# **Conducting a Regional Grazing School**

Gene Schmitz MU Extension Field Specialist in Livestock 1012A Thompson Blvd. Sedalia, MO 65301 660-827-0591 schmitze@missouri.edu







## **Purposes**

- **1.** Educate producers and agency personnel in the art and science of grazing management.
- 2. Transfer new technology in grassland management to producers and agency personnel.
- 3. Qualify producers for the state DSP3 cost-share program.





# **Brief History**

- 1. Original grazing schools at FSRC
- 2. Expanded to regional schools ~1991
- 3. 19,315 people in state program office grazing school database





## **Cost-Share Information**

- DSP 3.1 (Water development) = \$6,368,598
- DSP 3.2 (Water distribution) = \$19,165,539
- DSP 3.3 (Fence) = \$11,515,832
- DSP 3.4 (Lime) = \$3,511,252
- DSP 3.5 (Seed) = \$557,728
- DSP 2 (Perm. veg. cover enhance.) = \$10,011,594
- Old DSP prior to a per acre practice = \$12,750,951
- Total Cost Share = \$63,881,496







## Who is involved?

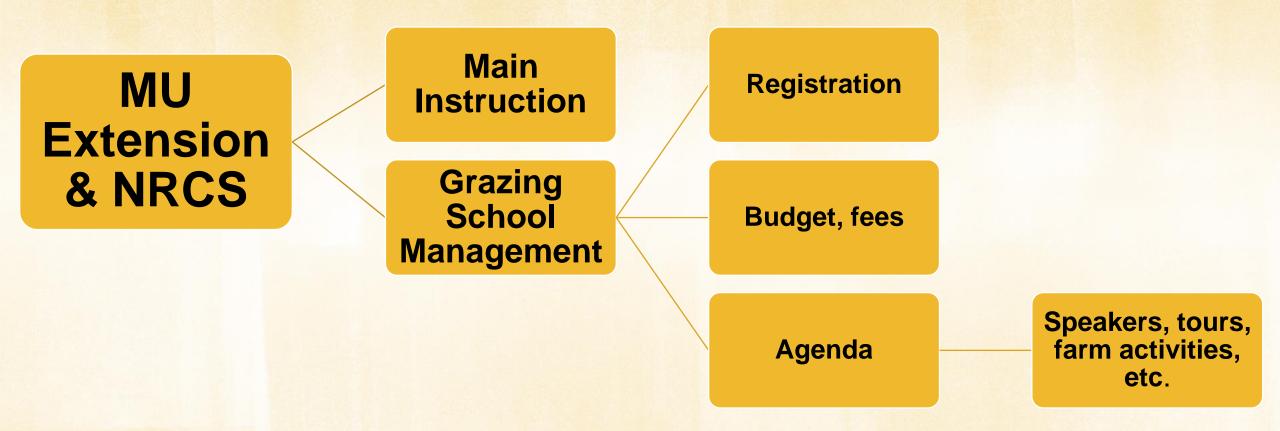
MFGC
MU Extension
NRCS
SWCD's



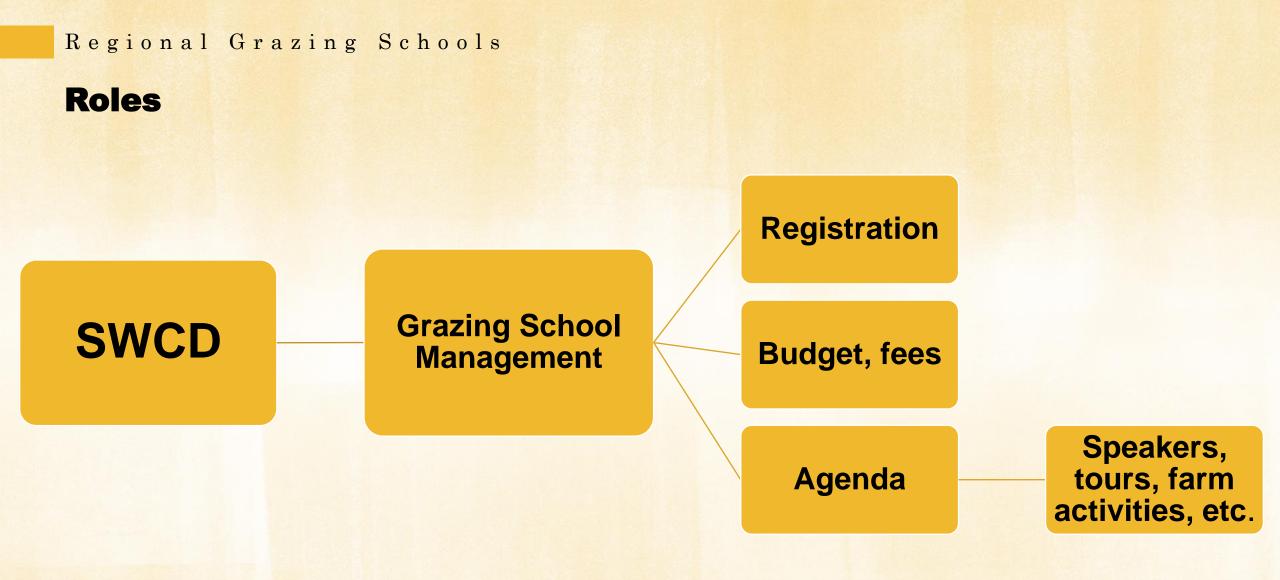




## Roles









# **Grazing School Regions**

- 9 Statewide
- MU Extension & NRCS Regional Coordinators for each region





## Roles

# Regional Coordinators

**MU Extension & NRCS** 

Liaison between MFGC and local schools

Coordinate schools within regions

Order and inventory materials for region

Evaluations, summary reports and billing to MFGC



# **Conducting the Grazing School**

- 3-Day school
- Flexible Agendas (See HO's)
- April 1 October 31
- Speakers
  - Must attend statewide training for certification
- Farm tours
  - 2 operations if possible
- Fees
  - Venue, meals, refreshments
