getahun, development agent in Fodu Gora kebele, Oromia Region, June 12, 2017

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