



APCNGF

Permanent pastures as an alternative land use model for marginal farmland in Andhra Pradesh (India)

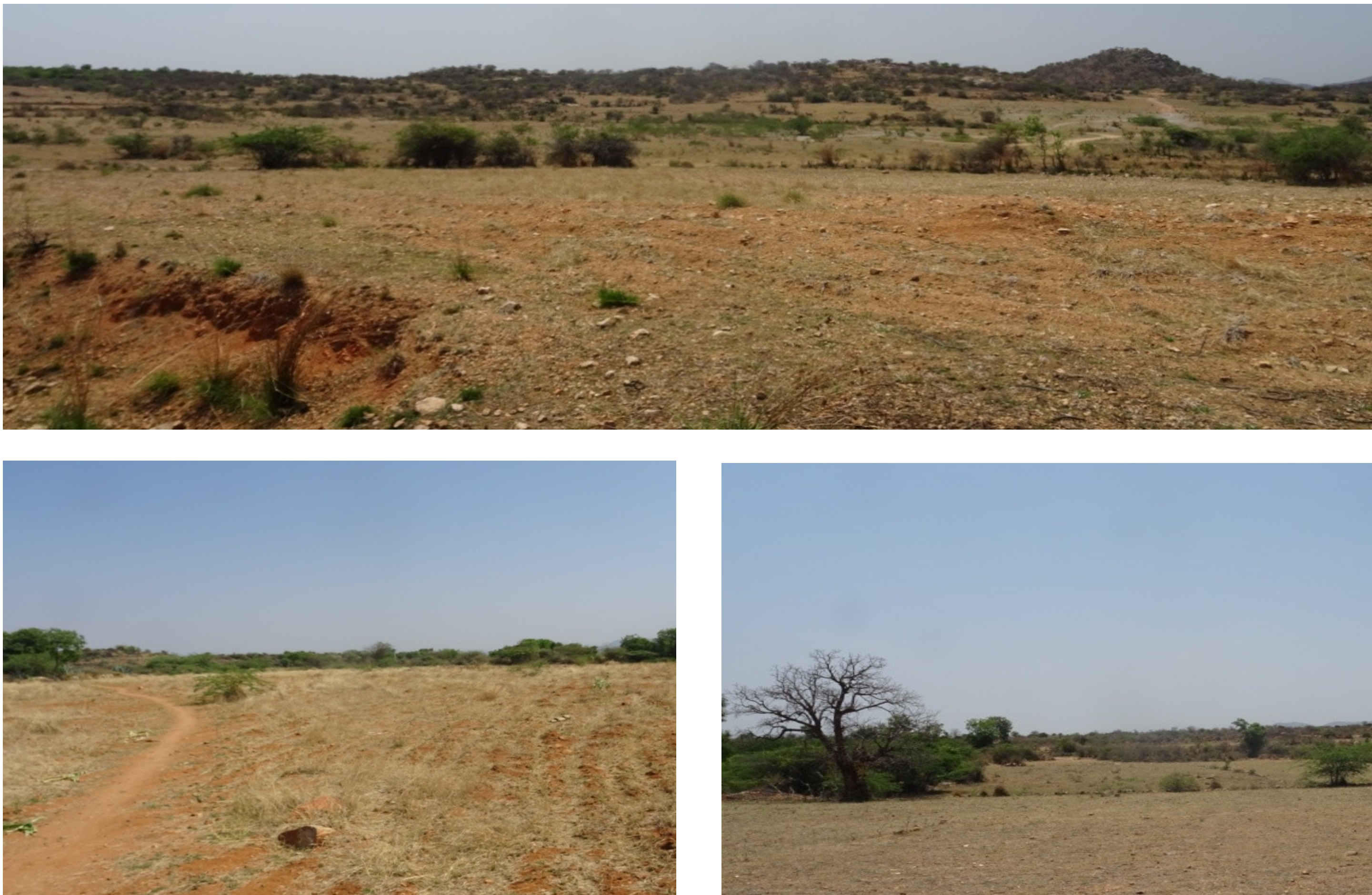
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IGGAARL

Introduction

In drought-prone areas of India, changes in rainfall patterns, poor farming practices, and rising income expectations have rendered rain-fed agriculture uneconomical, resulting in farmland being left fallow or under-cultivated. Managed permanent pastures could provide an alternative model for extensive land management, increasing economic resources.