  - Materials, education fee
- Final reports: regional coordinator → MFGC → DNR







# **Grazing School Materials**

## Required

- Missouri Grazing Manual
- A Guide to the Common Forages and Weeds of Pastures
- Grazing Stick
- \$44 for materials

## Optional

- Electric Fencing for Serious Graziers
- Watering Systems for Serious Graziers
- Missouri Soil & Pasture Health Guide
- Others



# **Grazing School Topics** DO NOT OVERSCHEDULE

- Intro to MIG
- Resource Evaluation
- Plant Growth
- Forage Quality
- Livestock Nutrition on Pasture

- Soil Fertility and Landscape Ecology
- Layout & Design
- Fence and Water Technology
- Economics
- Q&A / Discussion

**Optional topics** – NRCS/SWCD Practices & Policies, Wildlife, Pasture Weed Control, Alternative Forages, Stockpiled Grazing



# **Grazing School On-Farm Tours**

- Make or break school
- Experienced graziers who can communicate
  - May include school participants
- Provide guidance & reinforce topics covered during classroom lessons:
  - Forage productivity
  - Grazing heights / rest periods
  - Animal behavior / performance
  - Infrastructure

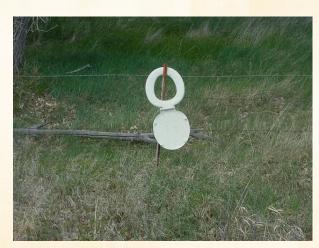






# **Grazing School On-Farm Tours**

- Respect Tour Hosts Time
  Pre-tour presentation?
- Length of Stay
- Travel Distance
- Time of Day
- Participant Comfort









# **Grazing School On-Farm Lessons**

# **Include Participant Activities as Appropriate**

- Pasture Condition
  - JS-AGRON-24
- Forage Yield Estimates
  - Grazing Sticks
  - Rising Plate Meters
  - Grazing Wedge
- Forage and Weed ID

- Reinforce Main Topics
  - Forage availability, grazing residual, animal demand, etc.
  - Forage allocation exercise?
- Electric Fencing
- Watering Systems
- Rainfall Simulator?



