



Agricultural Research Service



**J. Phil Campbell Sr.
Natural Resource
Conservation Center**

**1420 Experiment
Station Road
Watkinsville Georgia
30677**

**Research from the
Soil Resource
Management
&
Pasture, Forage and
Range Land Systems
National Programs**

Prepared by

**Alan Franzluebbers
Ecologist**

706-769-5631

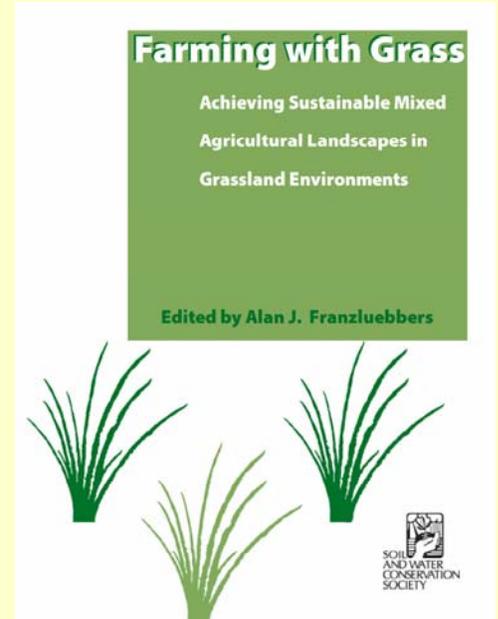
alan.franzluebbers@ars.usda.gov

**JPC Research Note
18**

Grassland Agriculture

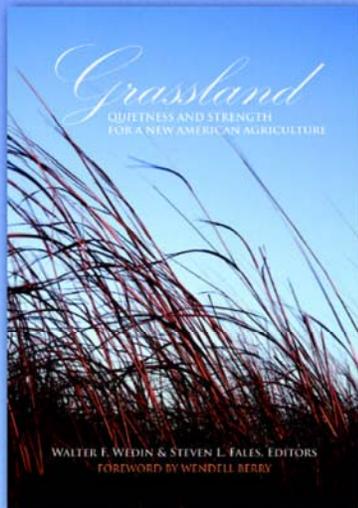
Why does it matter?

- Agriculture in grassland environments is facing multiple stresses from:
 - shifting demographics;
 - declining and fragmented agricultural landscapes;
 - declining environmental quality;
 - variable and changing climate;
 - volatile and increasing energy costs;
 - marginal economic returns; and
 - globalization.
- Degradation of air, water, soil, and biodiversity has been prevalent throughout the industrial epoch, and we can now see that such extensive degradation may be diminishing the future viability of agriculture and the quality of life in rural areas.



What was done?

- Collaborations with scientists at multiple ARS locations, as well as with university partners, were established to produce two separate books focused on grassland agriculture.
- The *Farming with Grass* Conference was held in Oklahoma City OK from 20-22 October 2008. It was held in conjunction with the rededication of the Grazinglands Research Laboratory of ARS in El Reno OK (Dr. Jean L. Steiner, Center Director). The conference was developed to bring together diverse stakeholders in grassland environments to:
 - Help assess the current condition of agriculture;
 - Consider alternative production scenarios for grassland agricultural ecosystems;
 - Identify key issues hindering the development of more sustainable systems;
 - Clarify the role of science and government policies in developing options for the future.
- A 238-page book was published by the Soil and Water Conservation Society and each of the 16 chapters or the entire book can be purchased online: http://www.swcs.org/en/publications/farming_with_grass/.
- An executive summary of presentations and paths towards a sustainable future was presented as a feature article in the *Journal of Soil and Water Conservation* (March/April 2009, Volume 64, No. 2, "Farming with Grass – for People, for Profit, for Production, for Protection", JL Steiner, AJ Franzluebbers).
- Support for the conference was provided by Grazing Lands Conservation Initiative, Samuel Roberts Noble Foundation, National Center for Appropriate Technology, Oklahoma Grazing Lands Conservation Association, USDA-ARS, USDA-CSREES-National Research Initiative, USDA Grazing Lands CEAP.



Geared toward agriculturists, students, the public, and policy makers, *Grassland* takes on the task of increasing our awareness of the vital role grass and grassland plants have in ensuring a sustainable future for America. Aiming to inspire and educate, the book's three main sections highlight the voices of grassland advocates through history, examine the many functions of grassland today, and look at the benefits grass-based agriculture can provide when grass is treated as an essential resource. Includes a foreword by Wendell Berry.

Hardcover, 256 pages, with companion CD of 1948 USDA Grass Yearbook. 2009. ASA, CSSA, SSSA. ISBN: 978-0-89118-171-2. Item: B40722. \$80. (ASA-CSSA-SSSA member price: \$64).

Grassland: Quietness and Strength for a New American Agriculture

Walter F. Wedin and Steven L. Fales, editors

Inspired by the 1948 Yearbook of Agriculture on "Grass", this book was produced as a contemporary sequel during this uncertain time facing grassland agriculture in America.

"If we are learning anything in the early years of the 21st century, it is that human activities are beginning to significantly diminish the capacity of our planet to sustain life and that societies based primarily on resource extraction will not prevail. This applies to agriculture as well as to mineral and energy resources. Our hope is to foster a new paradigm within the sustainable agriculture movement, a paradigm that fulfills the vision of P.V. Cardon in the 1948 yearbook - that grassland-based agriculture can and must be a permanent component of our food system." - W.F. Wedin and S.L. Fales

A total of 69 authors helped to produce 14 chapters arranged around the past, the present, and the future of grassland agriculture.

In Chapter 7 entitled "Grass-Based Farming Systems: Soil Conservation and Environmental Quality", Jeremy W. Singer, Alan J. Franzluebbers, and Douglas L. Karlen describe (a) farming system changes during the past 50 years, (b) sustaining natural resources with grass-based systems, and (c) opportunities for future agricultural systems with grass, including the Conservation Reserve Program, integrated agricultural systems, and new market opportunities.

Grasslands and cultivated forages provide numerous conservation and environmental quality benefits, including (a) control of soil erosion, (b) sequestration of organic carbon in surface soil, (c) restoration of fertility to previously cropped soils, (d) control of water runoff, (e) control of nutrient and pathogen movement into surface waters, and (f) enhancement of soil biodiversity.

Managing interactions among timber, forage, livestock, and row crops will be the key for creating sustainable systems with environmental benefits and a diversity of marketing opportunities that stimulate rural economic development.



American Society of Agronomy • Crop Science Society of America • Soil Science Society of America
www.societystore.org | books@agronomy.org | TEL: 608-268-4960 | FAX: 608-273-2021