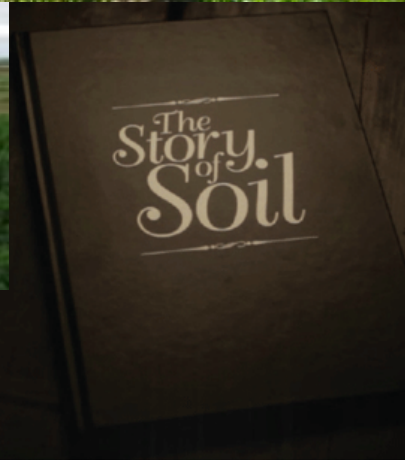




NM
STATE
UNIVERSITY



WANT TO SEE THE STORY OF SOIL?

Extension Plant Sciences

Agronomy Faculty Introductions



Robert Flynn

Extension Agronomy and Soils



Overview

- **Soil Test Interpretation**
- Manure Management
- Identification and management of saline and sodic soils
- Certified Crop Adviser Program
- Irrigation Water Quality Interpretation
- Composting (Ag Wastes and Mortalities)
- General Agronomy and Nutrient Management
 - Alfalfa, Cotton, Corn, Chile, pasturegrass, rosemary, and others.



Areas of Interest

- Plant Nutrition
- Nutrient Management – all agronomic crops plus pecans, rosemary, chile, and others.
- Irrigation water management
- Improved nutrient efficiency
- Iron deficiency induced by high soil lime
- Copper toxicity
- K-12 outreach, train the trainer/teacher



Variety Trial Collaboration

- Forage corn, sorghum and sudangrass trials with Mark Marsalis
- Cotton
 - Coordinated through Artesia
- Alfalfa
 - Coordinated through Las Cruces



Forage & Grain Extension in New Mexico

Extension In-Service

March 26, 2013

Las Cruces, NM



Mark A. Marsalis
Extension Agronomist
New Mexico State University
Agricultural Science Center at Clovis

Overview

- **Extension Agronomist (Forages emphasis)**
 - Extension (60%) ; Research (40%)
 - Extension Plant Sciences Department
 - Interim Superintendent (Since July 1, 2012)
- **Sustaining the Dairy Industry**
 - Over 265,000 dairy cows on 123 dairies
 - Large feed demand
 - High feed costs ; low milk prices
 - Lost 20+ dairies in last year
- **Producing Feed with Less Water**
 - Diminishing well flow
 - Extreme droughts



Areas of Interest

- **Silage Production**
 - **Limited Irrigation**
 - **Reducing Inputs**
 - **Sorghum-Legume Intercropping**
 - **Ensiling Studies**



Variety Trials

- **Corn (Forage & Grain)**
- **Sorghum (Forage & Grain)***
 - Dryland & Irrigated
- **Wheat***
 - Dryland & Irrigated
- **Small Grain Forage**
 - Wheat, triticale, oats, barley

*Texas A&M Collaborations (Regional)



Field Days

- **Annual Field Day (August)**
- **Wheat Field Day (Spring)**
- **Meetings/Workshops**
 - **Silage Workshops (Summer & Winter Crops)**
 - **Alfalfa Workshops (w/Texas A&M)**
 - **Dryland Wheat & Sorghum Programs**
 - **Dairy Fest / Ag Expo**



Commodity Groups

- **New Mexico Hay Association**
 - Southwest Hay & Forage Conference
 - NM Alfalfa Market News
 - Ex-officio director



