



Planting maize using walking tractor at Gudaya Billa woreda



implemented by
giz
Deutsche Gesellschaft
für Internationale
Zusammenarbeit (German Development Cooperation)



Conservation Agriculture (CA)

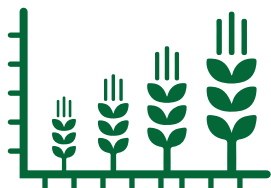
Conservation Agriculture is the farming approach that conserves, improves and ensures efficient use of natural resources and enable the farmers to achieve profits in a sustainable manner.

Benefits of CA

1 | Stable Yields

The water and soil conserving effects of CA help to stabilize yields against weather extremes.

Often, CA increases average yields in the long-term.



2 | Drought buffering

CA increases soil water content by increasing infiltration and reducing runoff and evaporation.

Increased infiltration improves water use efficiency and buffers crops against drought. Mulch cover also buffers the soil against temperature extremes.



3 | Reduced field preparation costs

CA reduces costs associated with tillage, whether manual or by machinery.



4 | Reduced soil erosion

Reducing tillage and maintaining soil cover with crop residues can reduce erosion by up to 80%.

CA also generally increases soil organic matter in topsoil, as well as soil biological activity and biodiversity.



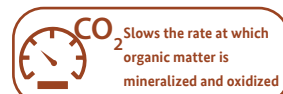
5 | Climate change mitigation

CA can mitigate climate change by accumulating carbon in soil, though this benefit may not be as large on a global level as has been hoped.



Principles of CA

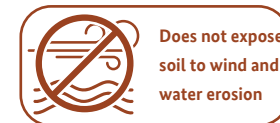
1 | Minimum soil disturbance



Slows the rate at which organic matter is mineralized and oxidized



Reduces soil compaction.



Does not expose soil to wind and water erosion



Improves water infiltration rates



Saves time, energy, and money

2 | Permanent soil cover with crop residues and live mulches



Reduces soil water evaporation



Suppresses weeds



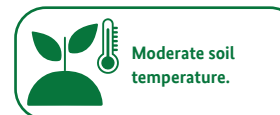
Helps to reduce runoff and seep the water into the soil



Helps to reduce direct raindrop impact and so reduces soil erosion



The organic residues improve organic matter content and soil nutrient status



Moderate soil temperature.

3 | Crop rotation and intercropping



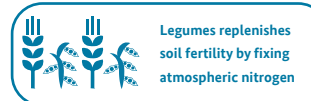
Control pests (weeds, of poster insects & diseases) by breaking their life cycles



Enables the crops to effectively use the nutrients in the soil



Reduces crop failure in case of drought & disease outbreaks



Legumes replenishes soil fertility by fixing atmospheric nitrogen

NB: Where farmers do not have enough land to rotate crops, intercropping can be used.