# **Grazing School Participant Follow-Up**

- Historically have not done a good job with this
- Grazing system design ok
- Grazing system operation year 1 & 2??
- Opportunity for advanced training / grazing schools













Gene Schmitz 660-827-0591 schmitze@missouri.edu







#### Regional MiG Grazing Schools Update on Program Policies January 3, 2017

A general overview of the school policies, including school dates, materials, and logistics can be found MFGC/GLCI website: <u>http://mofgc.org/policies.pdf</u> (Some information is out of date, but the basic operational information is current. Below is copied from the website):

#### PROGRAM POLICIES:

÷1

The Missouri Regional Grazing Schools are educational programs taught by the Natural Resource Conservation Service (NRCS) and University of Missouri Extension (MU). The schools serve three purposes:

- 1) Educate producers and agency personnel in the art and science of grazing management;
- 2) Transfer new technology in grassland management to producers and agency personnel;
- 3) Qualify producers for the state DSP3 cost-share program.

#### COORDINATORS, INSTRUCTORS, AND GRAZING REGIONS:

The schools are taught in nine "grazing school regions." These regions do not conform to institutional boundaries of either NRCS or MU. Rather, they define regions according to similar soil, topography, and land use; boundaries for regions were established more than ten years ago by NRCS and MU with approval from administration. Some regional boundaries have been adjusted since that time. Within each region are two co-coordinators--one from NRCS and another from UE.

A map of these regions, along with the names of regional coordinators is posted on the website for the Missouri Forage & Grassland Council/Grazing Land Conservation Initiative (MFGC/GLCI).

#### CURRICULUM:

All schools must address the following core subject matter in some form or another:

- Introduction to Management-intensive grazing
- Resource evaluation
- Plant growth
- Forage quality
- Livestock nutrition on pasture
- · Soil fertility and landscape ecology
- Layout and design
- · Fence and water technology
- Economics
- Tying it all together

Other subject matter may be added as deemed appropriate and as time allows.

#### SCHOOL DATES:

Schools are taught during the grazing season only. The grazing season runs from April 1 to October 31. They are scheduled in each of the nine regions under the leadership of the two co-coordinators. The two co-coordinators work together, along with instructors from NRCS and MU, to determine the number, the dates and the locations of schools in their region. They relay this information to MFGC/GLCI by February 14.

After information is relayed back to MFGC/GLCI it will be put on a calendar on the MFGC/GLCI website. MFGC/GLCI provides dates, places, and local contact persons for each school. This information will be posted on the MFGC/GLCI website in mid-March. In addition, the information will be published in various newsletters, including Missouri Grasslands.

#### INSTRUCTOR MATERIALS:

Instructors in each region are provided with multimedia materials.

#### PRODUCER MATERIALS:

Producer materials include manuals, grazing sticks, and other technical teaching tools. They are to be purchased from MFGC/GLCI, and the orders placed ONLY BY REGIONAL COORDINATORS. Materials are not to be ordered by instructors, secretaries, or other support personnel in the region; this will prevent duplicate orders and confusion of invoicing.

Materials can be ordered by the item. All orders are final, and regions that purchase materials are responsible for them. All orders must be turned in by February 14 to MFGC/GLCI. Purchasing by Item:

- Missouri Grazing Manual- \$20.00
- A Guide to the Common Forages and Weeds of Pastures \$14.00
- Grazing Stick- \$5/25 \$10 2

The above materials will be picked up by coordinators from the MFGC/GLCI representative. During pickup, coordinators will sign for all materials and they are to receive written receipts or signatures from all instructors, secretaries, or other personnel in the regions who receive these items. Additionally, copies of the NRCS publications Electric Fencing for Serious Graziers, Watering Systems for Serious Graziers, and Missouri Soil & Pasture Health Guide can be obtained through your local NRCS/SWCD offices. These are excellent resources and should be used as reference materials at grazing schools.

