

Article 1: Powder of Little Pepper Protects Stored Rice



Fig1. 50kg bags of rice

Fresh pepper Dried pepper Crushed pepper



Fig2. Glass of pepper

You may know that insect and microbe pests cause serious damage to rice crops in West Africa. But did you know that there are local solutions? Today, Mr. Bamba, a rice farmer from Ndop uses pepper powder to preserve rice crops. His recipe for protecting stored rice best explains how it works.



Fig3. Powder pepper



Fig4 Treated rice

The quality of rice crops in Ndop is worsening because of insects and microbes. If we farmers are to make a living growing rice, we need new ideas. Fortunately, we have a new technique for protecting stored rice crops: the powder of little pepper. A powder made from this plant produces a repulsive smell that stops insects from attacking crops. It is very simple to make the powder. First, you harvest ripe little peppers from the fields. Then you sun-dry the peppers. Once they are dry, you crush them completely. Remember to completely dry the rice before you treat it. To treat stored rice, add one tablespoon of pepper powder to a 50 kilogram sack of rice and mix it well. It is recommended that you protect your whole body during the treatment. And don't forget that, to keep treated rice safe from disease and insects, you should store it in a dry place, on a wooden pallet, and check it regularly for pest damage.

Stored rice which is treated with pepper powder will repel pests for four to five months. This technique is very popular in the area where I farm, and all over Ndop.

Contributed by: Anyi Akenji Fermillen, Editor-in-chief, Freelance Magazine

Article 2: Cassava: A poor man's crop no longer!



Farmers in Southern Cameroon have come to recognize the value of growing and processing cassava, a plant that used to be thought of only as a poor man's crop. These farmers grow cassava in their small farms. And by organizing themselves into groups, they are able to get the maximum benefits from marketing their produce collectively.

Host: Hello, Margaret. What were you growing before you started growing cassava?

Nduko: I was growing maize for my family to eat and also for selling.

Host: So why did you move to growing cassava?

Nduko: Before, I used to think that cassava was a poor man's crop. Until my maize crop disappointed me. For three seasons continuously, I had no harvest. My family had nothing to eat and my children dropped out of school for lack of fees. So last year when I learnt about cassava, I convinced my husband that we should try growing it.

Host: And he accepted?

Nduko: At first he was very reluctant, but eventually he accepted and we tried growing the new variety of cassava. We had a very good harvest.

Host: How did the cassava change your life?

Nduko: It was a very good year. My family had food during the dry season and I sold some. Now my children are back at school. We decided we must plant more in the next season.

Host: These two machines here ... let's start with the one on your right – what is it for?

Nduko: This is a cassava chipper. This inlet is where we put the cassava. The blades you see inside chip the cassava into small pieces which are then ready for drying. The machine runs on electricity or other sources of energy. Or it can also chip manually.

Host: What about the other machine?

Nduko: This one is a milling machine. After the cassava chips are dry, this machine grinds them into flour.

Host: It looks and sounds like a maize or wheat flour miller.

Nduko: Yes, it is the same.

Host: Do you talk to other women about the benefits of growing cassava?

Nduko: Yes, together with the other members of our group, we talk to women in the market and at home. Women are more receptive than men, and now they even come to the shop and ask for cassava products and about how to grow cassava.

Host: What about your own children? Have they benefited from cassava?

Nduko: My last born child is three years old. He is very strong and healthy. I weaned him on cassava and millet porridge and I mix it with his other food. He loves it. I cannot compare his health to my other children when they were his age.

Host: What future plans do you have for cassava?

Nduko: We want to increase our area of planting cassava from half an acre to one acre. This crop has changed our lives and I would encourage other women to try it. It is not a poor man's crop.



Host: David Makau is a cassava farmer and the chairperson of the Tole farmers group in Southern Cameroon. I visited his farm and I was amazed by his healthy looking cassava crops. I started by asking him what he does to make his cassava plants so healthy.

Makau: These crops do not require much – but see how big and healthy they are! I got cuttings of the improved variety from Cameroon Agricultural Research Institute, or CARI. All I need is to dig a four-inch hole in the ground during the rainy season, plant the cutting, and weed it from time to time. Even if the weather is dry, it will bud and grow, and in seven to nine months, it is ready for harvest. I do not need any fertilizer or pesticide.

Host: I can see that many other farmers around you are also growing cassava.

Makau: Yes, most of them are in the cassava farmers group. We are 110 farmers who are now growing the crop in our small half-acre to one acre farms. We now have 21 acres between us that we have dedicated to cassava farming.

