# Pack 103, Item 7

Type: Drama

March 2016

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**Papa Akwesi learns: Careful post-harvest management maximizes maize income** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Notes to broadcaster**

Maize is Ghana’s most widely cultivated crop, and accounts for at least half of total cereal production in the country. It is a major source of food, feed, and cash for many households. Maize accounts for almost half of the agricultural cash income among small-scale food crop farmers in the country. Maize is the main component in poultry and livestock feed, and is becoming a substitute in the malt drink brewing industry.

The area of maize planted has been increasing in recent years. The current area is approximately 1 million ha, and the average yield is about 1.75 metric tons per hectare. There is a large gap between the current yield and the maximum achievable on-farm, about 4-6 metric tons per hectare. Drought, infestation by Striga, use of low-yielding varieties, and declining soil fertility are among the major causes of low yield of maize in Ghana.

In 2005, the average Ghanaian consumed an estimated 44 kilos of maize per year. Ghana is a net importer of maize, even though it has the potential to be both self-sufficient and an exporter.

Maize is grown throughout Ghana, but the leading producing areas are the middle belt and the northern part of the country. In the middle belt, maize is planted twice in a year— April/May in the major growing season and August/September in the minor growing season. In the north where millet and sorghum were the main cereals grown and consumed in the past, maize is increasingly replacing these grains.

Maize is the most important cereal crop on the domestic market in Ghana. Consumers have a strong preference for dried shelled corn. Producers usually sell to traders, mainly women, who come from city markets to collect the produce from the farm. The maize is then sold in urban wholesale and retail traditional markets.

This short drama talks about Akwesi Papa, a great farmer, who loves his profession so much that he introduces his high school son, Akwesi, to the business of farming. Even though Akwesi Papa is an experienced farmer, it is a challenge for him to manage and control pests. Akwesi Papa’s brother, John, invites him to a public lecture where an agronomist talks about effective farming techniques and how to reduce post-harvest losses, improve upon storage, and manage mould and aflatoxin in maize. Akwesi Papa comes home a better farmer.

You might choose to present this drama 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 involved in the interviews.

You could also use this script as research material or as inspiration for creating your own programming on growing maize or similar topics in your country.

Talk to farmers and experts who are growing maize and are knowledgeable about the crop, especially about managing pests in the field and in storage. You might ask them:

What challenges do farmers face with storing maize, especially with pests and diseases? Have some farmers devised solutions to these challenges that they could share on your program? What do extension agents and other experts say about these challenges?

Estimated running time for the script: 15 minutes, with intro and outro music.

## CHARACTERS

**AKWESI PAPA:** 61-year-old farmer and husband of Aggie

**AGGIE:** 54-year-old nutritionist and wife of Akwesi Papa

**AKWESI:** 17**-**year-old high school boy and son of Akwesi Papa and Aggie

**JOHN:** 63-year-old farmer and brother of Akwesi Papa

**MR. OSEI**: 58-year-old agronomist

**AUNTIE SERWAA:** 43-year-old farmer

**SCENE ONE**

**SFX:** Door opens

**AKWESI:** Ah, it’s good to be home. I’m very tired.

**AGGIE:** You two are back. You look tired, dear. It must have been a hectic day.

**AKWESI:** Yes, mummy, it’s been a very tiring day.

**AKWESI PAPA:** Aggie, don’t mind him. We did not do as much work as I usually do alone—and your son, a younger man, is already tired! (PAUSE) These schoolboys are not taking after their parents at all. All they know is books, computers, and machines. (Aggie and Akwesi Papa laugh)

**AKWESI:** But that’s what is in vogue now. Computers and machines can do several times what manpower can do, and in a much shorter period—and without the kind of stress we’ve taken ourselves through today.

**AGGIE:** Akwesi, my son, you may have a point there, but that doesn’t mean we shouldn’t use the strength God freely gave us.