Below is more detailed information from 2016 Coordinators State Meeting:

#### Handling of materials:

- Coordinators keep records for their region's materials.
  - o Record of the materials picked up from MFGC/GLCI.
  - Record and signatures from people in their region who receive these materials, making sure the materials are counted as they are distributed, and keeping track of these materials.

#### Invoicing:

- At the end of each school, the coordinators will email the MFGC/GLCI office with needed information for invoice for that school
  - o Who to bill for the material (SWCD, Local Extension Office, Etc.)
  - o How much to bill them for.
  - How many to charge the Education Fee
- All bills for materials and educational Fee are to be sent from regional coordinators to the MFGC/GLCI office.
  - Bills should not be sent via alternate routes, as these cause double billings, missing billings, and confusion among the coordinators who are attempting to keep track of bills.
- MFGC/GLCI will then send the invoice to the coordinator, who will in-turn send on to the SWCD or Extension paying the bill.

#### **Participants List:**

- The Final Participant list for that school will be sent from coordinators to the MFGC/GLCI office, after which the lists will be sent by MFGC/GLCI immediately to DNR;
- The reason for this routing is the same as for billing—it prevents duplication, incomplete and unofficial information, and a disagreement regarding who has attended the schools.
- Instructors List A list of instructors, title, agency for each school must also be sent to MFGC/GLCI for records.

#### Educational Fee: \$50 fee -- Updated Policy:

 The \$50 fee is to be applied on a per head basis of those that attended the grazing school, unless there are two people from the same farm who register together. They will only pay one \$50 fee.



#### MFGC/NatGLC GRAZING SCHOOL REPORT

Name of School	
Region	
County	
Invoice (Name & Address)	
Coordinator(s)	
Billing Email	
Dates of School	
Grazing Manuals Used	
Forage & Weed Manuals	
Grazing Sticks	
Educational Fees	

#### Checklist of items sent to MFGC for reporting -Please mark off each item completed (click once to check the box)

- List of final participants with complete addresses who attended the entire grazing school
- □ Registrants attending together as one entity on list have been identified
- $\hfill\square$   $\hfill$  Full list of instructors with title and agency identified
- □ Agenda (either scan brochure or provide a typed copy)
- □ Evaluations compiled and entered on spreadsheet
- □ Submit to regional coordinators for forwarding to MFGC/NatGLC
- Summary of materials used

		School - Benton County	
	24, 25, 26,		
	Church Fe	lowship Hall, 201 E. Lamine, Lincoln,	MO
7/30/21			
Min	Tuesday 8/24/2021		
	8:30	Doors open, coffee & donuts	
30	9:00	Welcome, Course Introductions Get to know speakers and attendees	Gene Schmitz
15	9:30	Introduction to MIG History, goals, benefits, examples	Gene Schmitz
30	9:45	Resource Planning Inventory, efficiency indicators, management cycle	Amie Breshears
15	10:15	Break and Travel to SWCD Barn	
90		Fencing and NWSG	Mark Kennedy & Instructors
45		Lunch	
60		Basic Soil Structure, Function and Fertility	Travis Harper
60	1:45	Grazier's Arithmetic	Mark Kennedy
15	2:45	Break	
60	3:00	Basic Animal Nutrition	Gene Schmitz
	4:00	Adjourn	
Min	Wednesday 8/25/2021		
		Registration, coffee & donuts	
30	9:00	Farm Intro and Travel to Farm	Gene Schmitz
		Operator information	Leland Burnett
150	9:30	Participant activities: soil testing, forage stand	Travis Harper
		evaluation, forage identification, forage availability	Gene Schmitz
45	10.00	measurements	Mark Kennedy
45	12:00	Lunch	
60	12:45	Basic Plant Growth, Forage Quality, & Persistance	Travis Harper
15	1:45	Break	
90	2:00	Water Systems	Mark Kennedy
60	3:30	Matching Animals and Forages	Gene Schmitz
	4:30	Adjourn	
Vin	Thursday 8/26/2021		
		Registration	
30	9:00	Farm Intro and Travel to Farm	Gene Schmitz / Tina Dulaban
150	9:30	Operator information Participant activities: soil testing, forage stand evaluation, forage identification, forage availability measurements	Dwayne & Dillard Kreisler Travis Harper Gene Schmitz Mark Kennedy
AE	10.00		
45		Lunch	Maria Kamaraha
60		Layout and Design	Mark Kennedy
	2.15	Participant System Layout, Wrap Up, Evaluations,	NRCS / SWCD
60 30 60	2:45 3:15	Economics Cost Share Opportunities Participant System Layout, Wrap Up, Evaluations, Certificates Adjourn	Amie Breshears NRCS / SWCD Instructors, local S

