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
Strip Till Demo – Spencer Pipkin Farm
Herbicide Tolerant Sorghum
Grass Weed Control
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
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

Mark Marsalis
W : (575) 985-2292
C : (575) 799-6448
marsalis@nmsu.edu

http://clovissc.nmsu.edu
http://forages.nmsu.edu
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 Management

- 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
Sangu Angadi
Crop Stress Physiologist
Agriculture Science Center at Clovis
angadis@nmsu.edu
575-985-2292 (Off) 575-405-7598 (Mobile)

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
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

Pearl Millet
*Pennisetum glaucum*

Sorghum-sudan
*Sorghum bicolor*

Sorghum-sudan/lablab

Sesbania
*Sesbania exaltalta*
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
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
Integrating research, teaching and extension
Integrating research, teaching and extension
Integrating research, teaching and extension
Kulbhushan Grover
Plant and Environmental Sciences
New Mexico State University,
Las Cruces, NM
Email: kgrover@nmsu.edu
Phone: 575-646-2352