Project Title: **Characterization of selected range grass species in the ASALS of Kenya**

**Institute**  
Arid and Range Lands Research Institute

**Center(s)**  
KALRO Kiboko; KALRO Kitale; KALRO Lanet

**Principal Investigator**  
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**Problem Statement**  
Appropriate seeds and vegetative materials for reseeding degraded natural pastures have not been readily available in the market. Although efforts have been made through community based seed bulking approach but there are constraints in using informal seed systems.

**Objective(s)**  
To describe the characteristics of natural and commonly growing grass species in different ecological settings and to identify and promote unique ecotypes based on both the morphological and genetic characteristics which have a wide adaptation to different ecological settings.

**Planned Activities**
1. To collect and conserve ecotypes of priority rangeland pasture species.
2. To characterize and evaluate the genetic diversity of the collected indigenous pasture species using agro-morphological and molecular tools.
3. To evaluate productivity of selected pasture species.
4. To release elite pasture ecotypes for production and commercialization.

**Outputs**
1. Collections were made for Enteropogon macrostachyus (27), Digitaria macroblephara (8), Chloris roxburghiana (28), Eragrostis superba (25), Panicum maximum (33) and Cenchrus ciliaris (68) from various ASAL Counties in Kenya.
2. Phenotypic and genetic characterization was done and documented for 22 Enteropogon macrostachyus, 36 Cenchrus ciliaris and 22 Panicum maximum ecotypes.
3. Ten ecotypes of Cenchrus ciliaris were evaluated for seed and herbage yield and nutritive value components.
4. Four ecotypes of Cenchrus ciliaris were identified and recommended for release.

**Outcomes**
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**Budget**
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**Start date**
2016-05-01

**End date**
2017-04-30

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**Collaborators**
Ms. Brenda Nyaboke (National Museums of Kenya); KALRO Genetic Resources Research Institute (GERRI);