8 . . . C



AUG 31-SEPT 2, 2021

Desloge Methodist Church Desloge, MO

#### Instructor Contact information

- > turnerjd80@gmail.com
- > hopkinsrm@missouri.edu
- > grahamkk@missouri.edu
- > heather.hegel@usda.gov
- > ohmesg@missouri.edu
- > mark.nussbaum@mo.usda.gov
- > rsettle@quailforever.org



"The U.S. Department of Agriculture (USDA) prohibits discrimina-tion in all of its programs and action in all of its programs and ac-tivities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, pa-rental status, religion, sexual ori-entation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assis-tance program. (Not all prohibited bases apply to all programs.) Per-sons with disabilities who require alternative means for communicaalternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TAR-GET Center at (202) 720-2600 (voice and TDD)."

### USDA-NATURAL RESOURCES CONSERVATION SERVICE / UNIVERSITY OF MISSOURI EXTENSION / MISSOURI FORAGE AND GRASSLAND COUNCIL

#### Tuesday August 31, 2021

8:30—8:45	Welcome and IntroductionsHeather Hegel/Kendra Graham
8:45—9:30	Art & Science of GrazingJohn Turner
9:30—10:15	Evaluation of Farm ResourcesHeather Hegel
10:15—10:30	BREAK
10:30—11:45	Watering Systems Mark Nussbaum
11:45–12:30	Economics of Forage and LivestockRachel Hopkins
12:30–1:30	LUNCH
1:30-2:30	Matching Livestock Needs and NutritionKendra Graham
2:30-3:30	Extending the Grazing SeasonJohn Turner
3:30-4:30	Q&A SessionAll Instructors

#### Wednesday September 1, 2021

8:30–9:30	Forage Weed and Brush ControlAnthony Ohmes
9:30—9:45	Break
9:45—10:30	Fencing SystemsJohn Turner
10:30—11:30	Soil Fertility Management and Nutrient CyclingAnthony Ohmes
11:30-12:00	Q&A SessionAll Instructors
12:00—1:00	LUNCH
1:00-2:00	Forage Quality, Growth, and SpeciesAnthony Ohmes
2:00–3:00	Grazer's ArithmeticJohn Turner
3:00–4:30	Q&A SessionAll Instructors



AUG 31-SEPT 2, 2021

Desloge Methodist Church Desloge, MO

Instructor Contact information

- > turnerjd80@gmail.com
- > hopkinsrm@missouri.edu
- > grahamkk@missouri.edu
- > heather.hegel@usda.gov
- > ohmesg@missouri.edu
- > mark.nussbaum@mo.usda.gov
- > rsettle@quailforever.org



"The U.S. Department of Agriculture (USDA) prohibits discrimination in all of its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TAR-GET Center at (202) 720-2600 (voice and TDD)."