- **New Mexico Sorghum Growers Assoc.**

- Funding
- Demonstrations
- Annual Meeting



- **New Mexico Wheat Growers Assoc.**

- Funding
- Research



New Mexico State University
Extension Plant Sciences

Alfalfa Market News

New Mexico Hay Association, www.nmhay.com

Volume 28, Issue 6

October 6, 2011

| County | Contract | Position Buy (\$/ton) | Top Quality Buy (\$/ton) | Other Hay (\$/ton) | Conditions/Market Activity/Car Comments |
|-----------|---------------------------------|---|---|--|--|
| Chaves | County Buyers, County Agpt | \$160-120 (not \$110-120 until in house. \$10.00 to \$1.50 per unit less) | \$180 (not \$140) | \$180 (not \$140) \$1.60-1.70 Suggest alfalfa supplies. | 8 th cut 12%. Market strong. Demand high, some waiting only to register contracts. Some rain, some delayed supplies. |
| Cotton | Buy Logic, County Agpt | \$160-112 | Nothing less than \$145 if available | \$180 | 12 th 20%. Some producers had no rain this year. Dry and very cool. |
| Deer Ariz | Jeff Anderson, County Agpt | \$125-100 large bale; \$12.00- 12.50-11.00 large bale | Nothing less than \$100-100 if available | \$180 | 12 th cut 100%, mostly short 6". Most hay contracted earlier for March large demand than supply. Concerns building in winter approaches. |
| Lincoln | Whitney Co., County Agpt | \$140-130 large bale; \$12-11.00 small bale | \$180+ large bale; \$9-10.00 small bale | \$180+ if available | 8 th cut started. High demand, low supply. Prices rising quickly as fall approaches. |
| Lincoln | Jack Bessert, County Agpt | \$130 large and small bales. | \$180-180 (not for Dallas hay) | \$180-180 (not for Dallas hay) | 8 th cut 12%. High demand in all directions. Some waiting for winter sales. Open growth with cooler temps. |
| Roosevelt | Patrick Kierlin, County Agpt | \$175-150 large bale; \$7-11 small square | \$180-180 | Launched 2011 hay program \$12.00/large bale. | 12 th 75%. March more demand than supply. Low yields, poor stands. Hybridization of crops expected. |
| Valencia | Edie Tate, County Agpt | \$140-100 small; \$7.00-9.00 large small | \$120-140 small; \$6-7.00 large small | \$14 | 12 th cut started. High demand, supplies moving rapidly. Interest down, cattle steals. |

\$14 = price with supplies on available in the town

New Mexico Hay and Other Market Statistics
 Jerry M. Hombac, Associate Professor, Dept. of Agric. Economics & Agric. Extension
 Terry L. Crawford, Professor, Dept. of Agric. Economics & Agric. Extension

Hay prices throughout New Mexico have continued to increase during 2011. Primary factors driving prices include: aggregate supply, drought conditions throughout the western United States, and growth in the dairy industry. These factors, when combined, have contributed to unusually high hay prices. As the growing season in New Mexico comes to an end for 2011, expectations for continued upward movement in prices are anticipated.

Producers of hay are reporting that supplies are very tight with many growers indicating that they do not have any hay in storage at this point in time. This is the case throughout much of Arizona, Colorado, New Mexico and Texas. Demand continues to rise in all sectors of the livestock market. These sectors include the dairy, beef, and beef cattle industries in the southwest areas of the United States.

Alternative crops that were planted for this production year such as cotton and wheat due to anticipated price levels being the highest in several seasons have played a significant role in the overall supply of hay available in 2011. Estimates are that alfalfa average hay yields by as much as 15% in several western states from 2010 levels due to the historic prices of other commodities. Experts suggest that 2012

Strip Till Demo – Spencer Pipkin Farm



Herbicide Tolerant Sorghum

Grass Weed Control



National Sorghum Producers



PIONEER
A DU PONT BUSINESS

*Science with Service
Delivering Success™*

Wheat Varieties –

Quay Co. Agent – Rex Rush Farm



Problem Solving



Newsletters – Agent-Specialist

- **Critical Production Issues**
 - Recurring
 - Out of the ordinary (emergency)
- **Crop-Specific Topics**
 - Forage-related
- **Seasonal Themes**
 - Planning for planting season
 - Water management
 - Harvest considerations
 - Pest problems



De Baca County Cooperative Extension Service

Agriculture Producer Newsletter

A seasonal publication for De Baca County Livestock and Agronomy Producers brought to you by the De Baca County Cooperative Extension Service.

Managing Last Cuts on Alfalfa...

Recommendations from Mark Marsalis, Extension Agronomist, Clovis Experimental Research Station...

As the alfalfa growing season starts to wind down, it is important for growers to understand how the last cuttings of their stands may affect winter survival and yields in subsequent years. Some growers may choose to have a frequent cutting interval during spring and summer in order to maximize forage quality of the hay. Others may choose to wait a little longer (first flower to 25% flower) between cuttings to improve stand persistence and longevity. Whichever the case, proper fall management is critical for future productivity.

Alfalfa must build root reserves prior to going into the winter, and cutting at frequent intervals and at certain times in the fall can reduce plant persistence and yield the following spring. Longer intervals should be allowed for late season cuttings for root reserve accumulation. In fall, either of two approaches should be taken: 1) alfalfa may be cut so early that enough regrowth occurs to replenish root carbohydrate reserves prior to first frost (in this case, a late cutting may occur at or just after a dormancy-inducing frost which means little or no regrowth or 'waste' of stored carbohydrates will occur) or 2) it should be cut so late that regrowth is minimal enough to not exhaust root reserves before freezing.

General recommendations for fall management are to let plants rest for 6 to 8 weeks between the last regular harvest and the first frost (27°F for 4 hrs). The 6 weeks leading up to first frost is critical to plant survival. Depending on when the first frost date is for the area (generally sometime in late October for De Baca County), and when harvests began in the spring, this rest period may be necessary for either the 5th or 6th cutting. The detrimental effect of a fall harvesting is lessened if regular cuttings earlier in the year are less frequent.