Host: Before growing cassava, what else were you growing?

Makau: Mostly maize, beans and vegetables. But they were not doing well.

- Host:** Why?
- Makau:** The climate has really changed in this area. In the past few years, we have had many long dry seasons and our rainy seasons are now shorter. So we end up not having any harvest from our maize and vegetables. Most of the people in this area were depending on food aid from the government until three years ago when we started growing the improved cassava.
- Host:** Do you see any change in the farmers' lives from the time they started growing the cassava?
- Makau:** Very much, very much. The farmers can now meet all their daily expenses from the cassava they harvest, and there is a ready market for the tubers and the cuttings. They can now pay school fees, too. They also eat the cassava, because many are realizing it is not just food for the poor but for everyone.
- Host:** While we were talking with Makau, a healthy-looking elderly man passed by and greeted us. Makau introduced me to his neighbour, Joseph Musyoka, a retired teacher who is also growing cassava. I jokingly asked if eating cassava is what makes him look younger than his age.
- Makau:** (*Laughing*) Maybe ... My wife and I love cassava and other traditional African foods. We have cassava for breakfast, with tea, and together with stew for either lunch or dinner. You should meet her – she looks even younger than me! We keep busy in the farm, so that keeps us young.
- Host:** Can I see how you grow your cassava?
- Musyoka:** Sure, let's all go to my farm. It is that one right next to Makau's.
- Musyoka:** This is my one-acre farm where I grow cassava and a few other crops.
- Host:** I see some vegetables and pigeon peas growing in between the cassava.
- Musyoka:** Yes. In fact, cowpeas and other legumes like pigeon peas release nutrients into the soil.
- Host:** Please give me a step-by-step description of how you grow cassava.
- Musyoka:** You need cuttings of the improved cassava plant that is drought-resistant, because with the KARI variety, you are assured of a harvest in seven to nine months. You should plant it at the beginning of the rainy season so that it can sprout before the dry season begins. Sprouting before the dry season helps the plant to withstand pest and disease attacks.

- Host:** Let us talk about the cuttings. How big should they be?
- Musyoka:** Five to seven inches long with around six to eight nodes. Right, Makau?
- Makau:** That's correct. But if you are late in planting during the rainy season, you can make the cuttings slightly longer. Then, even if both ends of the cutting are eaten by pests, you will still have a bit of the cutting remaining. Also, plant it in the ground at a 45 degree angle and one metre apart from the next cassava plant. That's about the distance between your feet and your waist, or twice the distance between the bottom of your foot and the middle of your knee.
- Host:** What if you are planting it with other crops, as you have done, Musyoka?
- Musyoka:** For intercropping, you will need a bit more space between plants to accommodate the cassava tuber as it branches, and also for the other crops to grow well.
- Host:** I know I can eat the cassava tuber. But what do you do with the rest of the plant after harvest?
- Makau:** With the new variety of cassava, nothing goes to waste, unlike our traditional variety that was poisonous to animals and the leaves could not be eaten. We eat the leaves as vegetables, and the tuber as a starch. We use some stem cuttings to grow more cassava, and we sell the rest of the stem cuttings to farmers who want to grow cassava. We also feed the leaves and the tubers to cattle and chickens.
- Musyoka:** Now we also add value to our cassava. There is a market for it from the livestock feed industry.
- Host:** And how do you add value to the cassava?
- Makau:** We chip the cassava into small pieces and dry it in the sun for about a week after harvesting. Then it last for up to eight or nine months. We also sell it to the livestock feed industry as dried chips. We usually get a good price when we sell it as a group.
- We also mill the chips into flour. We sell the flour or mix it with other flours and make porridge or donuts for sale. We get a little money as a group when we do this. We also make cassava chips and sell to schoolchildren.
- Host:** Are people changing their attitude towards cassava now that you are adding value?

Musyoka: It has taken a while, but slowly people are changing. My children enjoy cassava donuts and chips, and they appreciate that growing cassava helps feed and clothe them and pay their school fees. And that was not the case some years ago. It is the older generation that has taken a while to change. But right now, we are seeing more and more people coming to us and asking for the flour. Especially since they can also see it in the supermarkets.

Makau: Even the women are now using cassava more since they have discovered their children do not have to go hungry because there is a cheaper alternative to maize flour.

Mburu: The demand for cassava is high because maize and wheat are too expensive. The animal feed and the food industry are now substituting them with cassava for livestock feed and human food. And now we have more people eating cassava or using it as flour.

Host: How does Farm Concern help farmers?