#### USDA-NATURAL RESOURCES CONSERVATION SERVICE / UNIVERSITY OF MISSOURI EXTENSION / MISSOURI FORAGE AND GRASSLAND COUNCIL

SOUTHEAST MISSOURI REGIONAL GRAZING SCHOOL-FALL 2021

#### Thursday September 2, 2021 8:30-930 Layout and Design .....John Turner BREAK 9:30-10:00 Benefits of Grazing Natives.....Rachel Settle 10:00-10:45 Q&A and Prep for Farm Visit 10:45-11:00 11:00-12:00 LUNCH 12:00-4:30 Farm Visit Producer Viewpoint.....Ben Davis Rainfall Simulator.....Warren Cork Pasture Evaluations......Heather Hegel/Anthony Ohmes Grazier's Arithmetic......Mark Kennedy Q&A with Producer.....Ben Davis/All Instructors



#### <u>Northwest Missouri Grazing School</u> <u>June 22-24 2021</u> <u>AGENDA</u>

#### <u> Tuesday. June 22. 2021</u>

- 8:00 Check-In / Welcome and Introductions Luke Skinner and Jim Humphrey
- 8:20 Art & Science of Management-Intensive Grazing Mark Green
- 9:00 Break
- 9:10 Forage Basics (Quality/Growth/Species) Andy Luke
- 10:00 Travel to Jim and Betty Grace Farm
  - -Grazing System Tour with Manager (50 min)
  - -In Field Forage Basics Wayne Flanary and Andy Luke (30 min) Break Out
  - -WS Grass and Grazing for Wildlife Conservation Jim Grace and Jeff P (30 min) Break Out

#### 12:00 LUNCH (MU Hundley-Whaley Research Center)

- 12:45 Rainfall Simulator/Pastureland Soil Function Luke Skinner
- 1:30 Pasture Fertility Wayne Flanary
- 2:15 Video: Soil Carbon Cowboys Jim Humphrey
- 2:30 Evaluation of on Farm Resources John Turner
- 3:15 Break
- 3:30 Economics of Grazing Wesley Tucker
- 4:30 Adjourn

#### Wednesday, June 23, 2021

- 8:00 Meeting Nutritional Needs of Livestock with Pasture Jim Humphrey/Shawn D
- 9:00 Break
- 9:10 Grazer's Math (grazing stick and pasture evaluation sheet) Wesley Tucker
- 10:10 Livestock Water Availability and Distribution Rodney Saunders
- 11:30 LUNCH (MU Hundley-Whaley Research Center)
- 12:15 Livestock Fencing (Fence Building Demo) Mark Green (John T)
- 3:00 Break
- 3:15 Matching Livestock with Forage Resources (crude protein and plant ID) Jim Humphrey/Shawn D
- 4:00 Adjourn

\*Option: HT Fencing "hands on" after hours

#### Thursday. June 24. 2021

#### 8:00 Travel to John and Kenneth Leuken Farm

- -Grazing System Tour with Manager (40 min)
  - -Water Distribution Demo Rodney Saunders (35 min) Break Out
  - -Pastureland Evaluation Luke Skinner and Mark Green (35 min) Break Out
  - -Grazing Stick and Record Keeping John Turner (35 min) Break Out

#### 12:00 LUNCH (MU Hundley-Whaley Research)

- 1:00 Extending the Grazing Season John Turner
- 1:45 Break
- 2:00 System Design and Layout Mark Green
- 3:30 Video: Sunshine and Rain Luke Skinner
- 3:45 C/S Opportunities Jeremy Redden
- 4:00 Wrap Up Questions and Answers