**AKWESI:** Of course, mum, but my point is that we have mechanized agriculture now. By this method, we can increase our maize production.

**AKWESI PAPA:** That’s alright, Akwesi. Just make sure the machines don’t make you lazy. Aggie, didn’t John call?

**SFX:** Knock on door

**AGGIE:** (CALLS OUT)Yes, come in, the door isn’t locked.

**SFX:** Door opens and John walks in

**AKWESI PAPA:** Wonders shall never end. John, I just mentioned your name and you walked in. Indeed, our elders say that if you mention the name of a stranger, you must get a chair ready for him. Welcome, my brother.

**JOHN:** Thank you. Good afternoon.

**AKWESI PAPA, AGGIE**

**AND AKWESI:** Good afternoon.

**JOHN:** I like this family, always together discussing a thing or two. I can see you just returned from the field. How is the maize farm doing?

**AKWESI PAPA:** We can’t complain. The earlier maize we planted has just started tasselling and it’s a beautiful sight to behold. It makes farming look very rewarding. All I’m praying for this time is to be able to contain the insects—I mean the weevils that disturbed us last season.

**JOHN:** So my visit is very timely.

**AKWESI PAPA;** How do you mean?

**AGGIE:** I’m not rudely interrupting; I just want to move to the kitchen with Akwesi to fix some dinner for us. We’ll surely be quick.

**AKWESI PAPA:** That’s alright, Aggie. Just remember to be quick before I start to complain; food is medicine, you know (LAUGHING).

**JOHN:** As I was saying, my visit is timely because I came to remind you—and literally pull you—to tomorrow’s town hall meeting.

**AKWESI PAPA:** Have you also joined the politicians? Look, I’ve told you that politics is the last profession I want to consider. All I want in this world is to be a better farmer to feed the nation. Period.

**JOHN:** Akwesi Papa, why don’t you wait for me to tell you what the meeting is about instead of jumping to uninformed conclusions?

**AKWESI PAPA:** Sorry, brother, I hope I haven’t offended you. I’m all ears now.

**JOHN:** That’s better. You remind me sometimes of those days in Congo when we were issuing commands to the ground troops, and they obeyed without complaint. But I’m not commanding you now!

**AKWESI PAPA:** Yes, sir! I’m all ears, sir! (both laugh)

**JOHN:** The Assemblyman is organizing a town hall meeting to help educate farmers on modern farming techniques. The goal is to reduce post-harvest losses and increase production, because that’s the only way to improve the income of our people.

**AKWESI PAPA:** That’s good news. At least we’ll be able to pay back our loans. But is it the Assemblyman who is speaking?

**JOHN:** No, no ... they have invited an expert from the District Directorate of the Ministry of Agriculture. I hear he’s a very knowledgeable agronomist who has been in his job for three decades.

**AKWESI PAPA:** You’re whetting my appetite now; I can’t wait for this public education.

**FX:** door opens

**AGGIE:** Ei ... two inseparable brothers, food is ready. Can we move to the dining table before the food gets cold? As a nutritionist, I say that food should be eaten warm.

**AKWESI PAPA:** Well, the queen of the home has spoken and must be obeyed. John, off we go.

**FX:** sounds of Cutlery and plates

**SCENE TWO**

**At the public lecture**

**SFX:** A crowded room, people talking

**MR. OSEI:** Good afternoon, ladies and gentlemen.

**VOICES:** Good afternoon.

**MR. OSEI:** It’s a pleasure to be with you today. I’m so happy because I can see the faces of hard-working famers here. Anywhere I meet farmers, my joy increases, because without them the world would cease to exist.

**VOICES:** MurmurS of affirmation

**MR. OSEI:** This afternoon, we’re talking about minimizing post-harvest losses, harvesting at the appropriate time, appropriate storage, and managing mould and aflatoxin in maize.

**FEMALE VOICE:** Officer, these are heavy words. Are all these things related to maize?

**MR. OSEI:** The words may sound heavy, but they represent very simple cultural practices for maize. We’ll make the words simple before leaving this hall.

