

# Pack 103, Item 3

Type: Drama

March 2016

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# Successful pest management in cowpea: What farmers need to know

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**Notes to broadcaster**

Cowpea is grown on more hectares than any other legume crop in Ghana, and is the second biggest legume in terms of total yield. Most cowpea in Ghana is grown in the northern savannah zone. But cowpea can be grown everywhere in the country.

Cowpea is an important and cheap source of protein for rural and urban families. Indeed, cowpea is often referred to as "the poor man's meat" because of its high protein content. The potential yield of cowpea is up to 1.5 tonnes per hectare, but the usual yield in Ghana and the rest of West Africa is less than 300 kilograms per hectare.

Cowpea is tolerant of shade and therefore can be intercropped with maize, millet, sorghum, and other crops. This makes cowpea an important component of traditional intercropping systems, especially in the dry savannah. In these areas, dried residues of cowpea are a valuable animal feed.

The major constraints to cowpea production in Ghana include insect pests, Striga infestation, diseases, drought, and low soil fertility. Insects and Striga can cause yield losses of 15% to 100%, depending on the level of infestation and the relative susceptibility of the variety.

Cowpea provides rural families with food, animal feed, and cash income. Processed products include: cowpea flour, cowpea cake, cowpea fritters, and cowpea chips. These are sold in village markets.

This drama focuses on managing pests in cowpea. It is based on interviews with farmers and experts.

You might choose to present this drama as part of your regular farmer program, using voice actors to represent the speakers. If so, please 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 growing cowpeas or similar topics in your area.

Talk to farmers and experts who are growing cowpeas or are knowledgeable about the crop. You might ask them:

Is growing cowpeas common in your area?   
If so, what challenges do farmers face, especially with pests and diseases?

Have some farmers devised solutions to these challenges that they could share on your program?

What do extensionists and other experts say about these challenges?

Do farmers mostly raise cowpeas for home consumption?

Is growing cowpea a profitable business in your area? What are the economic prospects?

Estimated running time: 15 minutes, with intro and outro music

**SCENE 1**

**ISSAH’S HOME**

**SFX:** Sound of birds chirping in the background

**HAWA:** (off-mic) Is anybody at home?

**ISSAH:** Yes, come in.

**HAWA:** (coming on-mic) Ei, Issah! Good morning. I wasn’t expecting to see you home at this time of the morning. No farm today?

**ISSAH:** Ah, Hawa, Aisha has left, so I have to prepare the children for school before leaving for the farm.

**HAWA:**  What! Issah, are you saying that Aisha has left you? How, and for who ... where … when?

**ISSAH:**  Didn’t you hear? Aisha left me last week for her mother’s.

**HAWA:**  Issah, is there a problem between you two?

**ISSAH:**  I wouldn’t say there is a problem as such. I only expressed my frustrations over a few domestic issues ...

**HAWA:**  But Issah, how could you have allowed your frustrations to push Aisha away?

**ISSAH:** Hawa, I don’t think my wife has my welfare at heart.

**HAWA:** That’s not true. We all know how hard Aisha has been working to support you and the children.

**ISSAH:** You may have a point there. But I believe in this case, she was refusing to see my point of view. Look, Hawa, there’s something I’m not sure of.

**HAWA:** What? Is it about her love for you?

**ISSAH:** No, no, no, not at all. You know, ever since I married her, everything has been going well. The farms were doing very well, and we always had bumper harvests—until she decided about three years ago to ask her brothers to come and help us on the farm. (Pause) That was the beginning of all my troubles.

**HAWA:**  Issah ... Look, I nearly laughed, but I know you are serious. What do you mean by the beginning of your troubles? Do Aisha’s brothers come here to eat every day for helping you on the farm? What exactly is the problem?

