31st Annual

March 3, 2015

University Plaza Hotel

Springfield, Missouri

Southwest Missouri
Soil and Water Conservation Districts

Proud Sponsors of the SW Missouri

Spring Forage Conference

Barry

Cedar

Christian

Dade

Dallas

Douglas

Greene

Jasper

Laclede

Lawrence

Ozark

Newton

Polk, St. Clair, Stone, Taney, Webster, Wright

Providing landowners with conservation education, technical support, and financial incentives needed to conserve their soil and water resources.

Welcome to the 31st Annual Southwest Missouri Spring Forage Conference!

For 31 years, the Southwest Missouri Spring Forage Conference planning committee has coordinated this annual event focusing on educating and enlightening those in the forage production industry. We strive to bring in professionals, both talented and versed in their fields of study, to convey the latest research and developments or simply expand on time-proven principles. This year will be no exception. With a world-renowned keynote speaker and a multitude of breakout sessions, I believe you will easily find a topic of interest. Bringing in nearly 500 attendees each year, this premier conference will give you a chance to visit with old friends and make new, while gaining new and sharing old trade secrets.

It is a pleasure to have Dr. Kim Stackhouse-Lawson, Director of Sustainability Project for the National Cattlemen's Beef Association, as our keynote speaker this year. Kim coordinated the Beef Checkoff sustainability research program. A program that provided the beef industry with its first sustainability assessment of the beef value chain, and a clear path toward improving sustainability in the future. Amongst being an industry spokesperson, Dr. Stackhouse-Lawson serves on the executive board for the Global Roundtable on Sustainable beef, as well as a subcommittee chair for the Five Nations Beef Alliance. We are pleased to have Dr. Stackhouse-Lawson with us this year.

Throughout the day, enjoy a variety of topics in our breakout sessions, then be sure to visit our trade show during the breaks. Our vast room of vendors and exhibitors will bring you in touch with the latest products sure to fit your needs. I want to give a big thanks to all our vendors and sponsors whom are a large contributor in making this conference so successful.

From early in the day to the final sessions, you will likely run into several members of the planning committee that can be identified by their matching tan shirts. While they don't just share in the pride of wearing identical shirts, they also share the pleasure of organizing one of the elite forage conferences in the country. Committee members represent the USDA Natural Resources Conservation Service, Soil and Water Conservation Districts of southwest Missouri, University of Missouri Extension, USDA Farm Service Agency, Missouri State University - William H. Darr School of Agriculture, Lincoln University Cooperative Extension, and the Missouri Department of Conservation. The strong partnership that we share makes this conference possible.

On behalf of the planning committee, I wish you an enjoyable day and thank you for your attendance. As always, we welcome your ideas and comments on ways to improve on the conference.

Sincerely,

NATHAN WITT
2015 Southwest Missouri Spring Forage Conference Committee Chairman

31st Annual Southwest Missouri Spring Forage Conference

March 3, 2015

TABLE OF CONTENTS

31st ANNUAL SW MISSOURI SPRING FORAGE CONFERENCE

Tuesday, March 3, 2015

AGENDA

8:00-8:45 am REGISTRATION & VISIT TRADE SHOW -- CONVENTION CENTER/NEBRASKA ROOM		
SESSION A (8:45 AM - 9:30 AM)	**ROOM**	**SPEAKER**
(A1) Grazing 201: Advanced Management Strategies and Tactics REPEATED AT 2:45 PM	COLORADO	Hugh Aljoe Pasture/Range Consultant, Noble Foundation
(A2) How to Treat My Heirs Fairly When Only One is Going to Take Over the Farm REPEATED AT 2:45 PM	ILLINOIS	Kelvin Leibold Farm Mgmt. Specialist, Iowa State Univ.
(A3) Alfalfa and Beef Cattle	OKLAHOMA	Eldon Cole, MU Ext. Livestock Specialist Tim Schnakenberg, MU Ext. Agronomist
(A4) Livestock Predator Control	KANSAS	Dan McMurtry USDA-APHIS Wildlife Biologist
9:30-10:15 am -- BREAK & VISIT TRADE SHOW -- CONVENTION CENTER/NEBRASKA ROOM		
SESSION B (10:15 AM - 11:00 AM)	**ROOM**	**SPEAKER**
(B1) Good Pasture Bugs REPEATED AT 2:45 PM	OKLAHOMA	Dr. Wayne Bailey MU State Entomologist
(B2) Cow-Calf Share Agreements REPEATED AT 2:45 PM	KANSAS	Joe Horner MU Agriculture Economist
(B3) Johnson Grass: The Good, The Bad, & The Ugly	COLORADO	Dr. Will McClain, MU Ext. Agronomist
(B4) Impacts of Grassland/Grazing Management on Quail Reproduction	ILLINOIS	Kyle Hedges, Frank Loncarich MDC Wildlife Mgmt. Biologists
11:00-11:45 am -- BREAK & VISIT TRADE SHOW -- CONVENTION CENTER/NEBRASKA ROOM		
11:45 AM - LUNCHEON -- CONVENTION CENTER Welcome -- Joann Pipkin, Emcee -- Show Me Agri-Communications **Keynote Address** ***"Beef Industry Sustainability"*** **Dr. Kim Stackhouse-Lawson, Director of Sustainability Project** **National Cattlemen's Beef Association**		
1:15 - 1:45 pm -- BREAK & VISIT TRADE SHOW -- CONVENTION CENTER/NEBRASKA ROOM		
SESSION C (1:45 PM - 2:30 PM)	**ROOM**	**SPEAKER**
(C1) Beyond the Research: Beef Sustainability Update	COLORADO	Dr. Kim Stackhouse-Lawson, NCBA
(C2) Cattle Health	KANSAS	Dr. Craig Payne Director, MU Veterinary Ext.
(C3) Managing Stocking Rate to Seasonal Forage Growth Changes	OKLAHOMA	Bob Salmon Producer, Appleton City, MO
(C4) Brush and Weed Management With Small Ruminants	ILLINOIS	Dr. Jodie Pennington Lincoln University Coop. Extension (Retired)
2:30 - 2:45 pm -- BREAK		
SESSION D (2:45 PM - 3:30 PM)	**ROOM**	**SPEAKER**
(D1) Grazing 201: Advanced Management Strategies and Tactics	COLORADO	Hugh Aljoe Pasture/Range Consultant, Noble Foundation
(D2) How to Treat My Heirs Fairly When Only One is Going to Take Over the Farm	ILLINOIS	Kelvin Leibold Farm Mgmt. Specialist, Iowa State Univ.
(D3) Good Pasture Bugs	OKLAHOMA	Dr. Wayne Bailey MU State Entomologist
(D4) Cow-Calf Share Agreements	KANSAS	Joe Horner MU Agriculture Economist
3:30 pm ADJOURN		

31st Annual
Southwest Missouri Spring Forage Conference
Committee Members

Pat Adams – NRCS
Area Resource Conservationist
1786 South 16th Avenue, Suite 102, Ozark, MO 65721
417-581-2719 Ext. 108
pat.adams@mo.usda.gov
Planning Committee Public Relations Chair

Roger Ankrom - Polk County SWCD
District Technician
1333 East Broadway, Bolivar, MO 65613
417-326-5993 Ext. 3 or 111
roger.ankrom@swcd.mo.gov

Gereon Brownsberger - Dade County NRCS
Area Soil Conservation Technician
124 South Highway 39, Greenfield, MO 65661
417-637-5993 Ext. 3
gereon.brownsberger@mo.usda.gov

Dr. Michael Burton
Missouri State University
William H. Darr School of Agriculture
Associate Professor
901 South National Avenue, Springfield, MO 65804
417-836-5085
MikeBurton@MissouriState.edu

Dr. Gordon Carriker
University of Missouri Extension
Agriculture Business Specialist
105 North 2nd Street, PO Box 160, Ozark, MO 65721
417-581-3558
carrikerg@missouri.edu

Patrick Davis
University of Missouri Extension
Livestock Specialist
113 South Street, Stockton, MO 65785
417-276-3313
davismp@missouri.edu

Mark Emerson - Webster County NRCS
Resource Conservationist (Grassland)
1202 Banning Street, Marshfield, MO 65706
417-468-4176 Ext. 3
mark.emerson@mo.usda.gov

Alan Garton - Laclede County NRCS
Resource Conservationist
1242 Deadra Drive, Lebanon, MO 65536-1015
417-532-6305 Ext. 3 or 800-203-4467
alan.garton@mo.usda.gov

Dee Glenn - Dade County SWCD
District Manager/Technician
124 South Highway 39, Greenfield, MO 65661
417-637-5993 Ext. 3
dee.glenn@swcd.mo.gov

Curtis Gooch – Polk County NRCS
Resource Conservationist
1333 East Broadway, Bolivar, MO 65613
417-326-5993 Ext. 3
curtis.gooch@mo.usda.gov
Planning Committee WebMaster

Mark Green - Greene County NRCS
District Conservationist
688 South State Highway B, Suite 200
Springfield, MO 65802
417-831-5246 Ext. 3
mark.green@mo.usda.gov
Planning Committee Vice-Chair

Terry Halleran - University of Missouri Extension
Agronomy Specialist
Hickory County Extension Center
203 Cedar Street
Hermitage, MO 65668
417-745-6767
halleranw@missouri.edu

Aaron Hoefer - Christian County NRCS
District Conservationist
1786 South 16th Avenue, Suite 102, Ozark, MO 65721
417-581-2719 Ext. 3
aaron.hoefer@mo.usda.gov

Chris Hoeme – St Clair County NRCS
Soil Conservationist
3835 NE Highway 13, Osceola, MO 64776
417-646-8108 Ext. 3
chris.hoeme@mo.usda.gov

Abby Inglis – Farm Service Agency
CED, Greene and Webster Counties
688 South State Highway B, Suite 100
Springfield, MO 65802
417-831-5246 Ext. 2
abby.inglis@mo.usda.gov

31st Annual
Southwest Missouri Spring Forage Conference
Committee Members

Ian Kurtz
707 North 6th Avenue, Ozark, MO 65721
417-581-6002
kurtzclan@cebridge.net

Jamie Kurtz – Douglas County NRCS
Resource Conservationist
3210 Hoover Drive, West Plains, MO 65775
417-256-7117 Ext. 3
jamie.kurtz@mo.usda.gov

Jody Lawson – Webster County SWCD
Program Specialist II/Tech II
1202 Banning Street, Marshfield, MO 65706
417-468-4176 Ext. 3
jody.lawson@swcd.mo.gov
2015 Planning Committee Secretary

Andy McCorkill
University of Missouri Extension
Livestock Specialist
Dallas County Extension Center
PO Box 1070, Buffalo, MO 65622
417- 345-7551
mccorkilla@missouri.edu

Rita Mueller – Lawrence County NRCS
Resource Conservationist
10763-G Highway 39, Mount Vernon, MO 65712
417-466-7682, Ext.3
rita.mueller@mo.usda.gov
Planning Committee Proceedings Chair