Also, leaving a 6-inch stubble will help insulate the soil and protect plants. Alfalfa producers thinking of making a late harvest should consider their need for extra forage and market demand contrasted with the possible risk of losing part of the alfalfa stand due to winterkill. In areas where winter temperatures may warm enough to break dormancy, less dormant alfalfas may grow only to get shut down by a freeze and this, too, wastes stored carbohydrates and is a reason to be cautious about planting less dormant alfalfas—even if they are winter hardy—because this process is not desirable for the alfalfa stand. Factors that increase the risk of winter injury are:

- stand > 3 yrs old
- variety with high winter hardiness rating
- low soil fertility - particularly potassium (K)
- poor soil drainage/excessively wet soil,
- fall cutting at inappropriate time.

Late Summer/Fall 2007

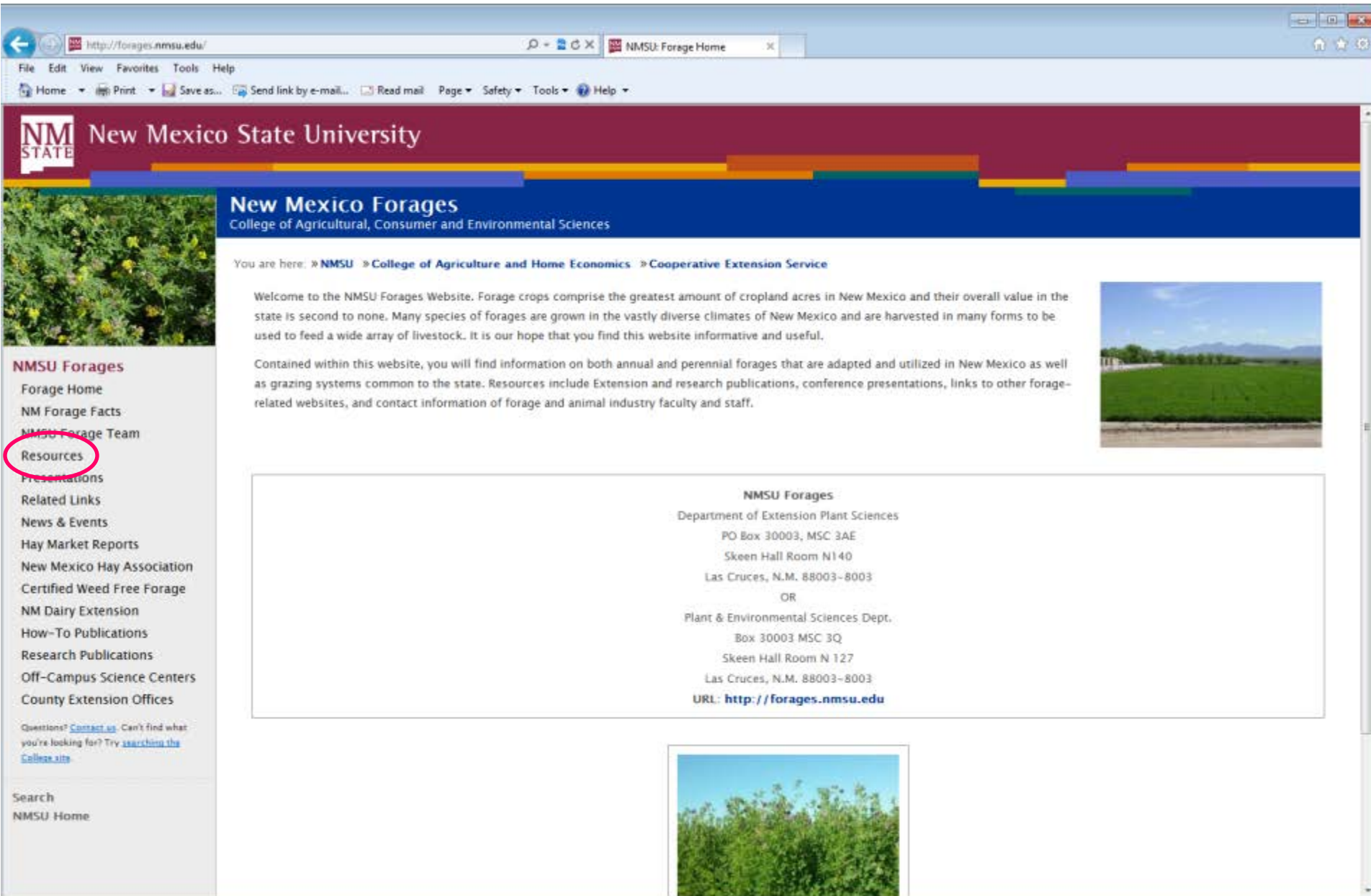
Inside this issue:

| | |
|-------------------------------------|---|
| Managing Last Cuts on Alfalfa | 1 |
| Early Wheat Planting and Planting | 2 |
| Wheat Variety Recommendations | 2 |
| 2007 Wheat Variety Trial Results | 4 |
| Minimizing Wearing Stress in Calves | 5 |

