



GLOBAL AGENDA FOR SUSTAINABLE LIVESTOCK

GOOD PRACTICE GUIDELINE

Chinese Sustainable Grassland Livestock Programme

KEY MESSAGES:

1. Government encouraged innovative approaches to grassland livestock system
2. Implementation of sustainable grassland livestock system was carried out at a household scale
3. Win-wins of ecology and livelihood were achieved simultaneously
4. Demonstration was the key for sustainable grassland livestock system

Chinese Sustainable Grassland Livestock Programme

Overview of practice

The objective of the case study is to promote the higher use efficiency of national grassland through the support of the government of China for environmental payments by demonstrating the results of a controlled stocking rate experiment on the environment, and net income. Further to implement this on-farm through programs from the Ministry of Agriculture of China, Inner Mongolia Autonomous Region and ACIAR.



The case study is located in the desert steppe region in the middle of Inner Mongolia. The desert steppe is a temperate grassland, dominated by *Stipa breviflora*, *Cleistogenes songorica* and *Artemisia frigida*. The climate is a cold, continental climate, with low winter temperatures of -15°C and high summer temperatures of 20°C ; average annual precipitation is 100-300 mm, falling mostly in the summer. The topography is rolling plateau with light chestnut soil low in organic matter content.

The case study includes: (grassland) grassland management, artificial pasture development, (animals) improvement of livestock age structure, sheep breeding activities, animal nutrition improvement, (social) household economic analysis, (value chain) good quality animal product marketing development, local government and private company cooperation, and (capacity building) training herders to carry out new grassland livestock management systems to ensure benefit both to grassland conservation and local herder's net income.

Animals are owned by individual households. Land is owned by the state, but individual households have the right to use the separate grassland. Most of the 520 ha of grasslands on a typical farm is used for livestock production from an average of approximately 270 adult animals, including mainly sheep and goats. Over 95% of the sheep are local Mongolian fat-tail sheep. Meat production is the main enterprise in this region. Local herders carry out whole year long grazing with some supplement in the cold season. The lambing time is mainly from December to March each year.

Livestock product marketing is poor in most pastoral areas in China. Livestock producers are organizing to build associations and to work with private companies in order to promote marketing of good livestock products at a higher price. The policy framework is built around the Chinese National Grassland Payment Programme. This programme pays herders for reducing stocking rates and conserving grassland.

It is intended that (a) grassland livestock system management will be of use to stakeholders at the Banner level (e.g. herders, local technicians, and companies), and also to the managers of the Ministry of Agriculture of China at the national level; and (b) destocking design and practice will be useful to policy makers in animal husbandry and grassland

conservation. The case study is intended to provide proof-of-concept to support decision-making by national policy makers about how to link livestock development with grassland conservation.

Approach

This case study is being performed in collaboration with the Ministry of Agriculture of China, the Ministry of Science and Technology of China, Inner Mongolia Committee of Science and Technology, Australian Centre for International Agriculture Research, and works with local government officials, private companies and herders. The case study links national-level policy agendas (e.g. grassland payment policy) with stakeholder concerns at the local level (e.g. Banner (county) to reducing stocking rate programme), and links stakeholders involved in livestock development with people in the research community (e.g. destocking and grassland livestock system improvement research).

The case study uses a long-term stocking rate experiment and a multidisciplinary research approach.

Baseline survey data collection was carried out on farm and models were used to understand the grassland livestock system, and to predict the future possible change.

Scientists, farmers, government officials and private company managers collaborated to promote the innovative grassland livestock system.



Benefits of the Practice

When low stocking rate (reduced by 46%) summer grazing and winter feeding (3 months) with the cross breed of Mongolian sheep and Dorpor sheep was carried out in the desert steppe the net income of new grassland livestock systems increased by 62% compared with traditional year long grazing.

The new grassland livestock system helped to change local people's idea, that it is possible to reduce overgrazing and still remain economically viable while improving grassland condition. It can be expected that this type of system design would have relevance in other grasslands of the world.

Key Characteristics required for success

Long term grazing experiment data to measure progress and inform predictions.

Relevant information on grassland resources and livestock production.

The ability to Integrate grassland conservation and local economics.

Delivery should be done by a local farmers, government officials, private company managers and scientists.

Adaptive management was used to test the principles to practices.

The Good Practice Guidelines intend to provide practical operational information related to the Global Agenda for Sustainable Livestock Focus Area 2: Restoring Value to Grasslands. The information has been drawn from a global inventory of pilot sites connected to FA2. This guideline aligns with FA2 Theme 4 Resource Management. Please visit www.livestockdialogue.org for more information.

CONTACT INFORMATION

Guodong Han

Dean and Professor

College of Ecology and Environmental Science

Inner Mongolia Agricultural University

29 East Ordos, Hohhot-010011, Inner Mongolia, China

[Tel:+86-471-4306802](tel:+86-471-4306802)

Fax: +86-471-4301371

Email: hanguodong@imau.edu.cn

FURTHER READING

Guodong Han, Zhongwu Wang, Zhiguo Li, Mengli Zhao, David R Kemp, David L Michalk And Kris M Havstad. 2013. Grassland Rehabilitation Through Re-Designing Livestock Management Systems. Pp1637-1642 .In: Revitalising Grasslands To Sustain Our Communities: Proceedings 22nd International Grassland Congress. Edited By David L Michalk.

AUTHORS

Guodong Han

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