



CONSERVATION AGRICULTURE

for increased production and environmental resilience

WHY CONSERVATION AGRICULTURE (CA)?

- Africa remains the only continent where per capita food production has declined over the last 35 years. Land degradation due to conventional farming methods is largely responsible.
- The HIV/AIDS and malaria pandemics compromise productivity of the African smallholder farms by reducing the quality and quantity of available labour.
- The earth's climate is changing and smallholder farmers in Africa will not be spared from the adverse effects; in fact indications are that they are among the worst to be affected.
- New farming methods that efficiently use labour, protect and improve the natural resource base are required to feed growing populations under the challenging environments. *Conservation Agriculture holds that promise!*

WHAT IS CONSERVATION AGRICULTURE?

Conservation Agriculture is a way of farming that promotes efficient input use and increases the long-term productivity of land and water resources. These objectives are achieved through the application, in combination with other good agronomic practices, of the following principles:



Minimum soil disturbance



Maintaining a permanent soil cover



Rotating and mixing crops

PRINCIPLES OF CONSERVATION AGRICULTURE

WHAT ARE THE BENEFITS OF APPLYING THESE PRINCIPLES?

Minimum soil disturbance

- Build up of soil organic matter which helps to sequester carbon
- Maintain and improve soil structure and soil health including biodiversity
- Improved water infiltration
- Reduced exposure of soil to erosion and runoff

A

Permanent soil cover

- Protects soils from erosion, extreme temperatures and fluctuations.
- Improved soil moisture retention by reduced evaporation
- Source of organic matter
- Suppresses weeds

B

Rotating and mixing crops

- Improved soil fertility through nitrogen fixation by legumes
- Extraction of nutrients from different soil depths
- Helps control weeds, pests and diseases
- Spreads risks of crop failure
- Biological tillage by roots

C

CONSERVATION AGRICULTURE & FARM PRODUCTIVITY

When these principles are applied simultaneously in combination with good agronomic management:

- Labour is used more efficiently thus increasing farm profitability
- Fertilizer and manure requirements are reduced by 50% or more.
- Crop yields can double or more and some harvest is possible in years of drought
- Household food security is improved and stabilized.

CA WORKS BEST WHEN ALL 3 PRINCIPLES ARE APPLIED

CA SUPPORTING BASIS

