SUSTAINABLE AND REGENERATIVE AGRICULTURE IN BABATI - TANZANIA

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Soils and the Food we Eat

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Agriculture in Babati District:-

- More than 90% of the population in the District depends on agriculture and livestock keeping (agropastoralists)
- District area 560,000 ha; Arable area 139,989 ha (25%) of the total district area. Small scale owns 2-3ha. Large scale farmers occupy 2,160n ha.
- Main food crops:- Maize, beans, leguminous crops, rice, sorghum, millet, cassava, bananas and potatoes
- Main cash crops:- coffee, pigeon peas, groundnuts, rice sesame, sugar cane, cotton, sunflower, wheat, vegetables.
- Livestock: mainly indigenous cattle, goats, sheep and pigs
- Number of livestock is more/less equal to the population of the people. Grazing land is 211,500 ha but rea required for livestock is about **816,000 Ha.**

Development of CA and DLF:-

- Compacted soils has been a major problem - deter water infiltration, limiting crop growth and increasing soil erosion.
- Hard pan after years of ploughing led to a formation of plough pan.
- Survey held in 1994/95 (LAMP) recommended: application of Farm Yard Manure (FYM), promotion of improved crop husbandry, improved seeds, inter-cropping, cover crops and alternatives to post harvest grazing. Together it was called Dry land Farming (DLF).
- A survey done in 1998 showed that the use of chemical inputs was low and that Babati District should gain from organic farming. The work for supporting organic farming started.

Conservation Agriculture (CA)

- CA aims at high crop yields, reducing production costs, maintaining soil fertility and conserving water.
- CA is a traditional practice in Babati, improved through dev. Programmes like (LAMP)
- CA combines:
  - Minimum soil disturbance
  - Permanent soil cover
  - Crop rotations /associations

Cultivation ridges Mama Issara

Dry Land Farming (DLF)

- Direct planting to minimize soil disturbance
- Permanent soil cover to protect the soil surface
- Mngt of crop residues and weeds to improve soil structure and soil fertility.
- Integrated Pest Management (IPM).

CA techniques in practice:-

- Agroforestry
- Sub-soiling
- Ripping
- Soil cover
- Inter-cropping
- Crop residues
- Cover crops
- Mulch
- Ridging

Impact of CA and DLF:-

- Increase of crop productivity from 100%-400%.
- Increase in Livestock productivity, up to 800% due to better use of fodder
- Reduced water run-off by sub-soiling, proper cultivation techniques, enhancing water infiltration and improving soil structure.
- More efficient farming operations by using proper/simple CA implements
- Reduced pressure to natural forests by development AF and farmland tree planting

Challenges:-

- Affordability of CA implements, for most farmers the price is high.
- Conflicts between farmers, pastoralists, and others (e.g. wildlife tourism)
- Low technical capacity among extension staff, lack of funds
- Efficient land use planning and implementation
- Institutional framework is not harmonized among sub-sectors, e.g. Lands, Agriculture, Wildlife, Forestry
- Limited technology transfer (from research and training institutes)
- Weak interaction amongst market actors, e.g. Service providers, manufacturers, farmer groups and financial institutions.

The way forward:-

- Holistic approach-Farmers operate in a holistic system rather than instituted subject specific approaches.
- Coordination of CA activities, including connections to scientists and other stakeholders to address challenges
- Promotion and publicity of CA to emphasize the benefits
- Introduction of subsidies, or similar tools, to promote implements, seeds and other key inputs towards adoption of CA / OF
- Review of land tenure and inheritance rights to reduce the “free-for-all” attitude, increasing individual responsibility and encouraging investment on CA.
- Capacity building and training (ToT) at all levels on CA. Conduct demonstrations trials/organize field days- on CA packages.

END OF PRESENTATION

Thank you