

What is CAWT?

Problems encountered by farmers
in traditional farming include:

Increasing cost of chemical fertilisers

High cost of land preparation

Soil erosion during rainy season

Solution?

a new farming system known as

Conservation Agriculture with Trees

**CAwT helps renew eroded and
degraded soils in the uplands with
the involvement of trees in farming.**

includes
3
principles
and
2
aspects



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RESEARCH
PROGRAM ON
Forests, Trees and
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Conservation Agriculture with Trees

Principles:

1 Minimum Soil Disturbance

Regular plowing interrupts proper access of water and root crop development. This destroys the soil structure. So instead, farmers can use equipment that would disturb the soil as little as possible.

Examples:



Dibbler

Ripper

Sub-soiler

Jab planter

Direct Planter

Tractor-drawn zero-till

Animal-drawn direct seeder



2 Crop Rotation

This is the practice of growing different types of crops alternately in the same area, and planting different crops after every season or year.

Benefits of Crop Rotation

Crop roots can draw moisture and nutrients from the soil that can improve soil structure

Planting different crops after each season breaks the life cycle of several weeds, pests and diseases and prevents them from multiplying

Crop rotation provides a wider variety of products to sell

Crop rotation reduces the possibility of erosion

This increases yields, leading to an increase in profits



3 Maximum Soil Cover

The soil should be covered with organic matter such as crops, crop residues, and trees that are compatible with the crops being planted. This is to improve soil condition, and reduce problems such as erosion and weed infiltrations.

Good soil cover is the backbone of CAWT

Prevents soil erosion due to wind and water

Blocks the growth of weeds

Increases soil fertility and the organic matter content of the soil

Develops plant roots that help improve soil structure

Aspect 1

Good Management Practices

Productivity can be maximised with the use of knowledge for good management practice. For example; knowing seed qualities, weather conditions, spacing and management of trees.

Aspect 2

Use of Nitrogen Fixing and High Value Trees

The use of man-made fertilisers can be reduced by selecting more appropriate trees to be planted on the farm. For example, growing legume trees would provide nitrates that help improve soil fertility. Leaves and litters of the trees also reduce soil temperature which is important in crop productivity.