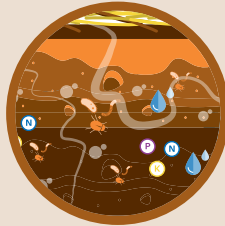




Soil and climate benefits of improved forage grasses

Soils

Soil Organic Carbon (SOC) is the main component of soil organic matter which acts as the basis of soil fertility and supports plant growth by improving soil structure, aeration and water infiltration.



Soil erosion, the removal of the most fertile top layer of soil through wind, water and tillage, is the #1 threat to our planet's soils. Over 80% of land degradation in sub-Saharan Africa is due to soil erosion.

The livestock sector contributes significantly to climate change with about 10-15% of all human-induced greenhouse gases (GHG).



Climate change

Livestock in sub-Saharan Africa has high GHG emission intensities due to low feed quality, mainly relying on natural pastures and crop residues.



Demand for animal source foods is rising due to growing population and urbanization. In Africa, where current consumption is low, this provides significant opportunities for income generation and better nutrition.

Improved forage grasses

Improved forages include perennial grasses such as *Brachiaria* and *Panicum* which can increase feed quantity and quality and therefore livestock productivity

More soil carbon through high soil organic matter input from above and below ground biomass—2 to 3 fold higher sequestration rates compared to annual cropping systems



Mitigate greenhouse gas emissions through reducing CH₄ emissions from enteric fermentation per unit of livestock product by 25%



Better soil structure through binding soil particles, improved aggregate stability and infiltration



Less soil erosion, up to 70% reduction in soil losses



Better soil health through higher and diverse microbial population and high microbial activity, which can increase resistance to drought and pest and diseases



Less nitrogen leaching and gaseous losses (N₂O) through reduced soil nitrification