**ISSAH:** Hawa ... Aisha’s brothers have done something spiritually to my farm.

**HAWA:** Oh ... Now I’m beginning to get the picture. But ... (pause) Issah, are you sure?

**ISSAH:** I am very sure, Hawa. Otherwise, how could my cowpea farm not yield even half as much as it used to?

**HAWA:** The picture is clearer now. Issah, I wouldn’t venture into matters of faith and your belief systems ... I would also not pretend to be an expert on growing cowpea. But experience tells me that what is happening to your cowpea has nothing to do with your brothers-in-law.

**ISSAH:** Hawa, this is about life and death. I am even planning to summon these boys to the chief’s palace.

**HAWA:** There is no need. You’ll only disgrace yourself before your in-laws.

**ISSAH:** Do you doubt my ability to do this? Just watch me expose them to the whole village.

**HAWA:** Anyway, let’s get more practical here. Did you know that we are expanding our farms? Ask me how.

**ISSAH:** How, Hawa?

**HAWA:** (Laughing) Oh, so you want a solution after all. I’m happy you want to learn. Look, I was actually on my way to see the Agric Extension Officer to book an appointment. I’ll just add you to the appointment. Should I?

**ISSAH:** What type of appointment is it?

**HAWA:** He is coming to inspect our farm and offer his technical advice. Should I add your case?

**ISSAH:** But won’t that cost a fortune? I don’t have money.

**HAWA:** Don’t worry; the government pays him for what he does. So for us, it’s free advice. Now, should I talk to him for you?

**ISSAH:** (Hesitant) If you think so ...

**HAWA:** But promise me you’ll bring Aisha back. I blame you for starting the quarrel.

**ISSAH:** I can’t be blamed for that, Hawa. I didn’t really want Aisha to go away. I love her very much.

**HAWA:** Then you must go to her mother’s house and bring her back.

**ISSAH:** Much as I love her, this is going to be difficult, Hawa.

**HAWA:** Listen, Issah. Regardless of your ego or whatever might have happened, drop everything and go for her.

**ISSAH:** What about her brothers?

**HAWA:** Did you quarrel with them too?

**ISSAH:** Not at all. But I suspect Aisha has told them all that I said about them ...

**HAWA:** Look, Issah, Aisha loves you. She wouldn’t do such a thing.

**ISSAH:** If you say so ... (PAUSE) I’ll be very happy to have her back.

**HAWA:** That’s good to hear. (PAUSE) I think I must be on my way now.

**ISSAH:** What about the Extension Officer?

**HAWA:** Joe, you mean? Don’t worry, leave that with me and take care of getting Aisha back. Anyway, thank God your farm is not far—he can visit yours before coming to ours. Prepare for him tomorrow.

**ISSAH:** Thank you very much for this. I’ll always be in debt to you.

**HAWA:** (Going OFF-MIC) I’ll see you tomorrow, but what about

Aisha?

**ISSAH:** Yes, Aisha, my wife ... leave that with me. I’ll go for her this

evening. Maybe she just used the opportunity to visit her

mother. You know she didn’t even take a dress.

**SCENE 2**

**ISSAH’S FARM**

**SFX:** Issah whistles a tune as he weeds

**SFX:** Sound of hoe

**HAWA:** (Coming on-mic) Issah, are you there?

**ISSAH:** Ei, Hawa, I didn’t see you coming. I’ve been so busy venting my anger on the weeds.

**HAWA:** I can see that. (PAUSE) Where’s Aisha?

**ISSAH:** She is getting the children ready for school before joining me on the farm.

**HAWA:** I hope everything is going well with you two.

**ISSAH:** Thanks for asking. Everything is fine now. Maybe I exaggerated ... so I also took the opportunity to visit my mother-in-law, and she was happy for the visit.

**HAWA:** Ok, Issah. Anyway, I’m here with Joe, the Agric Extension Officer I told you about the other day.

**ISSAH:** Welcome to my farm, officer. I hope Hawa has told you about my situation—how insects attacked my farm last season and the fact that I had a low yield. I don’t know if I should blame the soil, insects, weather, my inability to maintain the farm, or some spiritual attack.

