



Conservation Agriculture adoption status in Malawi and the role of sustainable agricultural mechanization.

Kefasi Jermiah Kamoyo

Principal Land Resources Conservation

Ministry of Agriculture; Department of Land Resources Conservation, Lilongwe

Malawi

(CONTACTS: KAMOKEFA@YAHOO.COM AND/OR +265999951981)

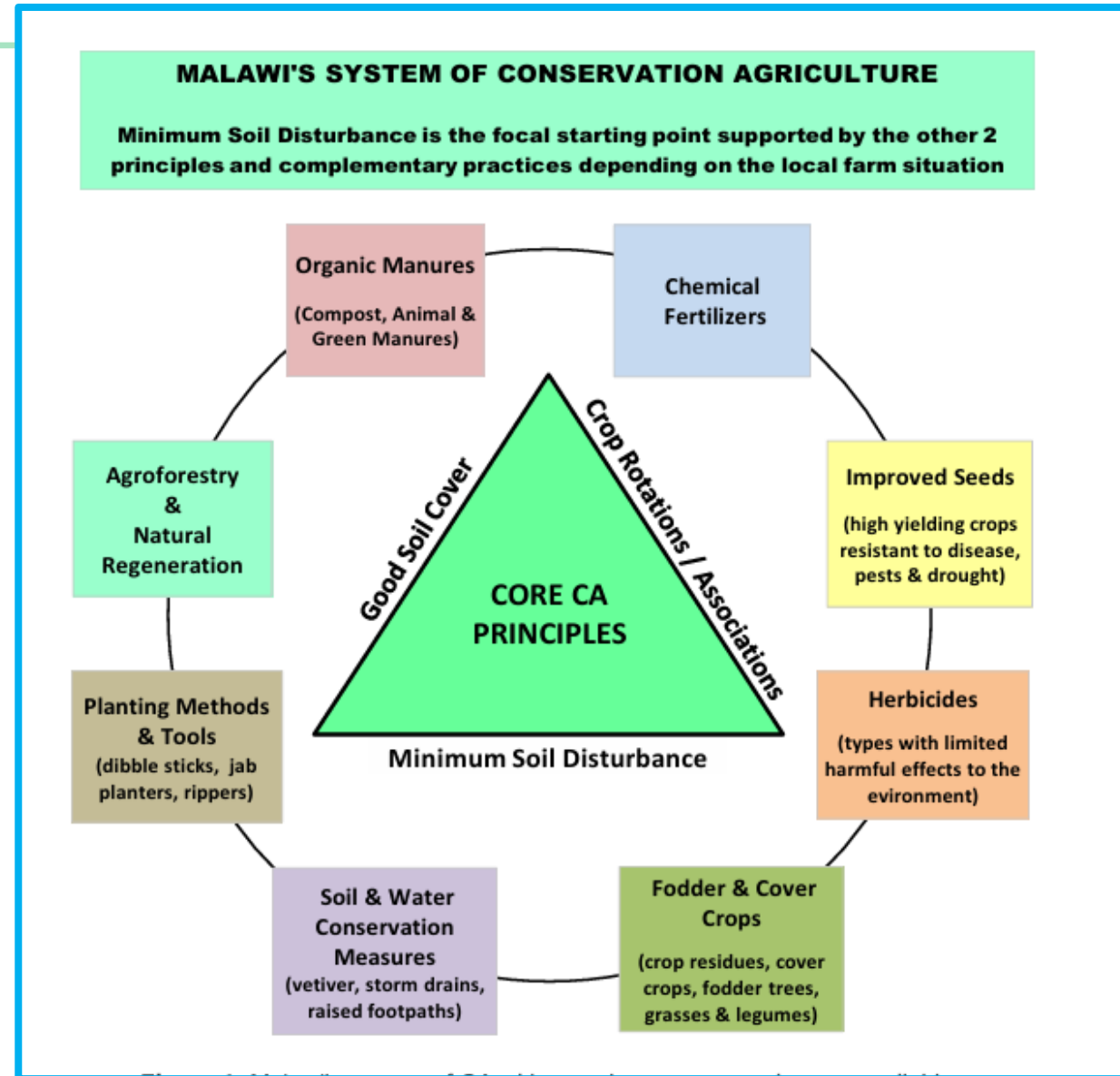
Department of Land Resources Conservation

- Department of Land Resources Conservation (DLRC) is mandated to provide policy guidance, land resource information and training in order to achieve sustainable land resources management and prevention of land degradation that will increase and sustain its productivity for agricultural growth and development.
 - Vision - 'a nation with reduced land degradation'.
- The Goal "To promote efficient and diversified and sustainable use of land based resources for both agriculture and other uses in order to avoid sectoral land use conflicts and ensure sustainable socio-economic growth and development"
- The Department is promoting Sustainable land management and climate smart agriculture using integrated catchment conservation and management approach model



Department of Land Resources Conservation

- DLRC is promoting conservation agriculture using catchment conservation taking on board the core principles with its complementary practice
- There are 11 Stakeholders in the promotion of CA in the country of which 3 are promoting mechanization of CA in the country using small tractors