Dr. Jodie A. Pennington
Lincoln University Cooperative Extension
Small Ruminant Educator
Newton County Extension Center
Smith Hall, Crowder College
601 Laclede Avenue, Neosho, MO 64850-9165
417-455-9500
penningtonj@lincolnu.edu

Ted Probert
University of Missouri Extension
Regional Dairy Specialist
PO Box 458, Hartville, MO 65667
417-741-6134
ProbertT@missouri.edu

Scott Radford
Missouri Department of Conservation
Area Biologist
1786 South 16th Avenue, Suite 102
Ozark, MO 65721
417-581-2719 Ext. 6
scott.radford@mo.usda.gov

Tony Rosen – Dallas County SWCD
District Technician
1240 West Truman, Buffalo, MO 65622
417-345-2312 Ext. 3 or Ext. 111
tony.rosen@swcd.mo.gov

Tim Schnakenberg
University of Missouri Extension
Agronomy Specialist
PO Box 345, Galena, MO 65656
417-357-6812
SchnakenbergC@missouri.edu
Continuing Education Credits Coordinator

Jill Scheidt - University of Missouri Extension
Agronomy Specialist
Barton County Extension Center
801 East 12th Street
Lamar, MO 64759
scheidtjk@missouri.edu

Mary Jo Tannehill – Laclede County SWCD
District Manager
1242 Deadra Drive, Lebanon, MO 65536
417-532-6305 Ext.3
mary.tannehill@swcd.mo.gov
Planning Committee Registration/Treasurer

Wesley Tucker
University of Missouri Extension
Agriculture Business Specialist
110 East Jefferson, Bolivar, MO 65613
417-326-4916
tuckerw@missouri.edu

Nathan Witt – Newton County NRCS
Resource Conservationist
1900 South Highway 71, Neosho, MO 64850
417-451-1366 Ext. 3
nathan.witt@mo.usda.gov
Planning Committee Sponsors/Vendors Chair
2015 Planning Committee Chair

Southwest Missouri Spring Forage Conference

GOLD Sponsor

conserving
natural resources
for our future

Southwest Missouri
Soil and Water Conservation Districts

Barry County	417-847-4309	Lawrence County	417-466-7682
Cedar County	417-276-3388	Newton County	417-451-1007
Christian County	417-581-2718	Ozark County	417-679-4876
Dade County	417-637-5993	Polk County	417-326-5993
Dallas County	417-345-2312	St. Clair County	417-646-8108
Douglas County	417-683-4816	Stone County	417-723-8389
Greene County	417-831-5246	Taney County	417-546-2089
Jasper County	417-358-8198	Webster County	417-468-4176
Laclede County	417-532-6305	Wright County	417-741-6195

Southwest Missouri Spring Forage Conference

SILVER Sponsors

Southwest Missouri RC&D

Resource Conservation and Development

FCS FINANCIAL

Growing Relationships. Creating Opportunities.™

A FARM CREDIT COOPERATIVE

Powerflex Fence

A Resource Concepts LLC Company

MFGC/GLCI

BARENBRUG

Southwest Missouri Spring Forage Conference

BRONZE Sponsors

CowBos
1347 North State Highway 97
Lockwood, Missouri 65682
Contact: Neil Bowers 417-398-1928
cowbos@outlook.com
www.cowbos.com

Dow AgroSciences
12490 Quivira Road, Apartment 3820
Overland Park, Kansas 66213
Contact: Brant Mettler 940-641-0274
bcmettler@dow.com
www.dowagro.com

Flying H Genetics
9510 NE Center Road
Lowry City, Missouri 64763
Contact: James Sparks 417-309-0062
james@flyinghgenetics.com
www.flyinghgenetics.com

Joplin Regional Stockyards
PO Box 634, Carthage, Missouri 64836
Contact: Mark Harmon 417-548-2333
markh@joplinstockyards.com
www.joplinstockyards.com

Merial
PO Box 1007, Ozark, Missouri 65721
Contact: Randy Schilling 417-848-5465
randy.schilling@merial.com
www.merial.com

Southwest Missouri Spring Forage Conference

BRONZE Sponsors

MQT Lab Services
8600 NW 107th Terrace
Kansas City, Missouri 64153
Contact: Bob Shaffer 816-801-6304
bshaffer@mlskclab.com

New Day Genetics
12700 SW 776 Road
El Dorado Springs, Missouri 64744
Contact: Jared Wareham 660-492-2777
jwareham79@gmail.com

S&H Farm Supply
7 Route A, Lockwood, Missouri 65682
Contact: Kenny Bergmann 417-232-4700
kenny@shfarmsupply.com
www.shfarmsupply.com

Springfield Biosolids Program
3301 South State Highway FF
Springfield, Missouri 65807
Contact: Karyn Highfill 417-891-1600 ext. 140
KHighfill@springfieldmo.gov

University of Missouri Extension
2400 South Scenic
Springfield, Missouri 65807
417-881-8909
http://extension.Missouri.edu/

Missouri Forage & Grassland Council
Grazing Lands Conservation Initiative

"The purpose of the Missouri Forage and Grassland/Grazing Lands Conservation Initiative is to promote profitable and efficient production, utilization and conservation of Missouri's forage and grasslands."

MFGC/GLCI is the voice of Missouri's forage industry

MFGC/GLCI provides education in forage production

Members of MFGC/GLCI enjoy a number of benefits:

Farm tours, "pasture walks", educational programs

Subscription to Missouri Grasslands Newsletter

Discount on registration to MFGC/GLCI Annual Meeting

Discount on AFGC membership

Discount on cost of forage analysis at cooperating testing labs

For more information, contact MFGC/GLCI office Phone: 573-499-0886

Email: mfgc@mchsi.com Website: http://mofgc.org

Southwest Missouri Spring Forage Conference

BREAK SPONSORS

MFA Incorporated

201 Ray Young Drive, Columbia, Missouri 65201

Contact: David Moore 573-876-5445, dmoore@mfa-inc.com

Buffalo Livestock Market

PO Box 1043, Buffalo, Missouri 65622

Contact: Lyle Caselman, 417-335-8122

To Participate in Southwest Missouri RC&D's Fire Protection Programs, Contact Duane Parker 417-569-7288 or Bill Altman 573-205-2192

Southwest Missouri Spring Forage Conference

EXHIBITORS

Ash Grove Aggregates
Barenbrug USA
Boehringer—Ingelheim
CowBos
Division of Workforce Development
Dow Agrosciences
Elite Equine
FCS Financial
Flying H Genetics

Southwest Missouri Spring Forage Conference

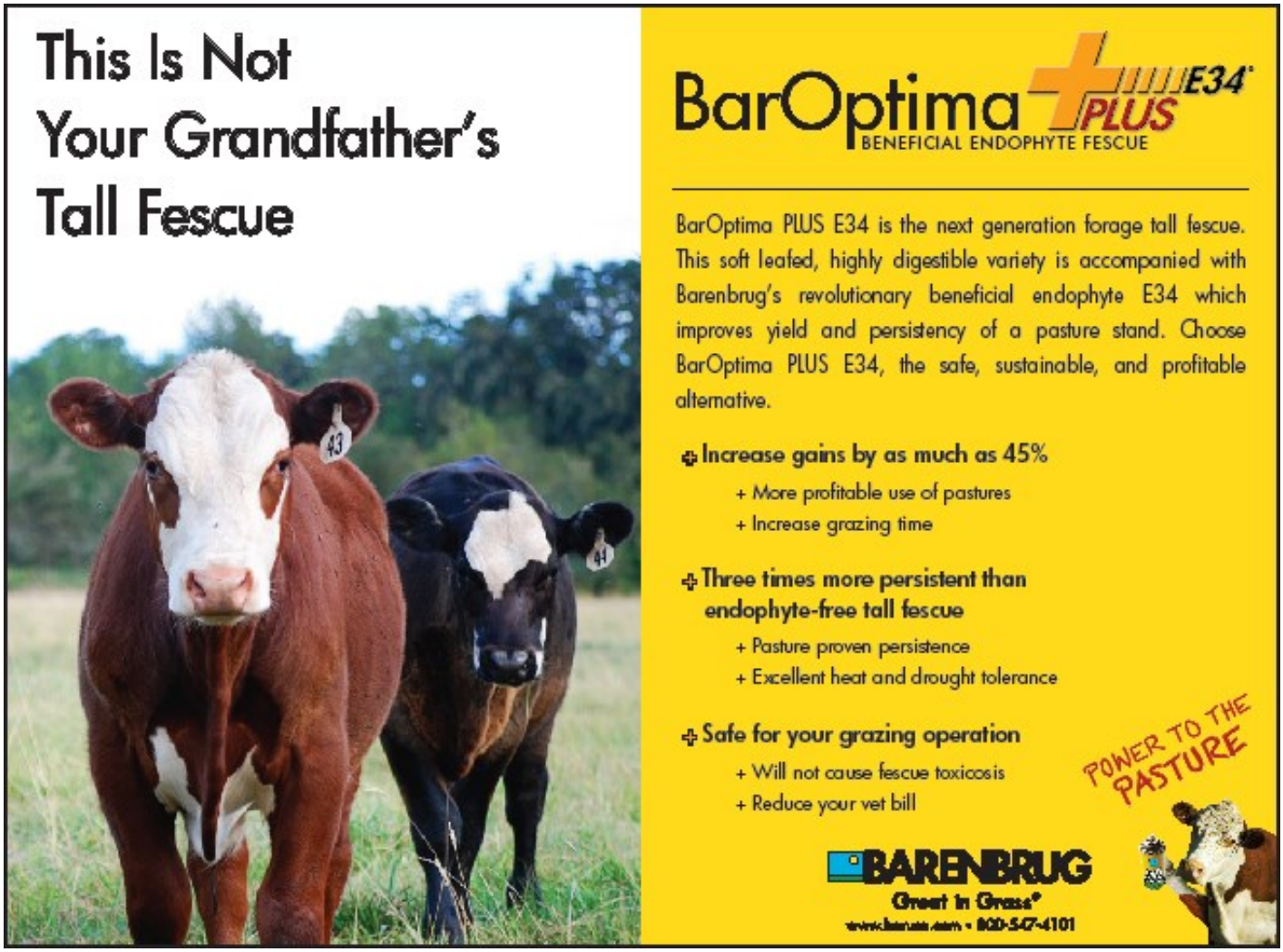
EXHIBITORS

Gallagher
Great Plains Marketing
Hamilton Native Outpost
Joplin Regional Stockyards
Kencove
Legacy Farm and Lawn
Missouri Department of Conservation
Merial
Missouri Forage and Grassland Council

Southwest Missouri Spring Forage Conference

EXHIBITORS

Missouri Agriculture and Small Business Development Authority
Missouri Beef Industry/Missouri Cattlemen
Missouri State University
MQT
Multimin USA Inc.
New Day Genetics
Pennington Seed
PowerFlex Fence
Race Brothers Farm Supply
Southwest Missouri RC&D



Southwest Missouri Spring Forage Conference

EXHIBITORS

S&H Farm Supply
SO-MO Agri Supply
Springfield Biosolids Program
Soil and Water Conservation Districts—Southwest Missouri
Timeless Fence
Truax
University of Missouri Extension
Zeitlow Distributing Company
Zoetis

The Southwest Missouri Spring Forage Conference is brought to you by the planning committee representing these agencies and universities:

Lincoln University Cooperative Extension

Missouri Department of Conservation

Missouri State University—William H. Darr School of Agriculture

Soil and Water Conservation Districts
Barry, Barton, Camden, Cedar, Christian, Dade, Dallas, Douglas, Greene, Hickory, Jasper, Laclede, Lawrence, Newton, Polk, St. Clair, Stone, Taney, Webster, and Wright Counties

USDA Farm Service Agency

USDA Natural Resources Conservation Service

University of Missouri Extension

The Southwest Missouri Spring Forage Conference Planning Committee would like to thank all sponsors, vendors, partners, and attendees for their help in making this conference a successful experience. We welcome your suggestions and feedback. Please come back next year!

