

High Plains Grasslands Research Station - Changing to Meet the Challenges of a New Century

The High Plains Grasslands Research Station (HPGRS), administered by the United States Department of Agriculture-Agricultural Research Service (USDA-ARS), has a long history of changing from its founding in 1928 as the Central Great Plains Field Station to meet emerging challenges of the nation's agricultural community. In 1930, the name was changed to the Cheyenne Horticultural Field Station to reflect the emphasis on ornamental, vegetable and fruit variety research, and shelterbelt research. In 1974, the research emphasis changed to range and forage management, and mined land reclamation and the station was renamed as the High Plains Grasslands Research Station. The trend of changing to meet new challenges is further illustrated

by the increased research focus on carbon sequestration in the 1990s and, as we embark on a new century, research into rangeland monitoring and health, management strategies for mitigation of global climate change and invasive species.

The Rangeland Resources Research Unit (RRRU) is headquartered in Cheyenne, Wyoming with research field resources located at Cheyenne (HPGRS) and northeast of Nunn, Colorado (Central Plains Experimental Range, CPER), and the Crops Research Laboratory in Ft. Collins, Colorado. The two field locations, separated by less than 25 miles, have contrasting rangeland vegetation that greatly enhances our research opportunities. The HPGRS is located at the southern end of the northern mixed-grass located at prairie, while the

CPER is located at the northern edge of the shortgrass prairie. Additionally, the CPER is a part of the world-wide Long Term Ecological Research sites (LTER, see website at <http://Internet.edu/>) program.

New Changes to Meet the Challenges of the 21st Century

Rangeland monitoring and health, invasive species, and land management strategies to mitigate global change will be the primary foci for the HPGRS in the early part of the new century, as these are prevailing concerns of Wyoming stockgrowers. Research will continue to target systems-level questions which are pertinent to both private and public lands issues. For example, studies to develop best grazing management practices will emphasize





1940 photo of High Plains Grasslands Research Station

size the optimization of both economical and ecological sustainability within a systems context (e.g. whole farm/ranch enterprise operation). While rangeland research will be continued at the HPGRS and CPER field sites, we will embark

on expanding research into the Sagebrush Steppe vegetation that is prominent throughout much of Wyoming. New research projects that are targeted to address public lands questions pertinent to the Sagebrush Steppe vegetation include:

1) determining above- and below ground carbon budgets following changes in land management, 2) utilizing very large scale aerial (VLSA) imagery as a method to assess and monitor vegetation change, and 3) determining the influence of removing or altering livestock grazing practices on vegetation and soil properties. For additional information, please visit our website at <http://rrru.ars.usda.gov>, or contact the Rangeland Resources Research Unit:

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100



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