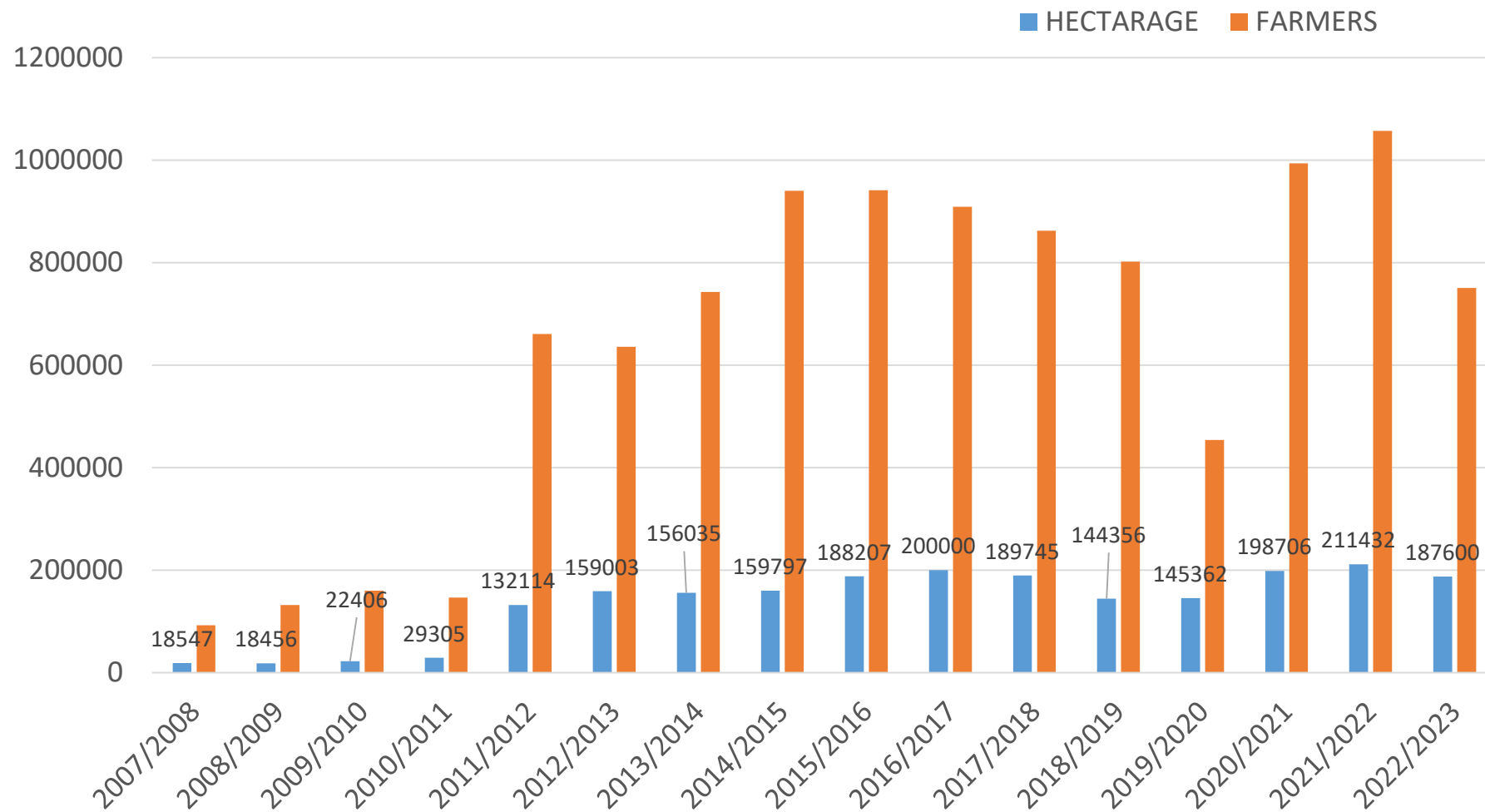


Current Land Preparation Practices in Malawi

- Current land preparation and crop husbandry practices in Malawi- use of hoes and dip sticks, mulching
 - 90% is human power/ hand hoe
 - 4% is draught power
 - 6% is tractor power



Adoption trend of CA in Malawi-success story and remaining challenges



The adoption trend of CA since 2007 Season.

(Source DLRC Annual reports)

2018 and 2019 there were fall army worm infestation in the fields which farmers associated it with CA which affected adoption

Success story and remaining challenges

- The Agriculture mechanization project managed to buy and distribute 92 tractors and accessories to PO with secured markets. This is a an opportunity for sustainable mechanisation in the country.
- The establishment of Mega Farm Unit within the Ministry to transform Malawian agriculture. One-Stop Private Sector Mega Farms initiative that will see 844 medium and large-scale farmers provided implements for mechanization.