Now that you have seen the farm, what do you say? Should I continue tilling or I should abandon the farm?

**JOE:**  Oh, my brother, I’m so happy to see you working this hard, and I can promise you the best of results. All you need to do is follow some cultural practices.

**ISSAH:** I’m all for anything that would turn my fortunes around. This problem with the cowpea farm nearly cost me my marriage.

**JOE:** I’m sorry ...

**ISSAH:**  Thank you, my brother. Now which cultural practices are you talking about?

**JOE:**  You must make sure everything you do on the farm is done at the right time.

**ISSAH:** But aren’t all crops cultivated at the same time? Do I have to classify crops into categories and time segments?

**JOE:**  Let me tell you one special secret. Late-planted cowpea which flowers and produces pods late has the highest amount of infestation and damage by pod-sucking bugs.

**ISSAH:**  Really?

**JOE:** Of course. Look, the yield of cowpea depends on the date of planting and the type of soil. But don’t get scared. Your type of soil is good for growing cowpea.

**ISSAH:**  Are you sure?

**JOE:**  Very sure. If your soil wasn’t good, I’d tell you. That’s my job. You see, insect and disease attacks are the most important challenge for the cowpea farmer. Pests and diseases attack the crop at every stage of its growth.

**HAWA:** Issah, I’m not an expert, but I know that the type of soil one has can also determine the yield.

**ISSAH:**  Ei, Hawa, I can see you are happy about your success and don’t want to be left out (LAUGHS)! I’m happy for you. Tell me some of your experiences.

**HAWA:**  Well, several diseases can be found in the soil, while others are spread by particular insects.

**ISSAH:**  Officer Joe, please, is Hawa right?

**JOE:**  She is very right.

**ISSAH:**  That sounds serious.

**JOE:**  Don’t worry. As I said at the beginning, good cultural practices will help address any pest and disease issues.

**ISSAH:** So what should I do?

**HAWA:** One step at a time, please ...

**ISSAH:** Could you please allow the officer to answer?

**JOE:** She is right. There is no need to overload you with information. Let’s move to the other side of the farm and talk about a few other things in relation to soil, weeds, and insect pests.

**SFX:** AS THEY TALK, JOE AND ISSAH walk to the other side of the field

**JOE:** Your farm is big; I’m impressed.

**ISSAH:** Thanks, officer. But let me go back to something you said

earlier about planting crops at the right time. What exactly do

you mean by that statement?

**JOE:** Ideally, Issah, sowing should be timed in relation to the maturity period of the variety, so that the crop doesn’t mature during the rains. Harvesting under humid, cloudy weather invites pod rot.

For early-maturing cowpea, you should usually sow at the beginning of the rains. In this way, you ensure that the sensitive stages of the crop avoid the peak activity of insect pests. Also, sometimes the rains stop earlier than expected. This affects flowering and podding. One way to avoid this is to use early-maturing varieties. If the rains stop early, early-maturing varieties are already mature enough to use the little moisture available and produce a good yield.

One other thing: when you sow the same variety as last season, it is recommended to use old seed reserves rather than sowing seeds from the previous harvest. Seeds that are not properly dried may not germinate well, or may germinate and die later.

**ISSAH:** Ok, so you are saying that we shouldn’t select seeds to plant at random, and that we must take the weather and the maturity period into consideration. Great, it’s is a big relief to me to know this.

**JOE:** Now, one other basic thing we should always be mindful of is weed control.

**ISSAH:** Yes, weeds; some can be very stubborn. Tell me more about weeds.

**JOE:** Weeds compete with cowpea for light, nutrients, and soil water. If you don’t manage them well, they can reduce both the yield and quality of the grain. They can also harbour insects and diseases that further reduce yield and increase the cost of production.

**ISSAH:** Is there a particular way to control weeds to get the maximum yield?

**JOE:** You should weed by the second week after sowing, although this depends on the type of weeds and how well the land was prepared. It is important to complete your weeding by the end of the sixth week when the crop is starting to cover the ground.