Special points of interest:

- A complete list of variety wheat trials for the west Texas/Eastern NM area
- Factors that increase the risk of winter injury to alfalfa
- Dates to remember
- NRCS Rain gauge monthly reports and NAP assessment

Forages Website



The image is a screenshot of a web browser displaying the NMSU Forages website. The browser's address bar shows the URL <http://forages.nmsu.edu/>. The website header features the NMSU logo and the text "New Mexico State University". Below this, a blue banner reads "New Mexico Forages" and "College of Agricultural, Consumer and Environmental Sciences". A breadcrumb trail indicates the current location: "You are here: » NMSU » College of Agriculture and Home Economics » Cooperative Extension Service". The main content area contains a welcome message and a list of resources. A sidebar on the left lists various navigation options, with "Resources" circled in red. A central box provides contact information for the NMSU Forages department. At the bottom, there is a search bar and a link to the NMSU Home page.

NMSU Forages
Forage Home
NM Forage Facts
NMSU Forage Team
Resources
Presentations
Related Links
News & Events
Hay Market Reports
New Mexico Hay Association
Certified Weed Free Forage
NM Dairy Extension
How-To Publications
Research Publications
Off-Campus Science Centers
County Extension Offices

Questions? [Contact us](#). Can't find what you're looking for? Try [searching the College site](#).

Search
NMSU Home

New Mexico Forages
College of Agricultural, Consumer and Environmental Sciences

You are here: » [NMSU](#) » [College of Agriculture and Home Economics](#) » [Cooperative Extension Service](#)

Welcome to the NMSU Forages Website. Forage crops comprise the greatest amount of cropland acres in New Mexico and their overall value in the state is second to none. Many species of forages are grown in the vastly diverse climates of New Mexico and are harvested in many forms to be used to feed a wide array of livestock. It is our hope that you find this website informative and useful.

Contained within this website, you will find information on both annual and perennial forages that are adapted and utilized in New Mexico as well as grazing systems common to the state. Resources include Extension and research publications, conference presentations, links to other forage-related websites, and contact information of forage and animal industry faculty and staff.

NMSU Forages
Department of Extension Plant Sciences
PO Box 30003, MSC 3AE
Skeen Hall Room N140
Las Cruces, N.M. 88003-8003
OR
Plant & Environmental Sciences Dept.
Box 30003 MSC 3Q
Skeen Hall Room N 127
Las Cruces, N.M. 88003-8003
URL: <http://forages.nmsu.edu>

Contact Information

<http://clovissc.nmsu.edu>

<http://forages.nmsu.edu>

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John Idowu – Extension Agronomist



New Mexico State University, Las Cruces
Email: jidowu@ad.nmsu.edu
Phone: 575-646-2571



Introduction



- Name: John Idowu
- PhD. (Land Management) – Cranfield University, UK
(Silsoe College)
- Worked in Africa for several years
- Moved to USA in 2003 and worked at Cornell University
(2004 – 2009) – Soil Health Assessment
- Moved to New Mexico State University in 2009

Major Research and Education Program Areas

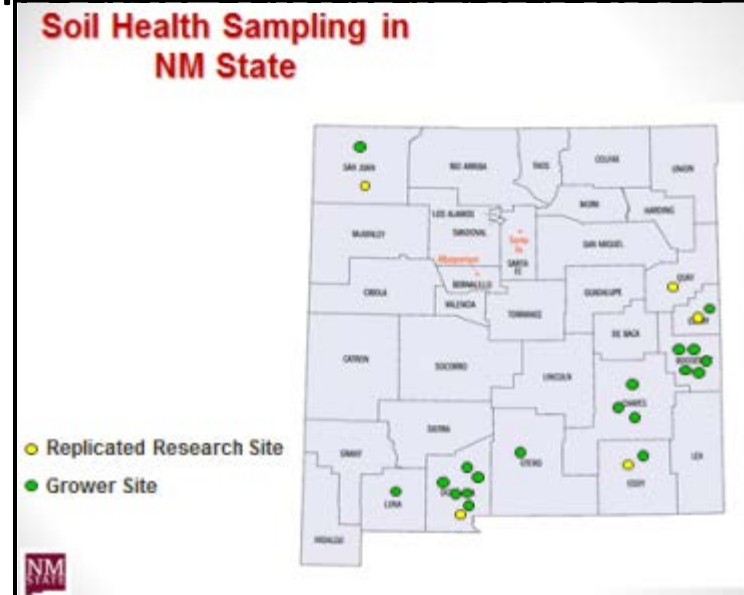
- Soil Health Assessment and Management under Production Agriculture
- Field Crop Management (Cotton, Alfalfa, Corn, Peanuts)
- Sustainable Crop Production Systems (including organic agriculture)
- Tillage Management of Agricultural Soils