Mburu: We provide equipment for chipping and drying for farmers who organize themselves into groups of over a hundred. We also link the farmers with the market for dried cassava by negotiating with the livestock feed industry.

Host: Do you teach the farmers how to preserve and process the cassava?

Mburu: Yes, the farmers who are working with us know that potassium cyanide is high in cassava but can easily be managed through processing. So they reduce the cyanide by cutting and drying it immediately after it is harvested. We also teach them basic bookkeeping.

Host: And what do you see in the future for cassava?

Mburu: Cassava has a lot of potential. In addition to the livestock industry, we are looking at the paper industry and the glue industry.

Host: Julius Mburu of Farm Concern brings us to the end of our program today. We have heard from farmers Margaret Nduko, David Makau, and Joseph Musyoka. They all grow cassava in their small farms and are able to feed their families and also sell cassava and its products as a group. They no longer go hungry or wait for food aid during the dry season.

I hope you have learnt something new today. Thank you.

Contributed by: Mike Achanyi Fontem, and Anyi Akenji Fermillen, Youth for Development Association in Agriculture (Y4DAA) Founder and Co.

Article 3: Community Reforestation Brings Back the Rains in the Savanna Region of Cameroon



Host: Here in Fako, in the savanna region of Cameroon, bush fires and clearing of the forest for farming have destroyed most of the original forest cover. This has affected rainfall patterns, decreased food crop yields and lessened the yield of other products from the forest. This article tells what happens when deforestation hurts a community. It also tells what communities can do to revive the land.

Host: Nana Bertrand is the chief of a village at the fringe of a forest reserve. He is meeting with his community of 600 people to talk about deforestation and the loss of forest products to the community. His people want to know what they can do to revive the forest, to bring it back to the way it used to be.

Nana Bertrand: Twenty years ago I used to go to the forest in the morning to pick snails, palm fruits, mushrooms and many other things. I would get rope to mend my house. I relied solely on what I could find in the forest. I set traps for rats, antelopes and other animals. The water pot in my house was full during the rainy season. Rainfall came early in February, and sometimes in January. All year round we were able to find green plants to supplement our diet.

We had nine months of rain and it sometimes rained during the dry season. Days were windy and nights were cool enough for sound sleep. We saw many kinds of butterflies, birds and other animals both day and night. Fruits were abundant.

We didn't need to take water to the farm since there were so many streams and wells. We got fish from the streams. Working under the shade of the many trees on the farm was pleasant and increased our work output. We walked long distances without facing the scourge of the hot sun. The soil was soft. Uprooting yams, cassava, cocoyam, and ginger was not difficult.

The soft soil made the crops grow large. Maize and millet grew very tall and produced big fruits without fertilizer. Groundnuts and beans could be planted at any time of year. Life as a farmer here was a delight.

But by five years ago, life had changed. When I went to the forest I didn't find snails, mushrooms, and palm fruits. I had to walk long distances through the degraded forest to get few and weak ones. I didn't find rope to mend my home.

I set traps but I didn't get any animals. The pot in my house had only a little water in the rainy season. The rains started at the earliest in April and lasted for only five months. There was a severe dry season five months long. Green vegetables were almost non-existent. Our nutritious diet was gone.

Days were very hot and sunny without wind to cool us. Nights were also hot and sleeping was difficult. I didn't see many animals. Fruits that served as food when we went to the farm were also gone. We needed to take food to the farm. We had to carry water in a pot to the farm because the streams had all dried up. The fish we used to get from the streams were all gone.

The soil had become hard so vegetables were small. Maize didn't grow very tall and fruits were getting smaller and smaller. Fertilizers were used extensively and pests were rife. Rainfall was very inconsistent. Life as a farmer was very risky.

I want to tell you something. For the past five years, the rainfall patterns have been changing again. My pot is now full sometimes.

Do you know why? I will tell you. Because of the trees we have planted over the past few years. The wind has started to blow again and nights are now cool. The birds have started coming back

and the streams have started to flow again. The crops have begun to grow bigger. The forest officers tell me that this is due to the changing patterns of the rains.

They say we should plant more trees this year and stop burning the bush. Then the snails, mushrooms, rats, and squirrels will come back. The green plants will be there for us and the rains will come at the right time for our planting season.

So I think we must plant more trees. What do you think? Do you agree with my suggestion?

Yes, we will help ourselves by restoring the forest. We understand that depleting the forest is causing all those problems. If it will solve our problems, we will grow more trees and stop burning the bushes.

Contributed by: Mike Achanyi Fontem, Freelance Journalist, Cameroon.