Another important weed of cowpea is Striga, also called witchweed. Striga is a parasitic weed that infests the roots of the cowpea plant and feeds directly from the infested plant. It causes stunted growth, yellowing of leaves, delayed flowering, and poor pod and seed formation. The method of controlling Striga which is most compatible with other pest control methods and is environmentally friendly is to use resistant varieties. The variety of cowpea that is available locally and resistant to Striga is called *Songotra*.

**ISSAH:** Can I use herbicides as well as hand weeding?

**JOE:** That’s a very good question, Issah. If you use a pre-emergence herbicide within two days after sowing, you should do the first hand weeding four weeks later.

**ISSAH:** My other question is: how important are insect pests to the cowpea farmer?

**JOE:** Very important. Insect pests reduce cowpea yield more than anything else! Farmers who don’t control pests—either by spraying or with other effective practices—can lose their whole crop. Many insects attack cowpea at every stage of growth. So it’s important to plant varieties that tolerate some insect damage, and it’s usually required to spray insecticide.

**ISSAH:** You told me how weeding should be done, but how many times do I need to spray insecticides per season?

**JOE:** The number of sprays depends on the incidence and the severity of the infestation of major insect pests—and the variety of cowpea. But usually, you need two or three insecticide sprays. Late-maturing varieties may require more sprays than early varieties.

It is important to note that it is no longer recommended to spray regularly according to a calendar, for example every 10-15 days. Calendar spraying can be expensive, unsustainable, and environmentally unfriendly. Therefore, you need to scout for the incidence of pests and decide when to spray based on the severity of infestation.

When there are dry spells at the seedling stage, aphid infestations are likely to be severe and you may have to spray. On the other hand, you can adopt cultural practices like rotating crops, growing different crop varieties in the same field, and planting trap crops which attract pests away from the valuable crop. These all help to manage pests, and might help you to avoid spraying. And don’t forget to use a resistant variety.

**ISSAH:** Other than aphids at the seedling stage, what other stages of the crop do I need to spray? I hope I’m not interrupting your thought pattern.

**JOE:** No, I’m happy you’re asking questions for clarity. Spraying at early flowering and during pod formation is also necessary to control important insect pests like thrips, Maruca, and pod-sucking bugs. And don’t forget that, whenever you spray, it’s very important to follow the instructions on the label.

**ISSAH:** Officer Joe, I’m very happy for the education.

**JOE:** You’re very welcome.

**ISSAH:**  (SHOUTING ACROSS TO HAWA) Hawa, Hawa, we’re done and coming over.

**SFX:** THEY WALK BACK

**ISSAH:** In fact, Hawa, knowledge is a powerful tool. Hawa, Joe has

actually opened my eyes to the realities of paying close attention to managing pests and soil.

**HAWA:** I see ... so now it’s no longer your brothers-in-law who are the

cause of the low yield!

**ISSAH:** Now I know. I guess I have to make a conscious effort to apply

what I’ve learnt from Joe to improve on my yield. My greatest

insight is that I can rotate crops and also grow different varieties of a crop on the same field to control pests. It looks so simple. But I know I have to do it carefully and well. If I do, my target of becoming the best cowpea farmer this year will surely be achieved.

**HAWA:** It’s seems like an ambitious target, but with commitment and

the “can-do spirit,” you can achieve your goals.

**ISSAH:** Hawa, thanks once again for introducing me to Joe.

## Acknowledgements

Contributed by: Francis X. Mensah

Reviewed by: Francis Kusi, Research Scientist (Entomologist), Council for Scientific and Industrial Research (CSIR) and Savanna Agricultural Research Institute (SARI), Tamale, Ghana

**Sources of information**

Interviews:

Mr. Cyril Anane, cowpea farmer, Akatsi District, Volta Region, Ghana, October, 2015.

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