Soil Health Assessment



- Main focus
 - Assessing soil quality under different crop production systems
 - How soil quality is influenced by different cropping systems (positive or negative)
 - How to improve soil quality through cultural practices
 - Crop Rotation
 - Cover Cropping
 - Organic Amendments
 - Reducing Tillage



Field Crop Managememe

Cotton Newsletter, April 2012, Volume 3, Number 1

This is the first edition of the NM Cotton Newsletter for the year 2012. The purpose of this newsletter is to present information and news items relevant to the needs of New Mexico cotton growers and other stakeholders in the cotton industry.

We are still in a drought this year and some counties have already received the news of reduced water allotment for this cropping season. It appears that this year, like the last one will be challenging for cotton growers. We have included in this edition of the NM Cotton Newsletter, some basic information that can help growers cope with farming during a drought. Also in this edition, we have presented some information on the status of the pink bollworm eradication program in New Mexico.

Wishing all our cotton growers a successful growing season despite the challenges!

Please feel free to send your comments, information and contributions to John Idowu (email: jidowu@nmsu.edu; phone: 575-646-2571). If you are interested in previous editions of the Cotton Newsletter, please feel free to download at http://aces.nmsu.edu/ces/ik/cm/cotton_production.html

Basic Principles to Cope with Farming in a Drought

According to the national weather service, drought is defined as "a period of abnormally dry weather, sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area". Agriculturally, this means that the amount of water available can no longer meet the needs of the crops that are grown in the farm. Without enough water, there will be reduced yield or even total yield losses as experienced by many farmers in western part of Texas last year. We are currently in a drought in New Mexico, and many farmers complained last year that they were unable to get enough water for their total acreage. The drought situation was made worse by the high temperatures that we experienced in NM during last summer.

From recent forecast, it appears that the drought will still be with us for a while, and farmers need to cope with this drought in order to remain productive and profitable. Below are a few suggestions that can help cope with the current on-going drought.

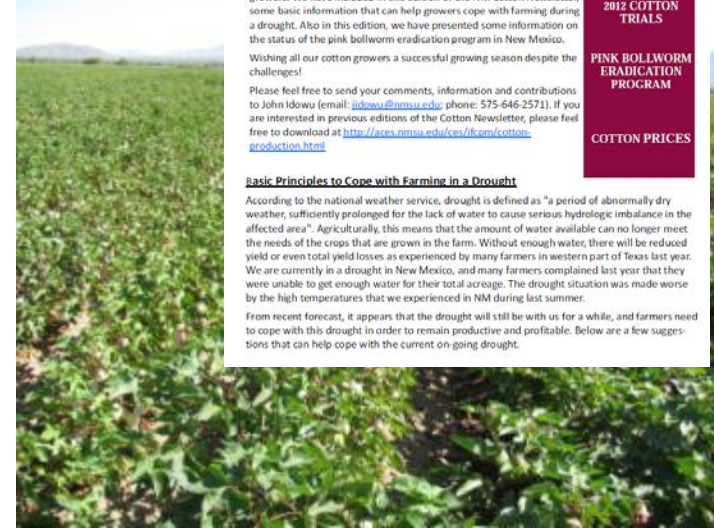
NEWSLETTER HIGHLIGHTS

FARMING IN A DROUGHT

2012 COTTON TRIALS

PINK BOLLWORM ERADICATION PROGRAM

COTTON PRICES



- Fine-tuning agronomic practices in cotton
 - Fertility
 - Planting date
 - Variety evaluation
- Evaluation of glandless cotton in NM
 - Growth
 - Pest pressure
 - Yield
 - Fiber quality
- Nutrient management in peanuts using chicken manure

Sustainable Crop Production and Organic Systems

- Adaptable Summer and Winter Cover Crops for NM cropping systems
- Green manure legumes for cropping systems in NM
- Moisture utilization under different cover crops
- Soil quality improvement due to cover cropping



Tillage Management of Soils

- Conservation tillage systems for soil quality improvement
- Strip tillage combined with cover crops for row crops (may help drought management)
 - Organic matter improvement
 - Soil moisture conservation
 - Soil structural improvement
 - Enhanced crop yields