Formation of the Mechanization Association of Malawi
Revamped & restructured ADD-based farm machinery hiring scheme
MOA Procured 8 new tractors

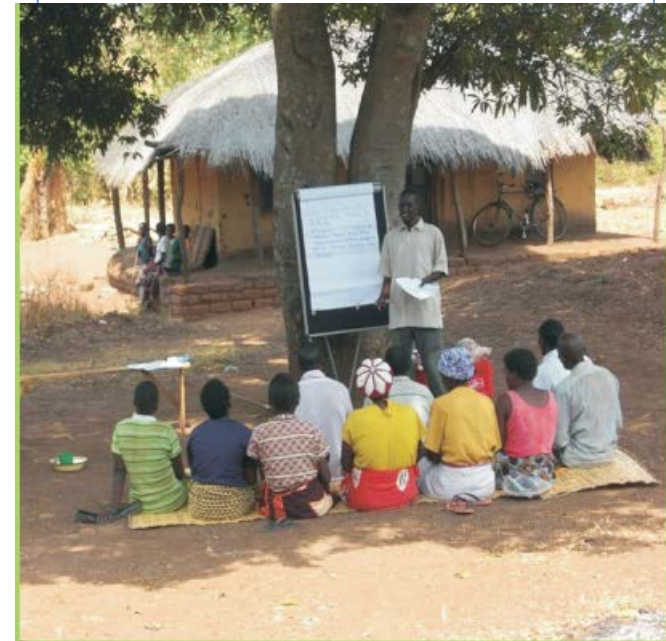
- However the problem still stand that there are no readily available accessories that are in tandem with CA. this is an opportunity of the country to start thinking on SAM under CA



What are the main challenges facing the farmers in adopting CA?

Key barriers to CA Adoption in Malawi

- **Resistance to Change:** Compelling evidence is needed to show that CA offers greater benefits than the tradition of ridging and clean fields (Small landholdings making farmers Risk averse)
- **Lack of understanding** on the long-term benefits of OM accumulation vs reduction of yield in 1st year due to high C/N Ratio
- **Conflict interest on the use of Stover** i.e. Livestock vs mulching_Energy Source. Amount of the mulch is adequate?
- **Quality Training:** Lack of practical knowledge on CA highlights the need for quality training to extension staff from Govt, Projects, NGOs and the private sector on how to implement CA practices on the ground.
- **Focus on inputs:** Farmers and extension staff believe that specific inputs and/or tools are needed to undertake CA (e.g., fertilizers, herbicides, and large amounts of crop residues (often imported)).
- **Little access to mechanisation:** without functional equipment for direct seeding of crops it becomes a protracted exercise to properly test, and, more importantly, demonstrate the benefits of CA



Success story and remaining challenges

Availability of several policies, guidelines and frameworks are advocating for promotion of conservation agriculture in Malawi. Some of them are as follows:

- ✓ Malawi 2063 Agenda
- ✓ National Land Resources Management Policy (2000) under Review
- ✓ National Agriculture Policy (2016) Under Review
- ✓ The Malawi Agricultural Sector Wide Approach (ASWAP) – aligned to the Comprehensive African Agricultural Development Programme (CAADP) and the Development Assistance Strategy
- ✓ Malawi National Agricultural Investment Plan (NAIP)
- ✓ Guidelines for implementing Conservation Agriculture Guidelines in Malawi (2017)
- ✓ Malawi National Climate Smart Agriculture Framework

However these policies emphasize less on SAM in CA



**MINISTRY OF AGRICULTURE, IRRIGATION
AND WATER DEVELOPMENT**

**GUIDELINES FOR IMPLEMENTING CONSERVATION
AGRICULTURE IN MALAWI**



APRIL 2016

Remaining challenges

- The integration SAM in CA into the policies and regulations
- Calibration, validation of mechanization tools for CA
- The flow of funds to support SAM for CA

Concluding Remarks/Recommendations

Scaling CA and sustainable land use systems in Africa.

- (a) Situating conservation agriculture based on a socio-ecological framework in order to avoid potential mismatch between the technology and the target biophysical and socioeconomic environment;
- (b) Exposure of farmers to different CA practices, particularly through FFSs On-farm demonstrations, Exchange Visits to show the benefits and practicality of cropping techniques, tools, and equipment;
- (c) Training in then practical use of new technologies, combined with flexible funding mechanisms and incentives, particularly during the period of transition;
- (d) Fostering cooperation and dialogue between scientists, suppliers and farmers, and between government and educational institutes;
- (e) Achieving and publicizing improvements in land productivity, reduction in farming costs and environmental benefits;
- (f)) Integrating conservation agriculture in agricultural development frameworks, strategies and policies to facilitate a shift from conventional farming practices

Concluding Remarks/Recommendations

- The roles/actions of sustainable agricultural mechanization in Malawi in scaling the adoption of CA or other sustainable land use practices?
 - ✓ Promote and ratify policies, regulations and laws that encourage SAM especially under CA
 - ✓ Support machinery-leasing schemes. Encourage schemes to support smallholder farmers to access SAM
 - ✓ Encourage sustainable mechanization across the value chain

Thank you for your attention!