31st Annual
Southwest Missouri Spring Forage Conference
KEY NOTE SPEAKER BIOGRAPHY

Kim Stackhouse-Lawson, PhD
Director of Sustainability Research
National Cattlemen's Beef Association

Kim is the Director of Sustainability Research at the National Cattlemen's Beef Association. She received her PhD in Animal Science from the University of California, Davis and was postdoctoral fellow with the Beef Cattle Institute at Kansas State University.

Kim leads the Beef Checkoff sustainability research program. Originally funded in 2010 by the beef promotion operating committee, this program is most well noted for the completion of the first and largest sustainability assessment of the beef value chain. The beef sustainability assessment spans the entire life cycle of beef production taking into account all social, economic, and environmental impacts of beef production. The project provides the beef community with its first sustainability benchmark and a path forward to improve sustainability along the entire value chain.

In addition to coordinating the Beef Checkoff sustainability research program, Kim serves as an industry spokesperson, executive board member for the Global Roundtable on Sustainable beef, chair of the Five Nations Beef Alliance sustainability sub-committee, and a member of the International Meat Secretariat sustainability sub-committee. She was recently recognized in the 2013 UC Davis alumni spotlight in Agriculture and Environmental Science Outlook Magazine for her leadership and career accomplishments in the area of sustainability.

31st Annual
Southwest Missouri Spring Forage Conference
SPEAKER BIOGRAPHIES

Joann Pipkin

Joann Pipkin was raised on a family dairy farm in Polk County, Missouri. She resides in Republic, MO, where she and her husband, Jim, operate Clearwater Angus Farm with his family. In addition to being a farm wife and mother to daughter Jera and son Jace, Joann is a freelance writer and public relations professional, operating her own agricultural communications business – Show Me Agri-Comm.

In the day to day operation of Show Me Agri-Comm., Joann offers writing, photography, and newsletter layout and design services to agricultural clients. She works one-on-one with Joplin Regional Stockyards and its monthly customer news-magazine, *Cattlemen's News,* as well as the Missouri FFA Association/*Missouri FFA Today* magazine. In addition, Joann cooperates with FCS Financial to write and photograph its customer feature for the cooperative's magazine, *HeartBeat.* Her work has been published in national farm publications including *Loops Magazine, Beef Today* and the *Angus Journal.*

A former farm broadcaster, Joann began her career in agricultural communications as the farm news director for KTTS Radio in Springfield. She's a graduate of Missouri State University with a degree in agricultural communications.

Craig A. Payne, DVM, MS

payneca@missouri.edu

Craig Payne received his DVM degree from the University of Missouri-College of Veterinary Medicine in 1993. Upon graduation he practiced at the Animal Medical Center in Marshfield, MO for one year before moving to Sedalia, MO where he became a partner at the Sedalia Veterinary Center. He practiced in Sedalia until 2005 at which time he moved to Kingsville, Texas, where he pursued an MS degree in Agribusiness from the King Ranch Institute for Ranch Management at Texas A&M – Kingsville. After completing his MS degree in 2007, Craig accepted a position as an extension veterinarian for the University of Missouri and is currently the Director of the Department of Veterinary Extension and Continuing Education at MU-College of Veterinary Medicine.

Bob Salmon
Salmon Ranch

Bob and Susan Salmon, along with two grown sons own and operate Salmon Ranch in northern St Clair County, Missouri. Out of necessity, in 1987, Bob embarked on a journey to improve his grass management. The goal being consistent profitability with the main input being labor. "We have no money, therefore, we must THINK". After over 20 years of diligent observation and a willingness to change and adapt to various situations caused by weather, markets, etc., he has developed a management style that is flexible, sustainable, and most importantly, always PROFITABLE.

This operation includes stockers, breeding heifer development, cow-calf, custom grazing, and sheep. Bob also raises and trains Border Collies in his "spare time".

Dr. Jodie Pennington, Retired
Lincoln University Cooperative Extension

Dr. Jodie Pennington is retiring from Lincoln University Cooperative Extension where he worked as a small ruminant educator, primarily in the southwest region of the state. He worked at the Newton County Extension Center and in partnership with the University of Missouri Extension in areas of goat and sheep management, production, and marketing.

Although his target audience was producers of sheep and goats who have small acreage and limited resources, he worked with all audiences. He has over 30 years of experience with sheep and goats, including extensive experience with multi-species grazing of cattle and goats or sheep and browsing management with goats and sheep.

Dr. Pennington's talk at this conference will center on the use of goats and sheep for weed and brush control/management. Results of a three-year project with Lincoln University, Crowder College, and NRCS utilizing small ruminants for brush control will be presented.

The topic will be "Use of Sheep and Goats to Manage Brush and Weeds", Jodie Pennington, Lincoln University Cooperative Extension (LUCE), Newton County Extension Center, Neosho, Missouri; Charlotte Clifford-Rathert, LUCE, Jefferson City, Missouri; Jay Wilkins, Crowder College, Neosho, Missouri; and Nathan Witt, NRCS, Neosho, Missouri.

Eldon Cole
Livestock Specialist
University of Missouri Extension
ColeE@missouri.edu

Eldon Cole was born and raised on a general livestock (beef, hogs and sheep) farm at Potosi, Missouri. He attended the University of Missouri majoring in animal husbandry and received a Bachelor's degree in Agriculture in 1962. Mr. Cole received a Masters in Animal Husbandry in 1963.

Mr. Cole began career with University of Missouri Extension in 1964 as Balanced Farming Agent in Marshall, Saline County. He transferred to Mount Vernon, Missouri, in 1968. Mr. Cole has served there as Livestock Specialist since with varying county, area, and regional assignments.

Hugh D. Aljoe
Consultation Program Manager
Pasture & Range Consultant
The Samuel Roberts Noble Foundation

Aljoe serves as a pasture and range consultant in the Samuel Roberts Noble Foundation - Agricultural Division's consultation program. He also serves as the consultation program manager, coordinating the efforts of the division's agricultural consultants who work mostly with producers in Oklahoma and north Texas.

Before coming to the Noble Foundation in 1995, Aljoe was the ranch manager of Belvedere Land & Cattle Corporation for 10 years. He supervised the growth of the ranch from a small 150-head purebred ranch into a 1,500-head purebred and commercial cow-calf operation on 3,900 acres. Forage resources were predominantly introduced Bermuda grass pastures (overseeded to ryegrass) operated under a planned, managed grazing program.

Aljoe received a Bachelor's degree in Animal Science and a Master of Science in Range Management from Texas A&M University.

Kelvin L. Leibold
Farm Management Specialist
Iowa State University Extension
524 Lawler Street, Iowa Falls, Iowa 50126
phone 641-648-4850, kleibold@iastate.edu

Kelvin Leibold is a Farm Management Specialist for Iowa State University Extension in Central Iowa. In his position, he assists producers in the areas of crop and livestock economics, risk management, strategic planning, beginning farmer programs, and estate planning.

He has worked with the development of farming operations around the world including Benue, Nigeria, and Paraguay.

Throughout the years, he has worked closely with many farm families assisting them through the transition of passing the farm business on to the next generation.

Kelvin has received numerous awards throughout his career and gets invited to speak often including presentations at conferences in Canada, Germany, China, and India.

Dr. Wayne Bailey
Associate Professor
Extension Entomologist
Division of Plant Sciences
University of Missouri
110 Waters Hall
Columbia, MO 65211
cell 573-864-9905

Frank Loncarich
Wildlife Management Biologist
Missouri Department of Conservation

Frank Loncarich is a Wildlife Management Biologist with the Missouri Department of Conservation (MDC), working out of the office in Neosho, Missouri.

Frank has been with MDC for 10 years. His primary work duties include managing public lands, including an intensively managed Quail Emphasis Area and four native prairie tracts.

Frank is also heavily involved with Bobwhite Quail research and serves on the state's Prairie Chicken Recovery Team.

Frank received his Master's Degree from the University of Arkansas where he conducted Prairie Chicken research in the Flint Hills of Kansas.

Before coming to MDC, Frank worked as a quail research biologist in Kansas and a wildlife biologist for the Arkansas Game and Fish Commission.

Joe Horner
Agricultural Economist
Commercial Agriculture Program
University of Missouri

Joe Horner works as a dairy and beef economist for the Commercial Agriculture Program at the University of Missouri. In his position, he assists producers in analyzing farm finances, creates informal adult educational opportunities for producers, and assists in projects that strengthen Missouri's dairy and beef industry.

A southwest Missouri native, Horner has worked for Extension for 26 years. He spent the first 12 years of his Extension career as a regional extension dairy and farm management specialist in southeast Missouri before moving to his current statewide assignment.

Before going to work for extension, Horner worked for Cargill's Feed Division. He received a B.S. in agricultural economics from the University of Missouri in 1985 and an M.S. in agricultural economics from the University of California—Davis in 1987.

Dan McMurtry
Wildlife Biologist
USDA Wildlife Services

Dan McMurtry is a Wildlife Biologist with USDA Wildlife Services in Columbia, Missouri, and has worked for USDA for 21 years. Dan is a 1987 graduate of the University of Missouri and holds a Bachelor's degree in Wildlife Management.

Dan is a Certified Wildlife Biologist with The Wildlife Society and a Certified FFA Airport Wildlife Biologist.

Dan has worked on over 50 airports in the United States to reduce the threat wildlife post to aircraft and human health and safety. Dan has also worked extensively on feral hogs, white-tailed deer on airports and disease issues, Canada geese, raptors, and starlings in feedlots. Dan lives in Callaway County and has been in the cow/calf business for 20 years.

Kyle Hedges
Wildlife Management Specialist
Missouri Department of Conservation

Kyle Hedges graduated from Kansas State in 1994.

Kyle was a Wildlife Biologist at Fort Riley Military installation in Kansas from 1995 to 2000. He was the Wildlife Biologist for the Missouri Department of Conservation (MDC) in Rock Port, Missouri, from 2000 to 2003.

Kyle has been the Wildlife Management Biologist for MDC in Bolivar, Missouri, from 2003 to 2014.

He manages 20,000 acres of public land in Cedar, Dade, and Polk counties. The focus of much of that management is on quail and other upland wildlife.