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Crop Stress Physiologist
Agriculture Science Center at Clovis
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FOCUS

**Multiple Strategies to Improve Water
Efficiency of Agriculture**

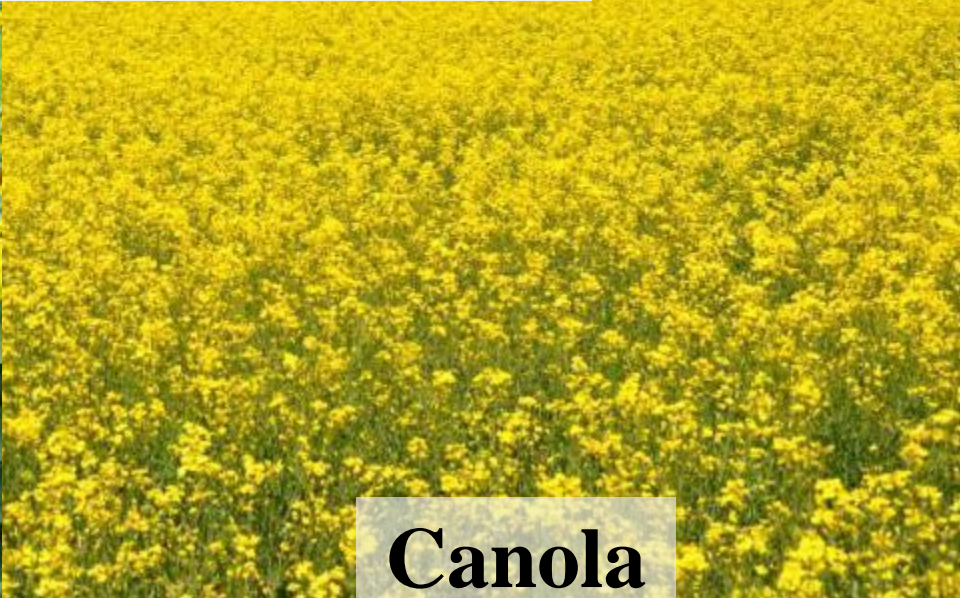
Alternative Crops and Cropping Systems



Biodiesel/Edible Oilseed Crops



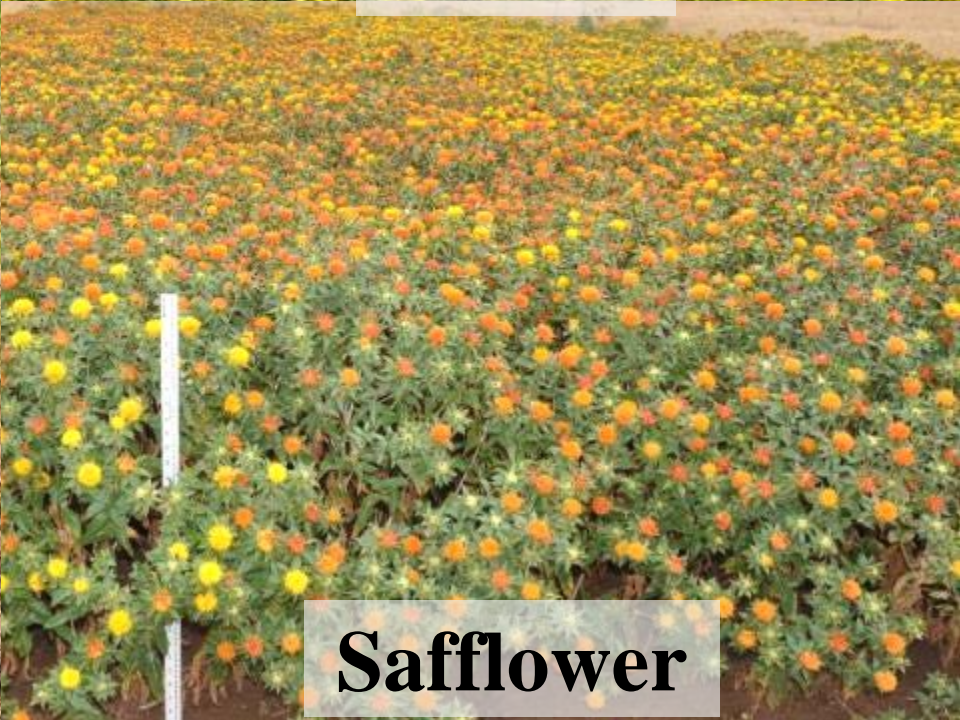
Sunflower



Canola



Camelina



Safflower

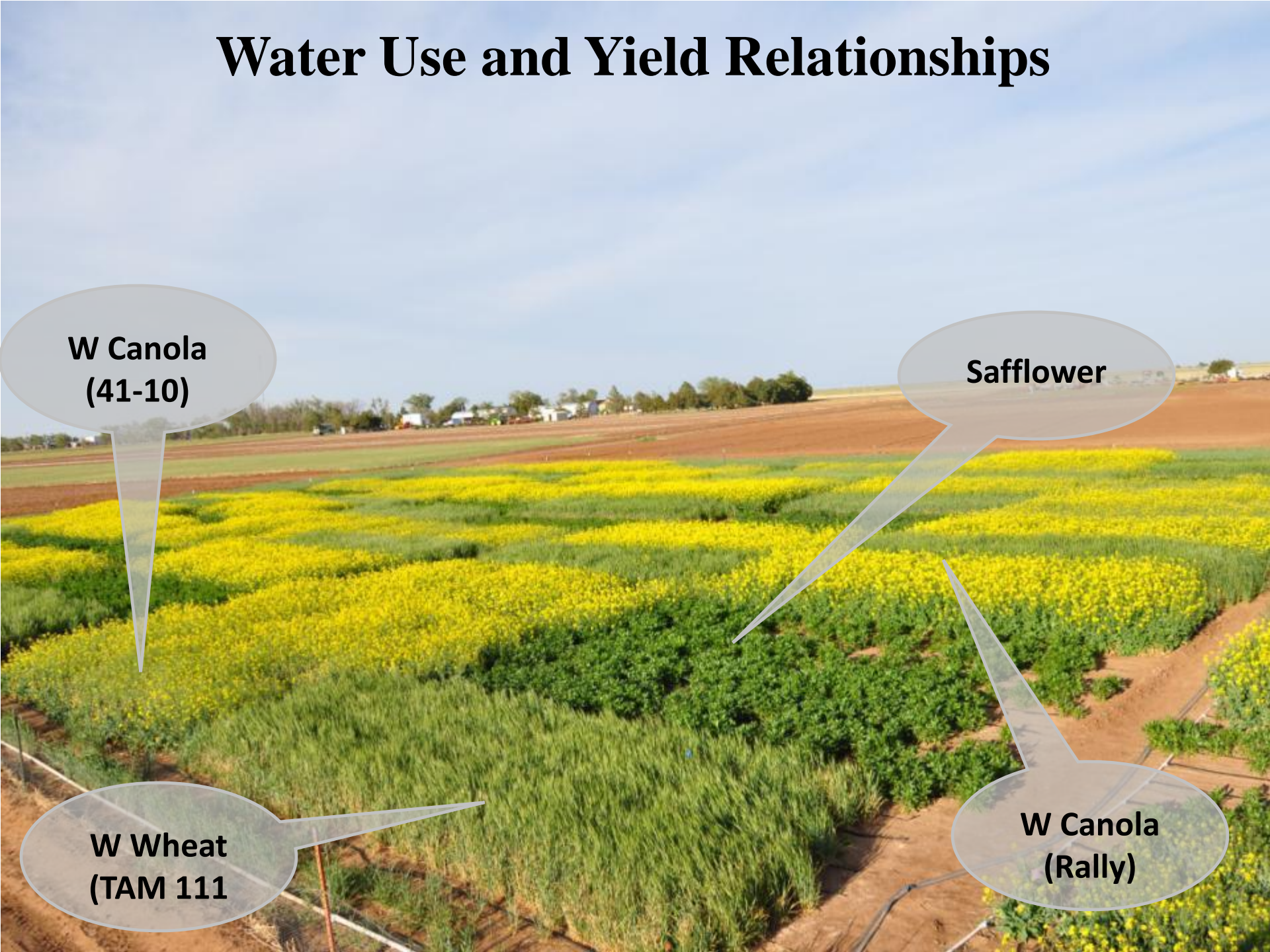
Water Use and Yield Relationships

**W Canola
(41-10)**

Safflower

**W Wheat
(TAM 111)**

**W Canola
(Rally)**



Strip Tillage and Stubble Management



Canola for Forage/Dual Purpose Crop



Thank You

Kulbhushan Grover

**Sustainable Crop Production
Plant and Environmental Sciences
New Mexico State University,
Las Cruces, NM**



