



University of Kentucky
UKnowledge

International Grassland Congress Proceedings

XXI International Grassland Congress /
VIII International Rangeland Congress

A Study of Forage Germplasm Resources and Their Utilization in Heilongjiang Province China

Xinyin Luo

Institute of Animal Science of Heilongjiang Province, China

Hong Li

Institute of Animal Science of Heilongjiang Province, China

Haiyang You

Institute of Animal Science of Heilongjiang Province, China

Follow this and additional works at: <https://uknowledge.uky.edu/igc>



Part of the [Plant Sciences Commons](#), and the [Soil Science Commons](#)

This document is available at <https://uknowledge.uky.edu/igc/21/1-5/27>

The XXI International Grassland Congress / VIII International Rangeland Congress took place in Hohhot, China from June 29 through July 5, 2008.

Proceedings edited by Organizing Committee of 2008 IGC/IRC Conference

Published by Guangdong People's Publishing House

This Event is brought to you for free and open access by the Plant and Soil Sciences at UKnowledge. It has been accepted for inclusion in International Grassland Congress Proceedings by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

A study of forage germplasm resources and their utilization in Heilongjiang province China

Luo xinyin , Li hong , You haiyang

Institute of Animal Science of Heilongjiang province , Qiqihaer 161005 , China

Key words : Heilongjiang , forage , germplasm , resource , utilization

Heilongjiang Province has 4.33 million hectares of grassland of which the Sanjiang grassland is 0.665 million hectares , the grass mountain and grass slope is 1.8 million hectares , and the western grassland is 1.865 million hectares , the most importance part of the Songnen grassland . Because of the differences of ecologic environment there are abundant cold tolerant , anti-alkali tolerant , drought and barren tolerant species and biotypes . Identifying germplasm resources and their scientific utilization is necessary not only for the development of animal husbandry , but also for control of the environment .

Forage germplasm resource composition The continuity of the Daxinganling , Xiaoxinganling , and Zhangguangcailing mountains , whose peaks rise and fall along the skyline are natural woodland and these mountain ranges resemble a horse's hoof that encircles the Songnen plain , with interleaving forest and grasslands , temperate zones and cold temperate zones . Therefore , there are three types of plant flora in this area : Mongolia , Changbai and Xingan . In this complicated area , about 2100 species are distributed , and about 1000 of them have an economic value According to investigations there were 11 families , 227 genera , and 796 species . .

Utilization and researching of germplasm resources

Domestication of wild species *Leymus chinensis* (Trin.) Tzvel were domesticated in the 1960s and *Melissitus ruthenicus* C.W. Chang in the 1970's . They were registered by the Chinese Herbage Cultivar Registration in 1988 .

Native species and the new species *Medicago sativa* L in Zhaodong adopted a protection and grow measure , becoming with cold tolerant , drought tolerant for the native species registered in 1989^[1] .

The diploid *Melissitus ruthenicuse* C.W. Chang crossing with traploid *Medicago sativa* L cv . zhaodong which was successfully bred^[3] using of the artificial inducing method with the ⁶⁰Co-rwhich increased seed matur of *Astraglus adsurgens* Pall in Heilongjiang .

Introduced varieties The best foreign *Medicago* species is *Medicago varia* Martin .cv . Rambler , and the better domestic *Medicago* species are the Caoyuan No 1 and No 2 , the Gongnong No1 and 2 . The grasses are *Elymus dahuricus* Turcz , *Elymus sibericus* L . , *Broumus inermis* Leyss , and *Agropyron mongolicum* . Keng , *Agropyron cristatum* (L .) Gaertn , *Agropyron cristatum* (Linn .) var . pectiniforme (Roem . et Schult .) H . L . Yang , *Agropyron trachycaulum* etc .

Utilization and exploitation of forage germplasm resources The collection , utilization and breeding of forage germplasm . Wild forage domestication for cultivation and their characteristics . Breeding of high yield , superior quality , cold tolerant varieties . The selection of drought tolerant , barren tolerant varieties . The selection of salt-alkali tolerant species .

References

Licensed Cultivars of Herbage crops in China , Beijing Agricultural University Press in China 1992 .

Luo xinyi , The characters of *Melissitus ruthenicus* C.W. Chang [J] *Pratacultural Science* , 1993 .(3) :24-26 .

Wangdiankui , Li hong & Luo xinyi , Research on distant hybridization between *Melissitus ruthenicus* C.W. Chang and *Medicago sativa* Zhaodong [C] *International Grassland Congress* , Nice , France , 1989 , p333-334 .