Tim Schnakenberg
Regional Agronomy Specialist
University of Missouri Extension

Tim Schnakenberg serves as Regional Agronomy Specialist based in Stone County. He is one of three Agronomy Specialists serving the Southwest Region of Missouri.

He has worked as an Agronomy Specialist since 1991 and currently focuses on pasture and hay management, crop production, pest management, pesticide training, soil fertility and soil conservation.

Ongoing educational efforts include Livestock and Forage Conferences, an annual Dairy Day, regional hay production schools, regional grazing schools, farm tours, on-farm demonstrations and pesticide applicator training.

William (Will) Edward McClain II
Regional Agronomy Specialist
University of Missouri Extension

William Edward McClain II (Will) was born 1970 in Little Rock, Arkansas and grew up in the town of Mt. Vernon, Missouri. He attended Mt. Vernon schools from 3rd grade through graduating in 1988. In 1989, he joined the Army early to help pay for a college education and stayed in the National Guard until 1999. He attended Southwest Missouri State University and received a B.S. in Horticulture/ Agronomy before working at a private country club as the head horticulturist and heavy equipment operator for several years. He then returned to Southwest Missouri State University and obtained a M.S. in Plant Sciences followed by a couple of years teaching soil and plant science courses in the Agriculture Department. After being convinced by Dr. Anson Elliot to pursue a PhD, he started at the University of Missouri under the advisement of Dr. Dale Blevins. His research projects covered many aspects of tall fescue production including stockpiling, seed production and nutrient dynamics.

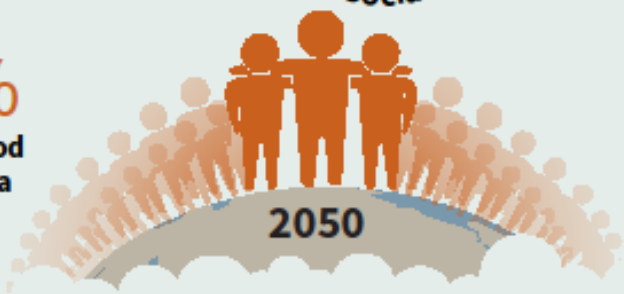
After completing his PhD, he worked as a senior research specialist for Dr. Robert Sharp on a drought project looking at changes in root architecture and depth of several soybean cultivars. Will has worked for University of Missouri Extension as Regional Agronomy Specialist since 2007. Will is married to Julie and has three children Madison 17, Gwenyth 13 and Cole 10. When not at work, spending time with his family or asleep on the couch, you can usually find Will fishing any one of the great creeks or rivers in south central Missouri.

Beef Sustainability

MEETING GROWING GLOBAL DEMAND BY BALANCING ENVIRONMENTAL RESPONSIBILITY, ECONOMIC OPPORTUNITY AND SOCIAL DILIGENCE THROUGHOUT THE SUPPLY CHAIN.

70%

percent more food needed to feed a growing population



The beef industry has improved its sustainability by 5% in just 6 years to help meet those needs.

The Beef Checkoff Program launched a comprehensive lifecycle assessment to quantify and benchmark environmental, social and economic aspects of beef industry sustainability from 2005 - 2011. Improvements included:

- **10%** Emissions to water
- **7%** Emissions to soil
- **2%** Greenhouse gas emissions
- **32%** Occupational illnesses and accidents
- **2%** Energy use
- **2%** Resource consumption
- **3%** Water use

Increased use of precision farming techniques

Improvements in crop yields

Improved genetics, health and nutrition for cattle

Increased use of biogas capture and conversion

Improved implementation of right-sized packaging

How was sustainability improved?

Future opportunities to further increase sustainability:

- Continue to increase waste water recovery and biogas capture
- Explore additional packing alternatives to reduce inputs
- Reduce food waste
- Continue to optimize nutrient application to soil and crop yields
- Further adoption of water efficient irrigation systems

Committed to a journey of continuous improvement

BEEF

Funded by the Beef Checkoff.

Source: Beef Industry Sustainability Lifecycle Assessment, funded by the beef checkoff

Alfalfa And Beef Cattle

Eldon Cole, University of Missouri Extension
Regional Livestock Specialist, Southwest Region

Alfalfa is known as the, "Queen of Forages," yet the Queen seems to be losing ground as a valuable forage enterprise in southern Missouri. The decline in alfalfa acreage is associated with the drop in the number of dairy farms. The majority of dairymen didn't think you could effectively produce milk from a cow if alfalfa wasn't in her ration.

When alfalfa was raised for dairy herds there always seemed to be an excess which was sought by other dairymen, horse owners and some beef cattle owners. However, for years the mindset of most beef producers was, alfalfa was too good and too expensive to feed to a lowly beef cow, calf or yearling.

Over the years I've watched the forage producing practices of farmers I consider to be successful beef cattle raisers. One thing they have in common is they produce or buy some alfalfa hay. They feed most of it to their cattle, but may sell some as a cash crop at a nice price.

I will quickly tell you alfalfa is not suited to all soil types and all farmers. It takes fertility, pest management, a love for harvesting hay every month and attention to details. We used to use the thumb rule that a beef cow needs about 1000 lbs. of alfalfa per year, winter and summer. Yes, sometimes alfalfa can be fed effectively in the summer as a supplement.

It's doable to raise 5 tons of alfalfa hay per acre so an acre of alfalfa should suffice for 10 head of cows. As you think the ratio through you see that 10 acres of alfalfa should accommodate a 100 cow herd. You will need other grass or grass-legume hay to complete the cow's diet, especially in the usual winter hay feeding period.

Alfalfa, if it's high quality, 20% plus crude protein (CP) and 60% plus on total digestible nutrient (TDN) should be viewed as a supplement for a dry cow when fed at around 5 lbs. per head per day or 10 lbs. every other day. Compare the price of alfalfa against other supplements such as cubes, lick tanks, tubs or feeding distillers grains in a trough and it should be very competitive.

As mentioned earlier, not everyone needs to grow and harvest alfalfa. It is rewarding if you wish to do it to raise your own protein supplement. However, buying alfalfa hay or haylage in season makes good sense. Whether you raise or buy alfalfa it needs to be kept out of the weather. If it's dry hay, a barn is the best storage. Haylage, of course, can be stored outside but plan to feed it the first year.

I've seen alfalfa hay be most effective when fed as a supplement or a major part of the daily dry matter intake of beef cattle that were grazing fescue that contained the wild type endophyte. We've always said the best approach to combating fescue toxicosis was to dilute the intake of the toxin. Legumes, especially alfalfa, seem to be as effective as anything you'll find at dilution of the toxin.

An increasing number of cow-calf producers find alfalfa serves as an excellent creep feed, especially for fall-born calves. Young calves find alfalfa hay to be very palatable. When placed in a creep area away from the adult cows, calves readily go to it. Intake is not high but improves daily gain and gives calves a thrifty appearance without excessive fleshiness seen when calves have free choice access to a grain-based creep ration without a limiter.

Alfalfa like all forages has an optimum stage of growth at which it's best harvested. When harvested in the bud or pre-bud stage the crude protein level will easily exceed 20% and the TDN will beat 60%. This is classed as dairy type hay. As the plant develops blooms, up to 50%, both CP and TDN drop into the upper teens on CP and mid to upper 50's on TDN. This is still excellent hay for beef cattle.

Maturity of alfalfa brings increasing fiber values. Higher percentages of fiber have a bearing on digestibility and intake values of the forage. When getting a forage test, request both ADF and NDF. This gives you a better feel for expected animal performance and possible refusal of alfalfa.

When buying any type of hay, try to get a forage analysis on it before writing the check. Dairy producers sometimes say their ideal hay is 20-30-40. That represents legume hay with 20%+ crude protein, 30% ADF and 40% NDF. Beef cattlemen can be a bit more tolerant of alfalfa that may not be 20-30-40.

Alfalfa hay or haylage or an alfalfa grass mix just might be something you should invest in.

Hugh Aljoe

Grazing 201: Advanced Management Strategies and Tactics

As graziers, our education in grazing management has come through educational venues and personal experiences. When we initiated the practice of intensive grazing, we probably developed plans to assist our management in the implementation. Once we developed some grazing skills, many of us began to 'eyeball' our rotations and cattle movements. Eventually, we recognized that monitoring and recordkeeping was not needed to make day-to-day decisions. In addition, we were not sure how to make good use of the information that had been collected. As a result for most practitioners, grazing planning became an after-thought, deemed not worth the effort – right at the place where grazing management actually begins.

After one establishes a level of proficiency in applying grazing management principles, the next level to master is using the grazing records and related information to make better decisions in the future. With a few years of record keeping, trend lines have been established and there is enough data to begin analyzing outcomes from resources and management. The question the arises: what is it the producer needs to know to determine if progress is being made toward identified goals. That may be the issue of why planning and record keeping is difficult to maintain once one becomes proficient with management intensive grazing. Most graziers don't have structured goals to guide management decisions; and that is an issue which will not be broached at this time.

Grazing records are a good indicator of grazed production per pasture over a given period of time. For example, what do you do with the following information? Grazing records indicate that for the season, 25 cows weighing 1300 pounds grazed Pasture 1 (5 acres in size) a total of 22 days and Pasture 6 (7 acres in size) for 25 days. Grazed forage production equals 3,718 and 3,018 pounds per acre for Pasture 1 and Pasture 6, respectively. If both pastures are similar in all other attributes and management, then Pasture 1 is more productive. If this same trend is observed over multiple years, then Pasture 1 is a stronger and more responsive pasture, and would receive management priority over Pasture 6, especially if resources become limited. Through this process, pastures can be grouped into levels whereby those most productive can receive the first priority of scarce resources. The biggest incremental benefit from additional management will come within the most productive pastures.

In addition, when grazing records are monitored and summarized over a period of years, producers can actually see if the grazing management has had a beneficial impact to particular pastures and the overall property. This is critical in the evaluation of pastures that have been managed for recovery or enhanced productivity. Without a benchmark and subsequent information, only testimonial evidence remains based on a producer's observations. If records indicate minimal change has occurred within a desired timeframe, alternative management practices can be attempted or less effort can be placed on that objective. Instead, attention can be shifted to areas that are historically more responsive. As a rule of thumb, management inputs should be placed on the most productive resources. Without assessing forage production in some manner, management decisions and allocation of resources are determined with little evidence to support decisions or to re-prioritize management objectives.

Grazing records can also be used in conjunction with critical decision date assessments. Within every operation, there are critical dates that could "trigger" impactful management decisions such as the implementation of a drought plan or determining how much extra forage there is present for additional grazing stock or haying. Critical date assessments better facilitate the management of the grazing plan. Two critical pieces of information are needed: an estimate of expected annual forage production and the amount of forage that has been produced by the critical assessment date. Estimates of expected forage production are best developed from past records, but can be developed initially using county soil survey information and knowledge of the typical monthly growth patterns of predominant forages. To determine actual forage production at the assessment date, there are three figures needed: 1) grazed production calculated from grazing records for the current season, 2) an estimate of the forage immediately available to be grazed, and 3) an estimate of stored forage on-hand. Comparing actual production to expected production at the critical assessment date, the percentage of production above or below expected production is determined, and corresponds directly to the amount a producer is over or under stocked at that date. The earlier a producer identifies a looming issue (drought) or an approaching opportunity (excess grass), the more time he has to consider the alternatives before making a management decision. Potential critical assessment dates for most operations would include: late spring, mid-summer, early fall, at frost and again mid-winter.