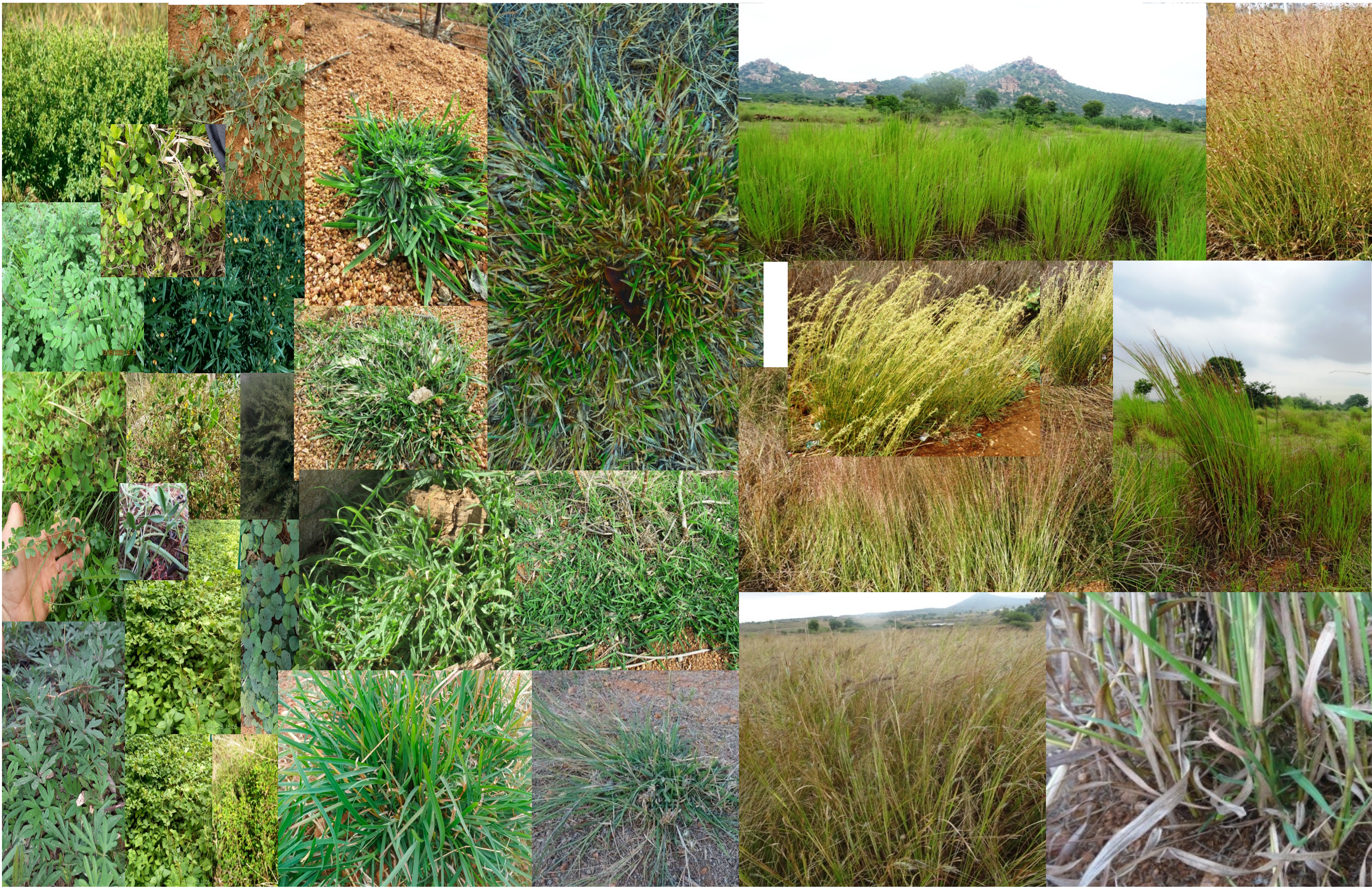
Aims of the Project:

- Screening suitable species and genotypes for implementation of productive permanent pastures.
- Establishment of suitable seeding and cultivation techniques, including use of bio-agents
- Establishment of grazing management strategies
- Provision of seeds for further experiments.
- Establishment of techniques for seed production and processing (including pelletisation or coating).
- Development of techniques for seed production and processing (including pelletisation or coating)



Most established commercial forage crop species and varieties are not well adapted to local climatic conditions.

Although a multitude of well-adapted spontaneous and native species and ecotypes exist, little is known about their performance, their adaptation to grazing and cultivation techniques, and their seed production. We collected and examined 10 grass and 25 Legume species, 150 accessions in total



screening of grass cultivars and spontaneous grass ecotypes, the native grasses emerged as the only option. *Heteropogon contortus* L. and *Chrysopogon fulvus* (Speng.) Chiov, showed good performance in terms of productivity, soil coverage rate, short or no dormancy and high drought resistance.



Seeds of native species vary widely in terms of size, form, the presence of awns, and seed dormancy. This presents different challenges for harvesting, purification, and seeding.



In some cases, coating or pelletization of the seeds is necessary to achieve uniform establishment, to avoid problems of seeding depth and to allow for pre-monsoon dry seeding.



Example of single plant selection of *Heteropogon contortus*. *Chrysopogon fulvus* is selected similarly.

We currently have two on-station field experiments in different environments and four on-farm experiments intended to develop into pilot projects. Our plan is to extend this to 15 farms within the next year.

Land ownership is highly fragmented, for rational grassland management small fields should be combined into larger units. This could take the form of common grazing grounds managed as cooperatives with defined grazing rights and obligations.