Email: kgrover@nmsu.edu

Phone: 575-646-2352

Overview

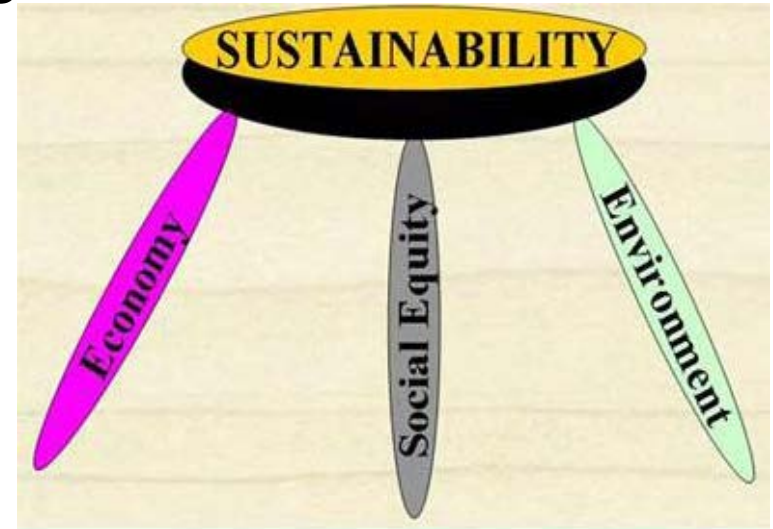
Assistant Professor of Sustainable Crop Production

- Teaching 50%
- Research 25%
- Extension 25%



Major Areas of Interest

- Sustainable cropping systems
 - Crop diversification
 - Crop rotations
 - Cover cropping
- Organic production systems
 - Transition to organic
 - Long term impact of organic practices on soil



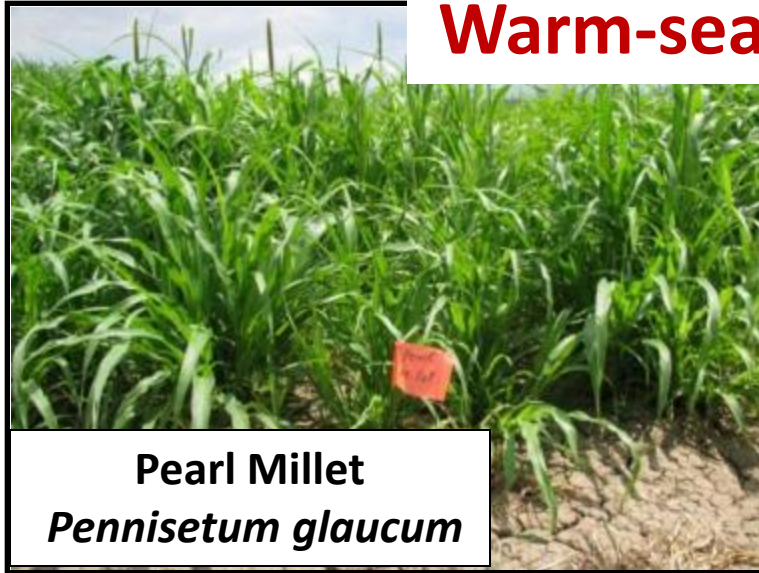
Major Areas of Interest

- Alternative specialty crops
- Small scale farming
- Soil quality improvement
 - Conservation tillage
- Water conservation



Cover Crops for Sustainable Cropping Systems

Warm-season Cover Crops



Cool season cover crops



Designing sustainable cropping systems

- Crop rotations for transition to organic
- Legume based crop rotation for winter cereal forages