Hugh Aljoe...continued

In addition to tracking production and using critical dates in the planning phase, tracking monthly rainfall records are complementary to grazing management. Most producers usually have a rain gauge. Some actually track rainfall monthly. By using the rainfall records for a given property, a producer can establish his farm or ranch rainfall history which can also be used to track forage production relevant to rainfall patterns. Actual rainfall records are used to create a water year rainfall table for the operation. The water year typically begins at the end of the growing season (i.e., October). Essential information needed is monthly rainfall and a running total by month; and corresponding long-term average monthly rainfall totals with a running total also. The comparison of actual to the long-term average provides the variance from the average for each month, season and/or year. Rainfall trends can be tracked for the operation using the variance from average and provides a good indication of expected forage production for the season ahead. Extended periods of above or below average rainfall prior to significant growing seasons often sets the productive potential for the season if not year. Knowing the current moisture trend, the duration of the trend, and the variance from average at any given time can assist a producer in making management decision at the critical assessment dates.

Other tools that planned managed grazing can facilitate are creep grazing and fence-line weaning. Creep grazing is the active facilitation of grazing of higher quality forage by young calves in adjoining areas to their grazing mothers. The benefit to the grazing calf is enhanced performance of the calves. Creep grazing is by default a byproduct of using single-wire electric fences whereby the calves ease under the fence to adjoining areas initially to move out of the way of the grazing cows and then later to selectively graze high quality forage. Rarely is a pasture established for the purpose of creep grazing but it can be using forages such as alfalfa, crabgrass or grazing sudan. Creep grazing can also be achieved in more conventionally fenced pastures also by using a creep access gate similar to the entrance to a creep feeder. If a designated area is established for the purpose of creep grazing, additional planning is required for successful implementation. With today's cattle market, every additional pound is valued more than ever.

Fence-line weaning is the weaning of the calf crop by simply separating the calves from the cows and allowing the two groups fence-line access during the first few days of the weaning process. The cows and calves can see, smell and hear each other which minimizes the stress involved in the weaning process. Fence-line weaning does require a good fence between the two groups whether it be electric, conventional, or a combination of the two. It works best with older, larger calves weaned at 5 months of age or older. However, it can be effective also with lighter, younger calves should the situation dictate, but the fence may need to be more substantial. Another key to successful implementation is ensuring the pastures in which the calves and cows will reside are of adequate abundance and quality. The pasture for the calves needs to have enough forage to last through the early weaning phase (at least two weeks). It is not recommended to move the calves until the cows have been away from weaned calves for a week or more. The cows need enough pasture to last 4 days or so until the bawling ceases. Then the cows can be moved away from the calves. This again requires planning several months prior to the weaning process. It is also recommended to have a common water source between calves and cows, or at least the calf water source near the cows, so the calves will drink adequate water during the first few days of weaning. Additionally, place feed troughs in the calf pasture near the common fence-line (i.e., 20 to 30 feet away) so calves are more likely to consume feed at desired levels during the first few days of weaning.

Generational Transfer and Treating Heirs Fair

Spring Forage Conference

March 3, 2015

Kelvin Leibold
Farm Management Field Economist
Iowa State University
641-648-4850
kleibold@iastate.edu

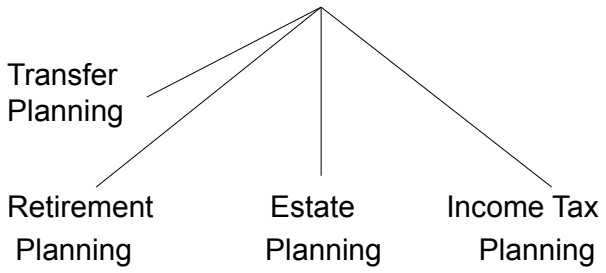
We are not giving Legal Advice

Just Providing Non Bias background Information

Seek out your own legal council

IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

Coordinate Your Planning



IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

Simplified

- What do you have?
- Who do you want to get it?
- When do you want them to get it?

IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

Keys to success

- Communication
- Goals
- Plan with timeline
- Team

IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

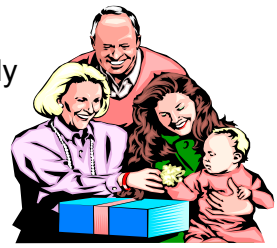
What is Estate Planning?

The overall process of making decisions as to how property is to pass to others, during one's lifetime, at death, or after death.

IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

Key is to Articulate Goals and Objectives

- The parents together
- The parents individually
- The on-farm heirs
- The off-farm heirs



Key is to Articulate Goals and Objectives

- Determine what you own and how much it is worth. (balance sheet)
- Who do you want to receive your bounty?

http://www.extension.iastate.edu/agdm/wholefarm/pdf/c4-57.pdf

- Review any past estate planning

Important Considerations

- Type of Asset
  - Inventory
  - Depreciable
    - Machinery & Equipment
    - Permanent Improvements
  - Real Estate
    - Land
    - Personal Residence
- Tax Basis
- Timing

Financial Statement (Net Worth Statement) (Balance Sheet)

Now that you have inventoried all of your assets, you might just as well make a financial statement. It gives you your financial position as of a certain date.

Size of the pie?

- Small pie – less than $5.43 million
- Medium size pie - $5.43 to $10.86
- Big pie - Over $10.86 million

Objectives under those circumstances

Would the surviving spouse or heirs want to:

- Receive Income?
- Sell interest?
- Participate in management?

Who should be involved?

- PARENTS
- ASSET OWNERS
- IF YOU OWN A BUSINESS - BUSINESS PARTNERS
- HEIRS WORKING IN THE BUSINESS
- HEIRS NOT WORKING IN THE BUSINESS
- NON FAMILY BUSINESS PARTNERS
- DAUGHTERS-IN-LAW & SONS-IN-LAW
- ATTORNEY KNOWLEDGEABLE IN ESTATE PLANNING
- FINANCIAL ADVISORS
- INSURANCE ADVISORS
- MANAGEMENT CONSULTANTS
- LENDERS
- MEDIATOR

Scheduling a Family Meeting

- SCHEDULING THE MEETING
- How often meetings will be scheduled
- Set specific beginning and ending times
- Establish a standing agenda
- How are items added to the agenda
- How are emergency meetings scheduled
- How is notice of meetings given
- What constitutes a quorum
- What happens if someone cannot attend

A Process of Decision Making

What criteria will be used;
Financial, values, production, time, family, etc.

Who will make the decision;
Owner/Parents, children, employees, advisors.

How will decisions be made;
Autocratic, democratic, consensus, collaboration.

How will conflicts be resolved.

MEETING GROUND RULES

- Agree upon the role and authority of the facilitator.
- Critique the message, not the messenger.
- Everyone must listen to learn.
- Do not interrupt. Practice good manners and model good behavior.
- Discuss your emotions. Our emotions often drive our decisions.
- Expect honest comments from others by being honest in your comments.
- Enthusiastically support decisions made at the meetings.
- Trust the process to generate an estate plan that all will agree upon.

Important Considerations

- TIMING

- Choose the right time for making the decision. Delaying a decision may be the same as not making a decision, however do not be rushed into making a decision.

- INFORMATION

- Remember that there is never the right amount of information for making a decision. One always wishes that more information were available or one feels overwhelmed by the amount of information available.

Methods of Asset Transfer

- Sale
- Gift
- Estate
- Combination
- There are differences in tax implications

Basis Example

Current Land Value $1,500 / acre

	Purchase Price		
	$ 500	$1,500	$3,000
Die	$1,500	$1,500	$1,500
Gift	$ 500	$1,500	$1,500*
Sell	$ 500	$1,500	$3,000*

* gifting or selling to family, 2 year rule

Gifts

Elements of a gift.

Must have a donor.
Must have a donee (recipient) of the gift.
Must have actual or constructive receipt of the gift.

Gifts must be given free of any restrictions.

Gifts in any amount are not income to the recipient.

Gifts in excess of $14,000 per year to any one recipient will effect the gift tax credit. Probably not a big deal!!!

Other Issues

a). Basis – step up, step down
b). Gifting
c). Income in respect of decedent
d). Sale of residence
e). Installment sales and private annuities
f). Special use valuation

Size of the pie? "Planning Zones"

- Small pie – less than $5.43 million
- Medium size pie - $5.43 to $10.86
- Big pie - Over $10.86 million

Unified Credit

- A credit that can be used during life to offset gift tax liabilities or
- A credit that can be used at death to offset federal estate tax (what ever is left over from the gift tax credit)
- However, no tax is due if you still have enough unused unified credit
- The excess is taxed at 40%

New rules - 2015

- Husband and wives can share the $10.86 million (Portability) or
- Have $5.43 million of "generation skipping" each (Reunification) or
- Have $5.43 million of "gifting" each
- In 2013 it went to 40% bracket for estates and gifts

Trusts

Property

Trustee

Beneficiary

Document

TRUSTS

Elements of a trust:

- Settlor or donor.
- Trust document.
- Trustee.
- Known or discernible beneficiary.

Trusts may be revocable or irrevocable.

Inter vivos or living trusts are established during the settlor's life.

All trusts become irrevocable upon the death of the settlor.

Testamentary or pour-over trusts are established by a will.

A revocable living trust has no greater effect on tax than a will.

Types of Trusts

Living Trusts

- Irrevocable Living Trusts
- Revocable Living Trusts

Testamentary Trusts

Charitable Remainder Trusts

Life Insurance Trusts

Generation Skipping Trust

Overview

Crucial estate planning steps

- Examination of how property is owned or held
- Review of family insurance program
- Advisability of lifetime gifting
- Alternatives for disposing of property during life

Long term care insurance

- Your odds are 33% that you will spend more than 3 months in a nursing home (according to the insurance industry)
- The very wealthy and very poor probably don't need LTC insurance
- Kelvin suggests those with assets of more than $150,000 but less than $1.5 million may want to consider LTC in the Midwest
- Title 19 is administered by the state – Iowa has a very long and aggressive program (60 months)

Farm Transition Planning

- Complex process
  - Labor
  - Management
  - Assets

Labor

- Pay wages – market value
- Pay later – deferred benefit compensation package – lots of problems with this
- Payment package
  - Wages
  - Health care
  - Stock in company
  - Use of assets
  - Transfer of assets – i.e. cows

Management

- Teaching new skills – both ways
- Understanding the management side of the business
- Understanding the financial side of the business
- Providing additional income – start small with a few cows

Assets

- Last step
- Different "buckets" – feeders, breeding, machinery, land
- Categories – not critical versus critical
- Revenue sources and risk level

Business Types

- Super firm
- Separate but together

http://www.extension.iastate.edu/agdm/wholefarm/html/c4-16.html

Business Structures

- Tools to manage taxes
- Tools to use for transfer
- Tools to manage risk

Company of the day – LLC, S-corp., C-corp, LLP, Etc.

http://www.extension.iastate.edu/agdm/wholefarm/html/c4-52.html

"Fair versus equal" & "Sweat Equity" issues

- Parent's don't treat children equally
- Parent's don't have an obligation !!!!
- People often have little idea of the values of gifts and "deals"
- Bubba and Johnny
- Control versus ownership
- Little sense of "time value of money"

Control versus ownership

- Use of life estates
- Use of trusts
- First right of refusal
- Right to buy at discount
- Right to rent
- Use of life insurance
- Use of business entities
- "Shared Appreciation" plans
- Buy / Sell Agreements

Getting started

- Summarize older generation's goals
- Does the older generation have enough income?
  - Gifting, contract sales, retained life estate
- Importance of the assets to generate income – calf sales, cull cows, hay?

