Developing Countries Farm Radio Network

Pack 12, Item 11

Type: Script

Date

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**Making copra, part 1 - A simple low-cost homemade ViSCA copra dryer**

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Information on this subject area was requested by DCFRN participants in Brazil, Chile, Columbia, Dominica, Fiji, Ghana, Guyana, India, Lesotho, Malawi, Montserrat, Pakistan,Philippines, Thailand, Western Samoa, and Uganda.

Presenter: George Atkins

**Special note**

Before using the information in this item, please read Note 1 at the end.

**Suggested introduction**

We at this radio station are part of a world-wide information network that gathers farming information from developing countries all over the world. It's the Developing Countries Farm Radio Network, sponsored by the Canadian International Development Agency, Massey Ferguson, and the University of Guelph.

Through this Network, we bring you information on ways to increase food supplies for your family, or to sell—ways that other farmers have used successfully.

If you grow coconuts, we have some special information for you today. Here's George Atkins.

MUSIC AND BEGINNING OF ANNOUNCEMENT - UP FOR :08 THEN FADED DOWNUNDER AND OUT

**ATKINS:** What you're hearing is a radio call to farmers in the Pacific island country of Vanuatu. They're being urged to produce higher quality copra or dried coconut meat—something they can do if they really try.

Well, as you probably know, some farmers make more money producing better quality copra than other farmers do. But did you ever think that the dryer you use could make a difference in the quality of copra you produce?

Segundino Cebu knows how to make the best possible copra. He's an expert at the Coconut Research Center at Baybay in the Philippines and he says that, to make good copra, it's most important that the coconuts are properly dried. He has told us about a very efficient dryer that produces top quality copra. It's the ViSCA dryer that's named after the Visayas College of Agriculture and used by farmers near the college. I'll tell you how you could build one that will dry 600 to 700 nuts in no more than two days; or if that's too big, you could just build it a bit smaller than the one I'll tell you about. On the other hand, you might dry copra for your neighbours in it or let them use it themselves.

Segundino suggests constructing your dryer on a piece of sloping land right in or near your coconut grove.

After your dryer is completed, it will look like a big oblong (rectangular) box on a levelled-out place on the sloping land. Under the box will be a 1 metre (3 feet) deep oblong hole and there will be a short horizontal tunnel that leads in to the end of that hole. The tunnel will be dug in from the sloping land below. Heat from a fire in the tunnel will dry the copra in the big box above the hole.

Now that you have a picture in your mind of what the dryer will look like, let's think first about the place you will level out on the sloping land. Using a shovel, you can level out a plot about 4 metres (12 feet) square. On this level place, the basic structure of the dryer will be a good sturdy frame made out of the trunks of old coconut trees that have been cut down because they're no longer really productive.

Build the frame oblong in shape, 1-1/2 metres (5 feet) wide and 2 1/2 metres (8 feet) long and place it flat on the ground in such a way that one end faces in the direction of the lower ground of the slope, with the other end toward the higher ground.

Now remember, I said that there will be an oblong hole under the drying structure. It should be exactly the right size and shape. After the sturdy frame is in place, dig the hole, removing the soil to a depth of 1 metre (3 feet) inside the frame. You now have the solid frame on the surface of the ground all around the oblong hole.

Now remember that the frame and the hole below it are on a levelled-out place on sloping land—so that if you go down the slope a little, it won't take much digging to make a tunnel in to one end of that hole below the frame, will it? Well that's one of the main features of this dryer—a tunnel that is dug in from down the slope a little. The bottom of the tunnel must be at the same level as the bottom of the hole.

Of course, under certain soil conditions or weather conditions, a tunnel like that could cave in (collapse), so with Segundino's dryer, the tunnel is kept open using an old metal drum that's had both ends cut out of it. He arranges it so one end of the drum opens right into the end of the oblong hole.

Now do you have a picture in your mind of the basic part of this copra dryer?

It's constructed on a levelled-out area that's been made on sloping ground. The base structure is a good sturdy frame lying solidly on the levelled out area. Inside the frame is a hole of the same shape, 1 metre (3 feet) deep. Then down the slope a little, a tunnel has been dug in, to reach one end of the hole. To keep the soil from caving (falling) in, the tunnel has been lined with metal. The lining is really an old metal drum with both ends removed.

Well that's the basic part of the ViSCA dryer, and now I'll tell you how to complete the structure.

First off, you can see that you could quite easily get a good hot fire going down there in the metal drum. Then too, you can imagine heat or hot air from that fire moving through the tunnel and on over into the hole beneath the sturdy frame. Now with that hot fire down there in the tunnel, if you were to hold your hands over the hole, you'd feel warm or hot air coming up out of the hole, wouldn't you? Well right where you feel that heat coming up is where you'll be drying your copra.

To do this, you'll have to build a strong. light-weight drying platform that can be set flat on top of your sturdy basic frame. The top of this drying platform can be made out of bamboo slats. The slats should be far enough apart so that warm air coming up out of the hole can get through to dry any coconuts you pile on top of the slats.

There's something else that has to be added to your ViSCA dryer—you must now build up solid walls, 1 metre (3 feet) high, on top of that basic sturdy frame you made in the first place.

Now see what you have? A good-sized drying box with solid walls. But the bottom of the box is really the drying platform made with bamboo slats; and that box is big enough so that you can pile as much as five layers of split coconuts inside it. And that's a pretty good-sized copra dryer, isn't it? It's big enough to dry 600 to 700 coconuts at one time.

Now there's just one more thing. Segundino Cebu says that you may now want to construct a roof over your ViSCA dryer so that you can dry copra even when it rains.

On our next program, I'll tell you about how to use the ViSCA copra dryer.

Serving Agriculture, the Basic Industry, this is George Atkins.

**Notes**

1. This item is the first of two items in this package on the subject of drying copra. Please use Items 11 and 12 in the proper sequence.