Developing Countries Farm Radio Network

Package 11, Item 11

Type: Script

Date

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**An improved beehive you can make at little cost**

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Information on this topic was requested by DCFRN Participants in Argentina, Costa Rica, Ecuador, India, Malawi, Philippines, Puerto Rico, Sri Lanka, and Tanzania.

Presenter: George Atkins

Interviewee: Dr. Gordon Townsend, Professor Emeritus, Department of Environmental Biology, University of Guelph

**Special note**

Before using the information in this item, please read the notes at the end concerning related DCFRN items.

**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.

Today our subject once again is honey, and honey bees that gather it and put it in a beehive that provides an additional source of food for you and your family or to sell. Here's George Atkins.

**ATKINS:** We've talked before about bees and honey and what you can do to get wild bees to live in a hive that you provide for them. You've also heard about how to get their honey out of hives that you can make out of hollow logs or sections of large bamboo that you hang up in trees—and about making a lot of smoke to prevent bees from stinging you when you are collecting honey.

It was the world-renowned beekeeper, Dr. Gordon Townsend, who provided that information for us.

Well there's another kind of beehive that he'd also like you to know about. He says you could make one like this and that it's easier to get the honey out of it than out of the hollow log or bamboo hive.

With the new type of hive Dr. Townsend is going to tell us about, you open it at the top instead of at the bottom. You first take off the lid that covers the whole hive, then you can lift out the honeycombs. You could think of this hive as a long box made out of thin boards or made like a long basket. You could make it out of whatever material you have. Hives of this type have been made out of an old metal oil drum that was cut in half lengthwise, making two horizontal troughs.

If you'd like to try keeping bees this way, you could do this, using just one of the troughs to start with.

**TOWNSEND:** We cut a barrel in half. Just split it down the centre so that you have the two curved sides, like two troughs that you could use for watering livestock. It does work. There's no question about it. If you're in Africa, you might use 45-gallon (200 litre) drums, or if you're in Asia, then you might get smaller drums, for instance down to a 30-gallon (125 litre) drum—something like that which may be a more appropriate size.

**ATKINS:** Why smaller?

**TOWNSEND:** In Asia there's a different type of bee than there is in Africa—they are a different type of bees that build smaller colonies and they live in smaller boxes (hives).

**ATKINS:** Of course, you must have a big, flat waterproof cover or lid on this beehive you're making out of half an oil drum. Remember how it is that the bees build their combs down from the top of the hive? Well, if you just put the lid on this open trough and the bees use it for their hive, they'll build their combs hanging down from the lid.

Instead of letting them do that, the main feature of this kind of beehive is that you give your bees something special to build their combs on. Not on the inside of the lid, but on a lot of straight sticks just below the lid. The sticks are placed across the drum. The ends of the sticks rest on rails you attach on the inside of each of the long sides of the drum. Now the sticks must be straight and round, and you set them right next to each other. Use round, straight sticks about an inch and a half (3 to 4 centimetres) across, and be sure that they're straight and so close to each other that there's not enough space between them for bees to get through from the bottom of the hive up to where the lid is.

When you're preparing your beehive, rub beeswax on the bottom of each stick. If you do this, the bees will build a separate comb hanging down from each one of the sticks.

Now you can see why this system is so good. When you want to take out a comb full of honey, you first make a lot of smoke so the bees won't bother you; then take off the waterproof lid, just lift out one of those sticks with a honey comb on it and you've got your honey! You can then break off the honey comb and put the stick back in place in the hive and put the lid on top once again. This way, you haven't really disturbed the bees but you've got your honey. Dr. Townsend calls those sticks "bars" and he calls this type of hive a "Top-Bar Hive." That's because of all those sticks or "bars" at the top of the hive, with combs hanging from them just under the lid!

Now if you're going to try making a Top-Bar Hive out of half of an old drum, you must be sure to thoroughly clean the drum both inside and outside. Be sure the bees can get into the drum hive from near the bottom of one end only. It's likely that there's already one hole there; but do you need to make any more holes?

**TOWNSEND:** Yes, you need extra holes in the end. Just get a large nail or something to make holes big enough for the bees to get in and out.

Now as this beehive is made of metal it will pick up heat quite easily. There is no insulation to keep it cool in the hot sunshine so it will have to be shaded. You'll have to have it in a good shady place.

**ATKINS:** With a hive as big as that, should you hang it on wire from the branches of a tree like you hang up a log hive?

**TOWNSEND:** Well yes, one of the main reasons for using wire for hanging them from trees is to protect them from safari ants. If these ants get into a hive, they will destroy the bees. They can destroy the colony of bees overnight. This is one of the main reasons for hanging hives in trees.

**ATKINS:** Is this a problem everywhere?

**TOWNSEND:** Almost everywhere. Ants are a real problem in all tropical areas, particularly in Africa.

Using wire for hanging hives, you can put grease on the wire to keep the ants from getting to the hive and destroying the bees.

**ATKINS:** What kind of grease do you use on the wires to keep the ants from getting to the bees?

**TOWNSEND:** Oh, any kind of grease that will stick on the wire—that won't come off too easily with the heat; that the ants won't cross—it should be petroleum grease, that is, thick grease used for cars and trucks.

Now what we like to do is hang our Top-Bar Hives low enough so you can work with the hives—2-1/2 to 3 feet (a metre) above the ground.

**ATKINS:** So now you know what a "Top-Bar Hive" really is. We've told you how one can be made using part of a metal drum cut in half lengthwise. Remember, though, you can make something like this out of almost any other materials you have. If you make it with other materials, however, it doesn't need to be quite as big as one you'd make from half an oil drum. Be sure, though, that the sides slope inward at the bottom.

After the hive is in place and you've rubbed beeswax around the holes you've made in one end for bees to go inside, sooner or later a swarm of wild bees should go into your hive and make it their home.

Finally, here's why Dr. Townsend recommends the Top-Bar Hive.

**TOWNSEND:** You can easily get to where the honey is without disturbing the colony of bees to any great extent. The Top Bar Hive is very cheap and easy to build. It doesn't require a foundation and it’s all in one long box that can be suspended in a tree.

So it has all the characteristics of the type of beekeeping that has been carried on for thousands of years and yet it has the advantages of the modern type of hive.

**ATKINS:** Thank you very much, Dr. Gordon Townsend, here at the Kibwesi Women's Cooperative in Kenya.

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

**Notes**

1. There are two other DCFRN items that contain information directly related to this item. They provide basic information your farmers should have in their minds before they learn about the ideas in this item.

You are therefore strongly urged to present that information to your farmers again before providing them with the information in this item. The two other items are:

Honey is Good Food that Bees Give You at no cost (Part 1 - A Simple Beehive) - DCFRN Package 4, Item 4.

Honey is Good Food That Bees Give You at no cost (Part 2 - Getting the Honey) - DCFRN Package 4, Item 5.

2. Also before using the information in this item, please read the notes at the end of the two items mentioned above.

3. Additional information related to the role of the honey bee in food production, and to the life cycle of insects can be found in:

How Blossoms and Flowers Become Fruit and Seeds - DCFRN Package 6, Item 2

Knowing Insect Life Cycles Helps You Control Pests - DCFRN Package 10, Item 8