Improving Livestock Feeds in Poverty Alleviation for Small holder farmers in Dryland areas



Qutline

- Introduction
- Key Problems
- Opportunities for Feed Improvement under Rainfed
- Opportunities for Feed Improvement under Irrigation
- Research Work
- Loss of Biodiversity
- Future Outlook

I. Introduction



Livestock production is key production system in the dryland areas

- Rangelands are sources of feed and water
- Rangelands cover about 60% of the land mass
- Most these areas are currently highly degraded and production is limited and have become concentration of food insecurity, poverty and poor health

Introduction...

- the key issues to address are:
- Population growth resulting an increase of cultivable areas
- agriculture and livestock into marginal land, deforestation
- land & water degradation
- poor productivity, food insecurity, poverty poor health, malnutrition

Introduction₍₂₎

The key problems

- Water Stress
- Land degradation, Low soil fertility
- Lack of improved varieties
- investment in irrigation may increase land productivity



Potential rainfed feed improvement

- Huge feed resource potential
- A number of of forage spp. available with multipurpose
- Examples include
- Forage: Acacia, Alysicarpus, Cassia,
 Stylosanthes, S. fruticosa etc.



Potential rainfed feed improvement...

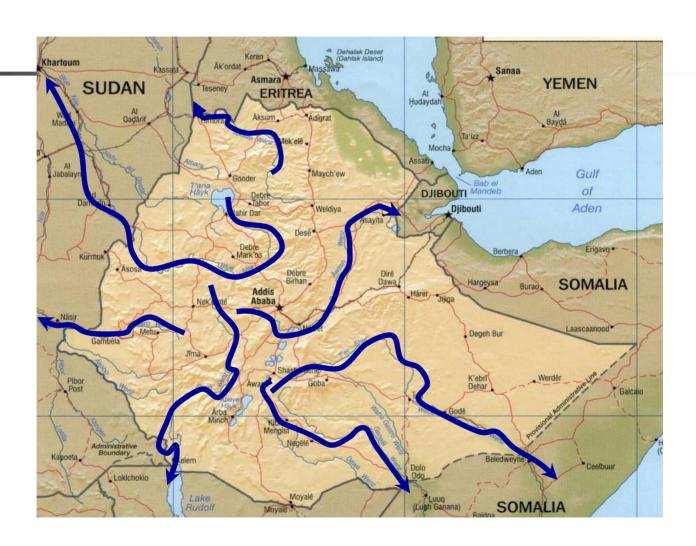
- Grasses: Aristida, Cenchrus, Chloris, Eragrostis, Panicum
- Trees and shrubs: Acacia senegal, A. tortilli,
 Blannites aegyptica etc. The leaves, pods and seeds are important feed sources
- They can solve the shortage of energy and protein especially during the dry season



Potential for Irrigated pasture

- Huge water resources: Rivers; Awash,
 Wabi-shebele, Genale, etc
- Ground water
- High potential for water harvesting

Potential in Irrigation





The need for developing irrigated pasture

- Shortage of rainfall as water source
- Shortage of water for livestock in rangelands
- Development of dryland grazing
- Minimize conflict over dry season feed



TRADITIONAL IRRIGATION

- Irrigation: various types are used ranging from large, river schemes to small plots watered by hand and pump irrigation
- Flood recession agriculture
- Water harvesting: ditches, bunds etc



Research Approach and Activities

- Past research activities
- Previous research development and research organization including NERDU, IAR, ILCA have conducted screening trials
- Screened appropriate grasses and legumes recommended, but without much impact
- ILRI screened accessions of herbaceous and fodder trees species from the trust collections



Research Approach...

- Screened those accession which show good adaptation in different AEZ for further research and development
- ILRI established seed unit for supply of improved forage seeds. Selected forage species with appropriate management practices particularly for the highlands



Current Research Activities

- Several research activities initiated in both rainfed and irrigated areas
- In somali region under rainfed in Jijiga, and irrigated areas at Gode
- In Afar at Argoba and several other sites under rainfed and Werer for irrigated areas
- The activities include screening, rangeland management and agroforestry



Current Research Activities ...

- Cactus (Opuntia ficus) research in the Somali and Afar regions deserves a special mention
- Source of of water, ash, and some vitamins, minerals, protein and CH
- The varieties include Mosobo, Mekelle, Golaa, Adikey etc.





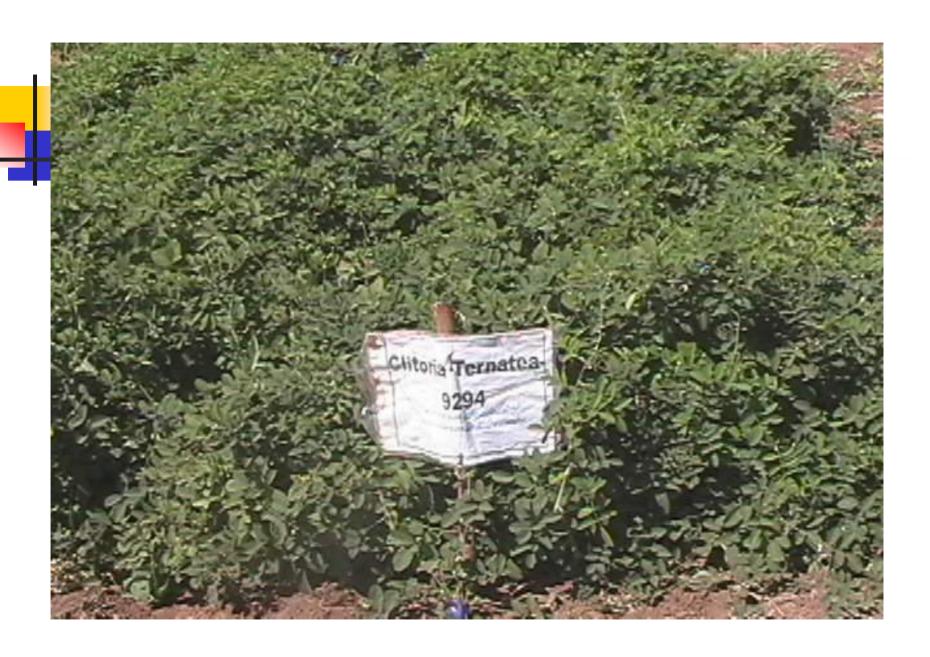
















Loss of Biodiversity

- Genetic erosion of indigenous forage and livestock species is increasing
- Due to population increase and associate problems, changes in climate
- Tendency to introduce exotic germ-plasm
- Change ecosystem etc







Conservation of biodiversity

- This a very pressing and urgent need
- Conservation through utilization
- The UNEP conference agenda 21 emphases conservation should take account the people whose livelihood depends upon them
- The resource should be characterized, conserved and utilize to avoid irreversible loss of biodiversity for the future



Future Outlook

- Water is the central production factor affecting production in dryland areas
- Research has to be conducted with water as a nucleus
- Low soil fertility has also to be addressed
- Integrated NRM and diversification to reduce risk and give more production and income stability for land users



Future Outlook...

- Solve the land property issue in the rangelands, otherwise technical solutions will not be adopted
- Biotechnology use for development of drought tolerant species and improvement of livestock productivity
- Characterization of available forage resources is the basis for continuing use of germplasm
- New technologies such as molecular genetics and GIS could be used to assess the extent of variation in collections and identify gaps in further collections