**AKWESI PAPA:** My first question is: What is this afla … afla … aflato … what?

**MR. OSEI:** Aflatoxin.

**AKWESI PAPA:** Yes, this aflatoxin of a headache, what is it all about?

**MR. OSEI:** Aflatoxin is a poisonous and cancer-causing chemical that is produced by some moulds.

**AKWESI PAPA:** Please take it easy; you’re introducing more complexities. Please finish with aflatoxin before adding these scientific animals that may confuse some of us.

**VOICES:** It’s true; Akwesi Papa is right.

**MR. OSEI:** These names and terms might sound technical, but there’s no way you can talk about aflatoxin without mentioning moulds. You see, moulds are the causal agents. They cause aflatoxin.

**VOICE:** So what are moulds?

**MR. OSEI:** Moulds are fungi that grow on food and result in discolouration in the food.

**VOICES:** OK.It’s clear now.

**MR. OSEI:** Good, so we can go back to our almighty aflatoxin. As I was saying, moulds are the causal agents of aflatoxin. Now aflatoxin grows in soil, decaying vegetation, hay, and grain. It is regularly found in improperly stored staple crops such as maize. When food which is contaminated with aflatoxin is processed, aflatoxin can enter the food supply.

**JOHN:** I understand that aflatoxin has a big effect on the human body, and especially on children.

**MR. OSEI:** Yes, children are particularly affected by aflatoxin. Exposure to aflatoxin can lead to stunted growth, delayed development, liver damage, and liver cancer. Adults have a higher tolerance, but are also at risk. These are some of the reasons we must take our storage and post-harvest practices seriously.

**AKWESI PAPA:** What should we do to keep our grains safe from aflatoxin infestation?

**MR. OSEI:** There are many things. For example,we must harvest our crops at the right time, not letting our grains stay too long in the field. After sorting, you should store your maize cobs in a well-ventilated drying bin. From time to time, you must check the grain quality. If you find high numbers of insects, then you should shell the maize cobs, remove the bad grain, and put the good grain in bags, preferably bags made of jute.

**AUNTIE SERWAA:** I’ve been quiet all along because I’ve been taking down notes. My question is: what are the safe, long-term storage practices for maize?

**VOICE:** Ei, Auntie Serwaa, the farmers’ researcher.

**MR. OSEI:** That’s a very good question. In the first place, you should clean and disinfect all bins and containers before storing your grains in them. Secondly, as I just mentioned, make sure the grains do not contain insects. Also, check for moisture levels and store only at recommended moisture levels, preferably below 15%, and usually between 10-15%.

**FEMALE VOICE:** How do I know when I’ve stored maize to correct moisture level?

**MR. OSEI:** Here’s a very simpleway to ensure that your maize has the right level of moisture after drying: put a handful of maize grains and half a handful of common table salt in a dry soda bottle. Shake the bottle for two or three minutes. Allow the grains to settle to the bottom of the bottle. If the salt sticks onto the walls of the bottle, this is a sign that the maize has not dried well enough to be stored. Dry the maize for a little longer and repeat the test until no salt sticks to the sides of the bottle. You can then store your maize and there will be no danger of it developing mould or aflatoxin during storage.

**VOICES:** Ooh good (in agreement and appreciation).

**MR. OSEI:** Also, avoid re-wetting the grain by contact with either moisture or rain, and inspect the grains regularly for problems.

**AKWESI PAPA:** Officer, when is the best time to harvest maize, and what’s the best way to dry our grains to ensure maximum returns?

**VOICES:** Good question, good question, brother.

**MR. OSEI:** Harvest maize as soon as it is dry. Don’t let it stay in the fields and be attacked by insects. One advantage of this is that it releases the field early enough to prepare for the new planting season.

