



Is tillage really necessary? The benefits of Conservation Agriculture

Notes to broadcaster

This program about Conservation Agriculture, in a two-host format, will be of interest to farmers who are concerned about loss of soil and decreasing yields. Conservation Agriculture includes practices of reduced tillage, the establishment of a permanent soil cover and the use of crop rotations. Farmers who have practiced Conservation Agriculture over a period of time observe that soils are more fertile, can hold more water and that they get more stable yields. We recommend that you follow up this program with further programming that describes in more detail the specific techniques involved in Conservation Agriculture. For more information, please see "The promise of Conservation Agriculture," also included in this package.

Start of program

Host: If you go to the fields around planting time, you will see most farmers out ploughing their fields. But does ploughing cause more problems than solutions for farmers? Maybe. Is tillage really necessary? Maybe not. These are the questions we're going to discuss today on this program. Please stay tuned.

MUSICAL BREAK

Host 1: Welcome back to the program. As farmers we've known about soil erosion and ways to prevent soil erosion for a long time, but still... we are losing soil.

Host 2: Losing soil and losing hope. Because, as the soil erodes, so do crop yields and the harvest gets smaller and smaller every year.

Host 1: Some farmers and scientists believe that ploughing contributes to soil erosion.

Host 2: You know, you might be interested in a new method I use called 'improved fallow'. Instead of leaving the land vacant, I plant trees and shrubs on fallow land. Why don't you come on inside and I'll tell you more.

Host 2: Ploughing? But every farmer ploughs and tills the soil! We prepare the land for planting, and till to remove the weeds.

Host 1: It's true that tilling the land is a most common farming practice. But did you know that some farmers in Africa and other parts of the world have stopped ploughing. They no longer till their land.

Host 2: What?! I'm not sure I understand what you are saying.

Host 1: These farmers have stopped ploughing to save their soil.



Host 2: That sounds like a lot of nonsense!

Host 1: It's not. It's called 'Conservation Agriculture'.

Host 2: Are you saying that all farmers should stop ploughing?

Host 1: No, no...you're getting ahead of me! I'm only saying that we should not be afraid to consider new techniques. Farmers and scientists who have studied such things say that tillage is not always necessary...especially in our tropical soils.

Host 2: But if this is true, why did farmers start ploughing in the first place?

Host 1: Tilling can help to control weeds and allow the soil to hold more water. But regular ploughing that turns over a lot of soil will lead to soil degradation. Especially here in our hot climate where the layer of topsoil is thin. Over time, with too much tilling, crop yields decline.

Host 2: Okay, so getting back to your question...is tillage really necessary? What's the answer?

Host 1: You just need to look at the forest to answer this question. There is no tillage in the forest. Yet, plenty of healthy plants are growing there.

Host 2: I guess that's true. If tillage was necessary for plants to grow, then all that land that wasn't tilled would become desert. That's something I hadn't thought about. If I wanted to start doing Conservation Agriculture, where would I begin?

Host 1: First, you would have to plough your land less frequently. At planting time, instead of ploughing, you would plant your seeds directly into the soil. When you stop ploughing, you may get a lot of weeds at first. It's important to use all possible techniques to control the weeds, including rotating crops. You should also keep the soil covered ... covered either by leaving crop residues or growing cover crops (such as Dolichos lablab or Pigeon pea) in association with your main crop.

Host 2: Would I have to change anything else?

Host 1: You would have to change your mind! By that I mean you would have to change the way that you think. That's probably the hardest thing for any person to do.

Host 2: So, if this conservation agriculture is so great, why aren't more farmers adopting it?

Host 1: Because it is a new practice. That means it requires a lot of learning by many people such as farmers and extension officers. New challenges take time to solve...but it can be done!

Host 2: Yes, but it is a big step. I would have to know that I would see some benefits. Maybe better harvests! Bigger profits!



Host 1: You have to give it time, but I am sure you will notice more stable yields and less soil loss. And you won't have to spend so much money on equipment, fertilizers and pesticides. If you want to see the benefits yourself, try it in a small part of your field to start. This is the best way to learn about it.

Host 2: It sounds promising. But you know, it's going to take me some time to change my mind about this....

Host 1: Didn't I say that was the hardest thing to change?

MUSIC TO END PROGRAM.

END

Acknowledgements

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Information sources

Conservation Agriculture: The future of Africa, Fact Sheet, World Agroforestry Centre, Nairobi, Kenya.

Shedding light on Conservation Agriculture, Theodor Friedrich, Agricultural Engineering Branch, Food and Agriculture Organization, New Agriculturist on-line, <http://www.new-agri.co.uk/00-4/perspect.html>

What is Conservation Agriculture?, FAO, 2005.
http://www.fao.org/ag/AGS/AGSE/agse_e/1ero/conser.HTM

Conventional tilling severely erodes the soil: New concepts for soil conservation required, FAO Press Release, 1998. http://www.fao.org/waicent/ois/press_ne/presseng/1998/pren9842.htm

For more information about Conservation Agriculture please contact:

Africa Conservation Tillage Network (ACT)
<http://www.fao.org/act-network>

Food and Agriculture Organization of the United Nations (FAO)
<http://www.fao.org>

Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement (CIRAD)
<http://agroecologie.cirad.fr/dmc/index.php>

Regional Land Management Unit (RELMA)
<http://www.relma.org>

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