Getting started

- Summarize younger generation's goals
- Does the younger generation have enough income?
  - Spouse income, off-farm income
- Current financial position?
- Ability to borrow?
- Ability to repay?

Who's got the business plan?

- If you have great communication and you have great in-laws and you have great ideas and you run out of money – what do you have then?

  https://www.agplan.umn.edu/
- Kelvin's rules:
  - Practice the golden rule
  - No co-signing
  - Plan to take things apart

Components of the transfer

- Layout some possible paths
- Evaluate the strengths and weakness of the paths?
- What are the threats and the opportunities?
- What are the barriers?
- How to deal with family?

Dealing with off-farm?

a). Cash
b). Life Insurance
c). Make them "creditors"
d). Make them business partners
active or inactive
e). "That's the way it is"

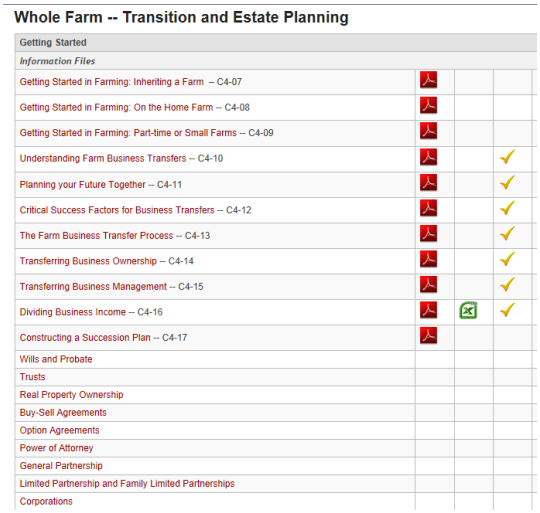
Undivided interest passing to heirs

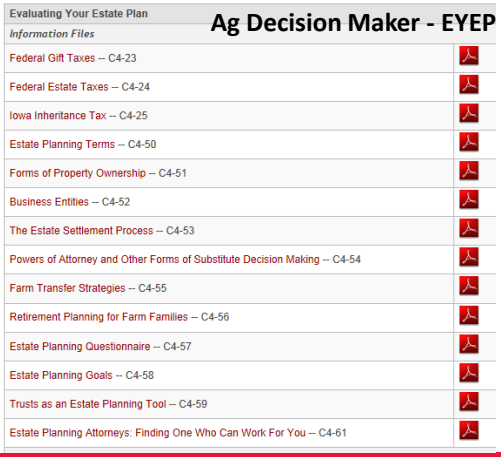
- Are the heirs willing to continue for the foreseeable future as happy, cheerful and contented holders of undivided interests in the assets including the farm or ranch land involved.
- Who will bear responsibility for management, how the ownership will be handled long term (as undivided interests or as co-owners of an entity formed prior to or after death such as a limited liability company, limited liability partnership or some other organizational structure).
- How will those wanting to exit from the arrangement do so on a fair basis.
- These concerns should be carefully worked out and agreed to in writing in a manner that will be enforceable even on the part of a minority owner.

Unequal distributions

- Generally done tax free at date of death
- Bequeathed in the will or trust
- Done when the trust is terminated
  - Tax free distribution???
  - May depend on state law and trust documents
  - May be impacted by partial ownership (spouse had life estate)

Resources available to use





Other resources

Farm Transfer – U of MN

- http://www.extension.umn.edu/agriculture/business/farm-transfer-estate-planning/
- On line tool called Ag Transitions https://www.agtransitions.umn.edu/

Other Resources

- Ohio Fact sheets
  http://ohioline.osu.edu/bst-fact/index.html
- University of Wisconsin
  http://www.uwex.edu/ces/farmsuccession/
- Montana State University
  http://www.montana.edu/estateplanning/

IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

Thank You for your time.

What questions do you have?

Kelvin Leibold

Extension Farm Management Specialist
Iowa Falls, Iowa
(641) 648-4850
kleibold@iastate.edu

www.extension.iastate.edu/agdm
http://www.calt.iastate.edu/

IOWA STATE UNIVERSITY
Extension and Outreach
Ag Decision Maker
Department of Economics

NOTES

Wayne Bailey, MU Field and Forage Crop Entomologist

Insect Management of Forage Crop Pest and Beneficial Insects

Management of forage insects is an important component of most forage systems. Although insect species generally differ in legume and grass forage crops, management of beneficial or pest insects in all forage crops generally results in greater protection of potential forage yields. When mixed-stands of various legume and grass species are grown together, insect problems are often reduced as compared to pure-stand planting, although economic populations of specific insect pests can occasionally develop.

Alfalfa is one of the most common legume forages grown as pure-stand and /or mixed stands utilizing one to several different grasses. In a typical year anywhere from 500 to more than a 1,000 different insect species can be found in alfalfa fields depending on field location within the United States. In a typical Missouri alfalfa field where 500 or more insect species can be found during a growing season, far less than 1% of the insect species present are considered to be pests. Approximately 20-30% of the remaining insects provide some benefit to the crop, and approximately 60-70% are transient insects that may just be using the field as a place to rest or hide, but rarely build to economically damaging levels. The three pest species common in alfalfa include the alfalfa weevil which feeds on 1st cutting alfalfa, the potato leafhopper which sucks plant juices from 2nd and 3rd cutting alfalfa, and the striped blister beetle which often appears when alfalfa is flowering or if weeds growing within the alfalfa are blooming.

These alfalfa pests do have several beneficial insects which either prey or parasitize them resulting in reduced pest insect numbers in most years. Alfalfa weevil larvae have three different parasitic wasps which either attack larvae when they are actively feeding during spring or feed on the inside of adult weevils as they overwinter. Their feeding inside adult weevils results in sterilization of both female and male larvae and prevents the laying of approximately 500 eggs per infested female adult the following spring. There are biological pathogens that can quickly reduce alfalfa weevil larval numbers if field conditions are favorable for the development of the various pathogens. Potato leafhopper nymphs and adults are eaten by a variety of predatory insects, whereas potato leafhopper eggs are parasitized by a tiny wasp species which results in reduced numbers of nymphs and adults being produced.

Tall fescue is a major component of most grass pastures in Missouri. Sometimes legumes are inter-seeded to increase forage quality of the grass-legume mixed stand. Two common pests insects of grass or grass-legume pastures include true armyworm and fall armyworm. True armyworm is a pest of many grass crops, but does not eat forage legume plant species. This insect tends to occur in late spring into early summer and can devastate large areas of grass pastures in Missouri. Problems most often are found in southern Missouri counties, but may occur statewide depending on the number and area into which migrating moths from more southern states are carried by winds and storm fronts. In contrast, the fall armyworm typically occurs late summer and will eat a variety of field and forage crops including alfalfa, numerous legume species, and most forage grass species. As with the true armyworm, larvae of this pest can cause severe damage to forage crops. Both armyworm species have several predators, parasitoids, and biological pathogens which control larval numbers in most years.

Pollinators are beneficial to many field and forage crops including grasses and legumes. There are three main groups of pollinator insects which include 1. Social and solitary bees, 2. Moths and butterflies, and 3. Beetles and true bugs. Social and solitary bees include honey bees, bumble bees, and many species of solitary bees. Moth and butterflies contain numerous species which pollinate field and forage crops. Various beetle species and many true bugs which may feed on plant flower also move pollen from plant to plant as they feed. Although plants can be pollinated by wind and several other methods, it has been calculated that 1 out of every three bites of food humans consume are the result of insect pollination.

Wayne Bailey continued...

Dung beetles include a wide group of insects which utilize dung as their primary food source. Although dung beetles were readily found in cattle pastures in the mid 1900's, populations were substantially reduced by the introduction of Avermectin/Ivermectin as antiparasitic drugs into the veterinarian market in 1881. These drugs were very effective wormers and became very popular in a short period of time. Although providing very effective control of most parasitic worm species, one undesirable side-effect was the mortality of dung beetles feeding on manure from recently wormed livestock, especially cattle.

Missouri is second only to Texas in the number of cattle. At present, Missouri cattle numbers are 4,150,000 cattle which drop enough manure pats to cover approximately 312,900 acres of Missouri pastures annually. The benefits to supporting a diverse group of dung beetle species in cattle pastures when dung pats are more rapidly removed and manure is incorporated into the soil include: 1. Reduce the time that grass growing adjacent to manure pats is avoided by grazing cattle, 2. Decrease nitrogen loss from manure pats remaining on soil surface for extended time period, 3. Increase soil tilth and water movement into the soil by tunneling activities of dung beetle adults, and 4. Reducing numbers of certain fly species by preventing manure pats to remain on surface for a period of time sufficient for completion of the fly life cycle.

In summary, some actions that cattle producers can adopt to increase and conserve dung beetle numbers and species diversity include worming during the fall and winter months when dung beetles are inactive, use new, more friendly cattle wormers such as Cydectin and other related products, worm when parasite egg counts in cattle manure reach levels that require worming, and avoid insecticide sprays to cattle pastures for other insect pests that may occur if possible.

Wayne Bailey, MU Field and Forage Crop Entomologist

Wayne Bailey
Associate Professor
Extension Entomologist
Division of Plant Sciences
University of Missouri
110 Waters Hall
Columbia, MO 65211
cell 573-864-9905
1/2/2015

Is Alfalfa a Viable Forage for your Beef Herd?

Tim Schnakenberg, MU Extension Agronomy Specialist, Galena, MO

Alfalfa has long been used as a high-end forage for providing protein and energy for livestock world-wide, however it often is underutilized in the beef industry in the U.S. Raising quality alfalfa can be both time consuming and expensive but the return can be rewarding. Many beef producers already own hay equipment but are using it to produce a much lower quality product. Having a few acres of alfalfa on the property that can be used to supplement lower quality feed or to creep feed calves may be a viable option for some beef producers.