- Chile rotated with cover crops



Broccoli as a potential crop for small scale farmers in southern New Mexico.



Green manure legumes for small farms in NM



**Green Manures for
Organic and Small
Farms in New Mexico**

Sustainability of organic peanut production systems in NM



Alternative Specialty Crops



- Low water needs
- Low inputs
- High industrial value
- Arid/semi-arid conditions suited

Field Days



Farm visits



Youth training in Sustainable Crop Production, Chaparral, NM



Integrating research, teaching and extension

Student-centered Field Laboratory



Field Day

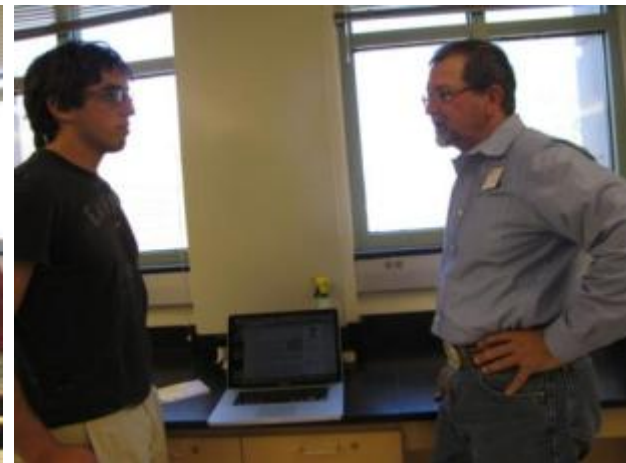
Student-centered Field Laboratory



Student Centered Field Laboratory



Integrating research, teaching and extension



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