\*Farm visits will be held rain or shine

### Regional Grazing School Agenda Linneus, MO October 6-8, 2021

#### Wednesday, October 6

1:00 - Welcome & Introductions	all instructors
1:30 - Art & Science of MiG	John Turner
2:00 - Inventory: Evaluating the Resources	Robert Conley
2:45 - Break	
3:15 - Basic Soil Structure, Function and Fertility	Valerie Tate
Thursday, October 7	
9:00 - Basic Plant Growth, Forage Quality and Persistence	Valerie Tate
10:00 - Basic Animal Nutrition	Zac Erwin
11:00 - Fencing: classroom portion	John Turner
Noon - Lunch	
1:00 - Matching Forages and Animals: Animal Requirements	Zac Erwin
1:45 - Fencing: Field Portion	John Turner
3:45 - Break	
4:00 - Watering Systems	Robert Conley
Friday, October 8	
8:00 – Economics	Joe Koenen
9:00 - Matching Forages and Animals: Yield Distribution	Valerie Tate
9:45 - Layout and Design	Robert Conley
10:45 - Grazer's Arithmetic	John Turner
Noon - Lunch	
1:00 - Leave for Farm Visit, New Boston	Tad and Kim Carnahan

#### GRAZING SCHOOL 2020 REGIONAL COORDINATORS

#### Northwest Region:

James Humphrey University of MO Extension 411 Court Street Savannah, MO 64485-0032 816.324.3147 humphreyjr@missouri.edu

Luke Skinner NRCS NCRS Area Office 3915 Oakland Ave. Ste. 103 St. Joseph, MO 64506 Luke.skinner@usda.gov 660.663.9381

#### **Northeast Region:**

Robert Conley NRCS 210 E. Main POB 158 Shelbyville, MO 63469 573.633.2211 x 3 robert.conley@usda.gov

Valerie Tate University of MO Extension POB 81 109 N. High St. Courthouse Annex Linneus, MO 64653 660.895.5123 tatev@missouri.edu

#### Northwest Central Region:

Zach Harding NRCS 1407 W. 32<sup>nd</sup> St. Sedalia, MO 65301 660.826.3339 x 3 zach.harding@swcd.mo.gov

Gene Schmitz University of MO Extension 1012 A Thompson Blvd. Sedalia, MO 65301 660.827.0591 schmitze@missouri.edu

#### **East Central Region:**

Rusty Lee University of MO Extension 310 Salisbury St. Ste. E Montgomery City, MO 63361 573.564.3733 leerw@missouri.edu

Megan Rudroff NRCS 1315 E. Main St. Linn, MO 65051 573.897.3797 x 109 megan.rudroff@usda.gov

#### Southwest Central Region:

Johnetta Yaeger 100 S. Burke Versailles, MO 65084 573.378.5822 x 104 johnetta.yeager@usda.gov

Travis Harper University of MO Extension 120 E. Lincoln St. Clinton, MO 64735 660.885.5556 harpertw@missouri.edu

#### **Central Region:**

Nathan Bilke NRCS 1050 Hwy 72 E Rolla, MO 65401 <u>Nathan.bilke@usda.gov</u> 660.582.7423

Gatlin Bunton University of MO Extension 302 Water St. POB 190 Steelville, MO 65565 573.775.2135 buntong@missouri.edu

#### Southwest Region:

Wesley Tucker University of MO Extension 451 S. Albany Ave. Bolivar, MO 65613 417.326.4916 tuckerw@missouri.edu

Nathan Witt NRCS 1900 S Business Hwy 71 Neosho, MO 64850 417.451.1007 x 3 nathan.witt@usda.gov

#### South Central Region:

Sarah Kenyon University of MO Extension 1376 Bill Virdon Blvd. West Plains, MO 65775 417.256.2391 kenyons@missouri.edu

Jamie Kurtz NRCS 3210 Hoover Dr. West Plains, MO 65775 417.256.7117 x 3 jamie.kurtz@usda.gov

#### Southeast Region:

Anthony Ohmes University of MO Extension 684 W. Jackson Trail Jackson, MO64755 573.243.3581 ohmesg@umsystem.edu

Heather Hegel NRCS 711 Pointe Basse Dr. St. Genevieve, MO 63670 573.883.2703 x 3 heather.hegel@usda.gov