If managed well, alfalfa can give many years of return on the investment by providing quality forage that is more productive per acre than typical fescue stands. With around four cuttings per year, it is not unreasonable to harvest 3-5 tons of hay from a field compared to the typical 1.5-2.5 tons of hay from fescue stands. The increased tonnage of quality feed can offset many of the expenses that would go into managing the crop. Here are some considerations for producing alfalfa:

Give the Stand a Good Start

Alfalfa establishment takes preparation. The soil should be well drained and a soil test should be taken to determine suitability for alfalfa. At the time of establishment the pH should be near 6.5 and phosphorus levels should be high. If not, extra time will be needed after amendments are made to bring the soil up to test. Long-term variety trials on varieties offered to the public are difficult to find these days. There are a few extension programs in the mid-section of the U.S. that still do alfalfa variety trials. Most seed companies market their varieties based on fall dormancy ratings for an area. Seeding rates are typically recommended at 12-15 pounds of inoculated seed per acre. Higher rates are sometimes used but since 60 percent or more of the seedlings planted will die off the first year, producers should remember that only a set number of seedlings will fit into a square foot. Alfalfa is one of the more flexible forages regarding time of the year for establishment. Spring seeding has become popular, especially if no-till is the method of choice. This is usually done April through early May. If fall seeding is preferred, drilling in late August through early September is recommended. An insecticide may be needed to reduce cricket and grasshopper damage in the fall. Orchardgrass is often used as a grass mix in conventional stands. If this is used at planting, keep rates lower so that it will not overpower the alfalfa. If a nurse crop is used, it is imperative to keep rates low since stands have failed due to the desire to harvest a cereal grain crop with the first cutting of alfalfa. Seedling alfalfa cannot handle competition. A common mistake is to kill off an old stand of fescue and plant alfalfa. This normally results in an alfalfa/fescue mix in a couple of years. Ultimately the fescue will take over the stand. A spray-smother-spray approach will eliminate this concern, unless the producer chooses the Roundup-Ready approach.

Roundup-Ready Alfalfa has Provided More Options for Weed Control

Seeding costs for Roundup-Ready alfalfa are much higher than conventional varieties, but there are many long-term benefits of this approach to raising alfalfa that could offset the extra cost. Since alfalfa stands have potential for lasting sometimes well over five years, the extra cost prorated over the years is minimal. Alfalfa life can also be extended greatly by a significant reduction of weed competition the first year or two. This can give Roundup-Ready seed an advantage. If producers are seeking a grass-alfalfa mixture, grass is sometimes no-tilled into the stand after year-three or four.

Planting Alfalfa Requires a Commitment to Maintaining Fertility Needs

Many stands of alfalfa have been planted and then failed after a couple of years because adequate fertility was not maintained. Alfalfa is a heavy user of plant nutrients, particularly potash. A modest four-ton alfalfa production will remove 212 pounds of potash and 44 pounds of phosphate from the soil each year. Only a soil test can determine if your soil needs this much fertility added each year. In a few cases, less will be needed due to good soil test levels. In most cases more will be needed in order to build base soil test levels up to par. If higher rates of potash fertilizer are needed, it is recommended to split the application between before or after the first cutting, then again following the third cutting in order to balance out the fertilizer need of the crop. Though boron is an essential element for growing alfalfa it should not be used the year of establishment due to toxicity to seedlings. Once established, one pound of boron per acre is important to maintain the health of the stand.

Tim Schnakenberg …..continued

In-Season Stand Management Insures Tonnage, Quality and Persistence

The two most important considerations to maintain a stand for several years, produce high tonnage and insure quality is to maintain fertility requirements and adopt good cutting management techniques. Typically alfalfa harvest is targeted for every thirty days or at 1/10th bloom. This is the best balance between stand persistence, tonnage and quality. The first cutting can be very difficult to harvest in our region and many producers have opted for making round bale silage for this cutting. Special care is necessary when harvesting dry alfalfa hay to avoid leaf loss or deterioration. Avoid tedding if possible. Grazing alfalfa is an option but special care must be taken to avoid stand damage by hoof action and overgrazing. At the end of the season, the last harvest should be taken roughly thirty days before the first frost. In south Missouri this is often around September 15. Consistently harvesting close to frost will greatly diminish the root health in the fall and persistence will be compromised. A late fall or early winter harvest or grazing can again take place once freezing temperatures (28 degrees F) are reached for several nights. This sends the alfalfa into a semi-dormancy that protects it from the loss of its top growth at that time of the year.

Pest Control is an Essential Part of Alfalfa Production

One of the great challenges of raising alfalfa is keeping the insect population under control so that significant losses don't occur early in the season. In the spring the alfalfa weevil can decimate an alfalfa stand, greatly stunting it and lowering production. Growers must be vigilant to scout the stand early before the first cutting and spray the crop with an insecticide accordingly. Some stands may have troubles with aphids or potato leafhopper. There are several weed control options for pure stands but grass-alfalfa mixes are sometimes challenging. Contact your extension agronomy specialist for a list of control options.

Ask Yourself the Hard Questions before Proceeding

Do I need to make my own hay or is purchasing good hay cheaper?
Do I have adequate equipment and time to harvest hay four times per year?
Do I need a solid stand or a grass mix for the class of livestock I will be feeding?
Have I gotten the ground in shape for alfalfa in advance?
Am I willing to fertilize heavy and often?

Tim Schnakenberg
Regional Agronomy Specialist / Associate Extension Professional
University of Missouri Extension; Stone County Extension Center
P.O. Box 345, 108 E. Fourth St., 2nd Floor Courthouse
Galena, Missouri 65656
417-357-6812 (Office); 417-838-8405 (cell); 417-357-8442 (fax)
schnakenbergc@missouri.edu (email)
http://extension.missouri.edu/stone (website)

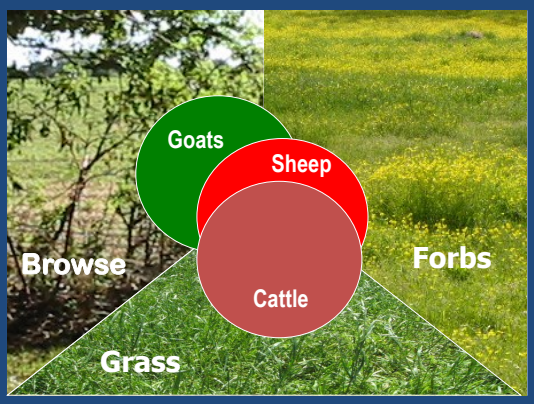
UNIVERSITY OF MISSOURI
Extension

Brush and Weed Management With Sheep and Goats

Jodie Pennington, penningtonj@linconu.edu
Region Small Ruminant Educator,
Lincoln University Cooperative Extension (LUCE),
Newton County Extension Center,
Neosho, MO—417-455-9500; with co-authors Charlotte Rathert (LUCE), Jay Wilkins (Crowder College), Nathan Witt (NRCS), and James Caldwell (LU)

LINCOLN University Cooperative Extension

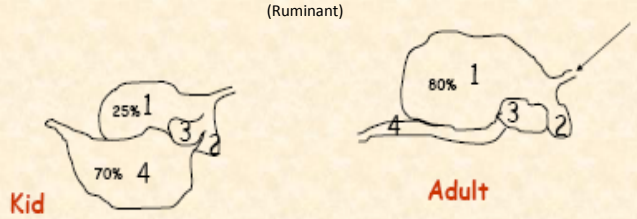
Feeding Preferences



Goats & sheep can decrease weeds

Digestive System

(Ruminant)



1 - rumen
2 - reticulum
3 - omasum
4 - abomasum

Digestive process is faster than cattle - need for lower fiber forage

How to make money with woodlands? 1500-2000 lbs of dry matter per acre

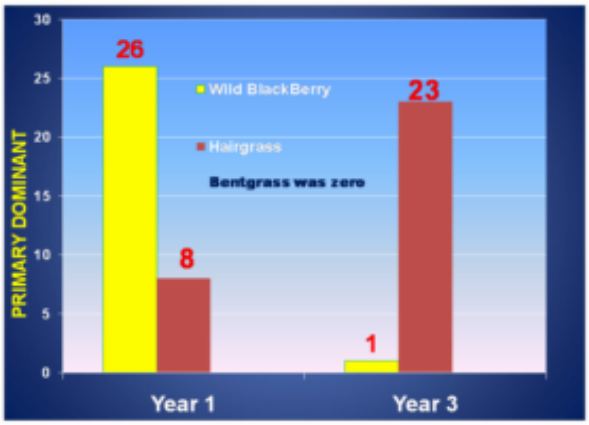
- ~~G~~et goats or sheep—preferably hair sheep
- Use finishing kids or lambs or nursing mothers
- — Takes about 6-7 pounds of DM intake to get 1 lb of gain
- — Current 60 lb kid prices = $2.00/lb up to $3 plus
- Current 80 lb lamb prices= $1.50/lb
- If there are 1750 lbs of available DM/ac and it takes 6.5 lb DM/lb gain, that is 269 lbs gain or $538.46/ac if price of meat is $2.00/lb or $673.07 if $2.50/lb--- over $500 per acre or greater

Is browsing too good to be true? Factors affecting profitability:

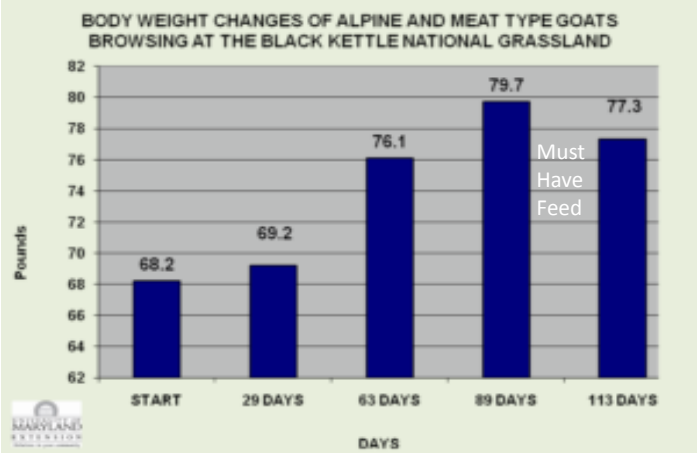
- Fencing (most$$): weight benefits versus costs; grass is greener on other side; keep predators out
- Predator control: effectiveness and costs of care and, if a dog, dog food
- Water is needed
- Time to monitor
- Feed quality and availability: nursing moms may lose body weight; trace mineralized salt? Is there a need to supplement moms?
- Must monitor body condition and parasite load
- Toxic weeds: poisonous vs. noxious

Sheep and goats can change conventional pastures also, economical weed control

Goats to Improve/Change Vegetation



Goats Can Grow on & Control BRUSH



Nutrient Requirements for Goats

	CP %	TDN%
✖Buck	10 %	60 %
✖Dry doe	9	55
✖Late gestation	11	60
✖Lactating doe	11	60
✖Weaned kid	14	68
✖Yearling	12	65

✖Higher demand—greater requirements

Goats Grow Better With Higher Nutrients- Monitor Forage Availability & Palatability

(Goats do not eat mature forages well, esp bermuda)

Table 12. Growth performance (lsmean ± SE) from pasture-fed, browse-fed and concentrate-fed goat kids

Trait	BG (pasture)	MB (browse)	CONC (concentrate)
No. of animals	15	15	15
	Performance phase (98 d)		
Body weight, kg			
Initial weight	21.21 ± 0.91[a]	21.19 ± 0.91[a]	22.86 ± 0.91[a]
Final weight	25.93 ± 0.93[c]	29.42 ± 0.93[b]	35.12 ± 0.93[a]
ADG, g/day	46.23 ± 4.57[c]	82.43 ± 4.45[b]	124.14 ± 4.77[a]

[abc] Means within the same row with different letters differ $P < 0.05$.