Keep the harvested grain as clean as possible. Dry your grains on a raised platform or on tarpaulins to prevent contamination. At home, don’t heap the cobs in a room, or in your kitchen or yard. This increases post-harvest losses. Transfer them to the drying place immediately. Never dry your maize on bare soil.

**SFX:** All clap in appreciation

**AKWESI PAPA:** I’m very happy for the education you’re giving us today. But one very key thing I’m thinking about is: How do I store my maize in order to make it more attractive for the market?

**MR. OSEI:** The main goal of storing maize is to maintain good quantity and quality by preventing deterioration. During storage, the grains must remain dry and clean. If this is done well, the grains can stay in storage for up to two years. You should place the grains on pallets above the floor to avoid conditions that may lead to mould and aflatoxin. And of course, don’t forget to protect your maize against rodents and theft.

**SFX:** All clap

**JOHN:** Well, today has been a very busy and fruitful day for all of us. On behalf of all gathered here, I would like to thank you a million times for this great education. With these practices, we can change our economic conditions and pay back our loans. Then we can pay our children’s school fees and secure their future.

 Once again, thank you, Mr. Osei, and to you, colleague farmers, for coming to listen to this insightful lecture. Let’s put these lessons into practice.

**SFX:** All leave, TALKING about the lecture

**SCENE THREE**

**SFX:** DOOR OPENS

**AKWESI:** Daddy, you’re back.

**AKWESI PAPA:** Sure I’m back, and fully loaded with information. I’m now a better farmer.

**AKWESI:** But you haven’t started implementing the new techniques—so how come you’re already a better farmer?

**AGGIE:** I’m so pleased to see you looking happy and refreshed after this public lecture. How did it go?

**AKWESI PAPA:** Oh Aggie, dear, now I know how to store my maize after harvest to prevent the losses we have had lately, especially this aflato ... xin (LAUGHS).

**AGGIE:** What’s making you laugh?

**AKWESI PAPA:** It’s this aflato ... word (LAUGHS). It gave me a hell of a time trying to pronounce it the first time.

**AKWESI:** Oh, that word ... it’s just a chemical that is produced by moulds in maize and other products. Aflatoxin is poisonous.

**AKWESI PAPA:** Of course, the agriculture officer later explained it to us, and now I think I must take my post-harvest cultural practices very seriously if I want to make any headway with this farming business. One unique thing I learnt was a very simple way to check the moisture level in stored maize. He made it very easy. The method just involves a soda bottle, maize grains, and common salt. He also told us to harvest maize as soon as it dry and not leave it in the field for too long, as this could lead to attack by insects. He also said we should clean and disinfect all bins and containers before storing the grains in them. Also, we should make sure the grains do not contain insects.

**AGGIE:** I’m all for this great leap. I shall do everything to support this

 farming business more.

**AKWESI PAPA:** Well, what can we say? We owe a lot to John for coming down to invite me.

**AKWESI:** So dad, what new role could I play in this reorganized family farm business?

**AKWESI PAPA:** Thanks, my son. Now that you’re going to complete high school this year, you would use your knowledge of agriculture to help me in the farming business. Before you leave for university, you would keep records and monitor all business activities.

**AKWESI:** This actually sounds more businesslike. I shall be bound by this new task, dad ... it’s a promise, trust me.

**AKWESI PAPA:** Thank you, my son. (PAUSE) Aggie, my wife, I hope food is ready.

**AGGIE:** It’s very ready, dear. Let’s get to table.

**SFX:** SOUND OF MOVING TO THE TABLE, TALKING

## Acknowledgements

Contributed by: Francis X Mensah

Reviewed by: Prof. Samuel Adjei-Nsiah, International Institute of Tropical Agriculture, Tamale, Ghana

**Sources of information**

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2. The Organic Farmer, *The magazine for sustainable agriculture in Kenya*, A simple way to test for moisture content in maize. <http://theorganicfarmer.org/content/simple-way-test-moisture-maize>

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