Small Ruminants Need a Balanced Diet—tend to balance?????

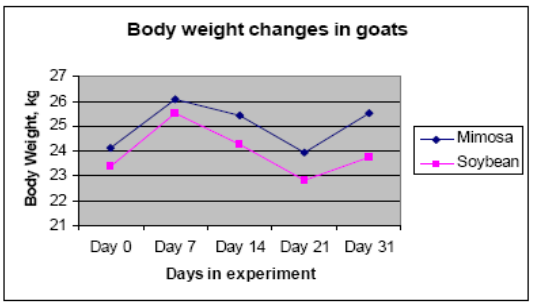
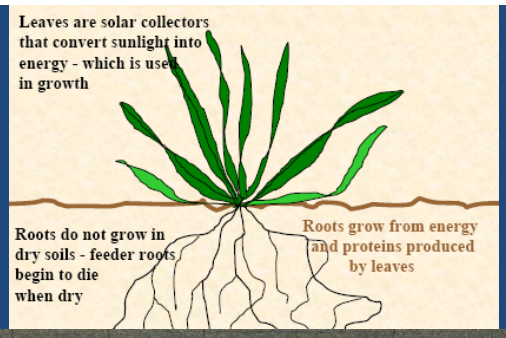


Figure 3. Body weight changes of goats during experimental period



Controlling brush and weeds

(Slide from Steve Hart, Langston University)

- Graze them early
- Defoliate every 6 weeks or less
- Defoliate in the fall
- Ask---What are we going to graze after the brush and weeds are gone?

To manage brush as a renewable resource

1) Get on it later in the spring, leave 50%
2) Long rotation > 8 wks rest, and
3) Do not defoliate late in the fall

Benefits of Multispecies Grazing

- **Increased utilization of forages (??maybe 10-20%)**

--Greater total lbs per acre

- **Weed control**

--Goats eat weeds, can clean up pasture (2-3 yrs)

- **Reduced parasite loads**

--Goats graze higher

- **Diversified production**

--Goats and cattle
--Cattle and sheep
--Goats and horses
--Start at 1 goat per cow and can go to 3 goats per cow-vary

What Stocking Rates of Cattle and Goats?

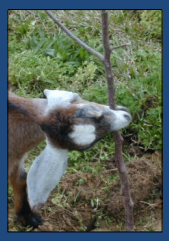
Pasture Type	% Brush Canopy	Cows	Goats	Cows + Goats
Excellent Pasture	< 10%	1	6 to 8	1 + (1 to 2)
Brushy Pasture	10 - 40%	1	9 to 11	1 + (2 to 4)
Brush Eradication	> 40%		8 to 12	.5 + (6 to 8 per acre)
Sustainable Browse Manage-ment	Maintaining 10 to < 40%		1 to 3 per acre	.25 + (1 to 2 per acre) Note:cow=1000 lb goat=150 lb

Example Stocking Rates of Commercial Goats with Management Intensive Grazing (MIG): Varies With % Utilization and DM/Acre

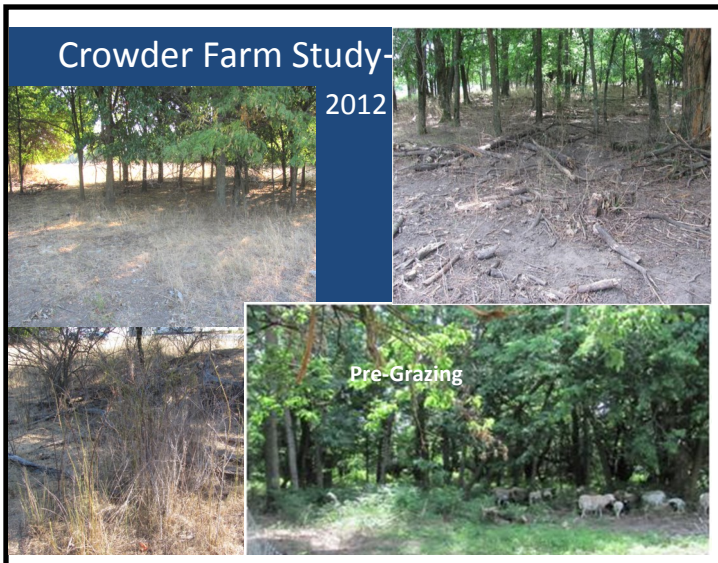
Pasture Type (*Repeat w/ growth;**Usually 1x or 2x per year	% Brush Canopy	Goats/ week	Goats/ 2 weeks
Excellent Pasture (3000 lbs DM/ac@60% utilization=High?)*	< 10%	40-45/ acre	20-22/ acre
Brushy Pasture (2500 lbs DM/ac@70% utilization=High)**	10 - 40%	40-43/ acre	20-21/ acre
Brush Eradication (2000 lbs DM/ac@80% utilization=High)** (Note:Goats weight=120 lbs, not 150)	➢40%	36-40/ acre	18-20/ acre
Sustainable Browse Manage-ment (2000 lbs DM/ac@80% utilization with leaving 50%)**	10 to > 40% browse	18-20/ acre	9-10/ acre

Be careful!

- Sheep and especially goats will destroy tree seedlings.
- Trees with larger diameters often die when goats remove bark.
- Goats and especially sheep will eat perennial grasses if there is no other preferred forage.



Crowder Farm Study- 2012



- Table 2. Probabilities of species (S), lactating status (L), and S x L affecting performance traits of meat goat and hair

Performance trait	Lactation status (L) robability	S x L	Species (S)
Weight change (kg)	0.009	0.207	0.072
Body Condition score change	0.008	0.084	0.707
FAMACHA score change	0.001	0.414	0.690

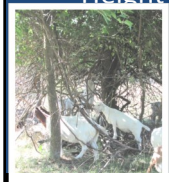
- Table 3. Change in weight of does and ewes during the eight-week trial. Does did better than ewes and non-lactating animals did better than milkers

Animals (lb change while on browse/pasture)

- Lactating 2.4
- Does 9.5
- Ewes - 4.8
- Non-lactating 6.4
- Does 7.9
- Ewes 5.1
- Does 8.6
- Ewes 0.0

Vegetation

	level of difference (P<probability)	Goats	Hair Sheep
Multiflora rose (individual plants- % eaten)	0.031	98.4	95.9
Buck brush (no. leaves left)	0.124	6.2	11.5
Height of browse line (in)	0.003	56	40



- Table 1. Comparisons for meat goats (MG) and hair sheep (HS) for consumption of vegetation categories.

Vegetation	MG	HS	Probability of difference
	% eaten		
Sericea lespedeza	82.1	74.8	0.015
Buck brush	86.6	92.0	0.070
Multiflora rose	98.4	96.1	0.036
Blackberry/other briers	97.7	78.1	0.003
Fescue/cool season grasses	94.5	92.0	0.648
Bermuda/summer grasses	95.1	93.6	0.772
Broadleaf/clover/ ragweed	97.2	86.9	0.031
Vines/ivy	99.9	99.8	0.662
Trees/hackberry/ bushes	94.1	84.5	0.015
Multiflora rose (plants)	98.4	95.9	0.031

Conclusions from 2012 Crowder Study

- Both MG and HS cleared the woodlands.
- MG ate slightly more vegetation than the HS .
- Of the vegetation categories, all of the available vines/ivy was eaten followed by lesser percentages eaten of multiflora rose, buck brush, summer grasses, winter grasses, broadleaves, trees/bushes, briers, and sericea lespedeza.
- MG ate greater percentage sericea, multiflora rose, briers, broadleaves, and
- trees/bushes than HS.
- MG had a higher browse line than HS.
- HS seemed to be affected by the extreme hot weather more than MG.
- Does had greater weight gain and improved body condition scores and FAMACHA scores than ewes.
- Nursing ewes lost weight and non-lactating ewes gained weight during the 8-week trail while both nursing and non-lactating does gained weight during the trial.
- Lactation status may be a factor to consider in utilizing ewes in woodlands.

2013-14 **Crowder** Browse/Pasture Demo

- Compared goats on browse mix and goats on pasture
- Data not analyzed but no gross differences in growth, FAMACHA scores and fecal egg counts for goats on either browse mix and pasture
- % DM from buck brush, multiflora rose, blackberries, vines, and trees/bushes declines from year 1 to year 2 and year 3-will check next spring
- Langston study showed that goats increased ADG 10-15% with access to browse compared to no browse; all of these goats had some browse

Example: Typical Browse Trend for 3 Years from 2012-2014 (projected 2015)

- In lot 1, %DM from sericea lespedeza from 17.5% to 2% (1%); buck brush went from 40% in 2012 to 8% (4%); multiflora rose from 9.5% to 8% (2%); blackberries from 9.5% to 1% (0.5); broadleaf weeds from 10.5% to 6%; vines from 12.5% to 1(0.5%);
- In lot 1, %DM from fescue 4% to 51%; bermuda from 8.5% to 5%; trees from 8% to 6%
- DM in the wooded area appeared to decrease and was not affected in the pasture area from 2012 to 2014

Conclusions/Recommendations (p 1 of 3)

- **Goats and sheep can utilize browse efficiently**
- To best utilize browse or pasture, MIG will increase efficiency of utilization compared to continuous grazing; make lanes with forestry masticator
- Generally, goats ate about 4% of body weight with 80% utilization of browse in 1-week or 2-week sessions; goat ate about 30-60% of grass depending on the maturity of the forage
- Browse could be grazed only once per year except for less than 50% regrowth if grazed in early spring; grass can be regrazed after normal rest period; kill browse more quickly with greater grazing pressure

Conclusions/Recommendations (p 2 of 3)

- Most of the browse will be killed out after three years but grass will continue to grow
- If browse is grazed heavily, about 50% will not return the next year
- Goats eat significantly greater amounts of browse than hair sheep but hair sheep can be used to clear woodlands as they will eat about 96% as much browse as goats
- Non-milking animals kept body condition better than milking animals (which may need extra feed)
- Monitor body condition and FAMACHA scores as both can change quickly

Conclusions/Recommendations (p 3 of 3)

- Use caution with FAMACHA on babies & yearlings as the score can change quickly; death can result
- If drought, trees or brush can be used as an emergency feed source for both sheep and goats
- DM/acre of trees/browse varied but it appeared to be about 1600-2000 lbs per acre (80% efficiency)
- Need predator control (i.e. dogs) and proper fencing with browse; use caution with electronet as animals can get tangled in it when electric is off
- Consider costs versus value of the woodlands for feed before investing in animals and fencing

NOTES

NOTES

NOTES

— Save the Date —

32ND Annual

Southwest Missouri Spring Forage Conference March 1, 2016

Thank you to all of the sponsors, vendors, speakers, attendees, and supporting agencies and universities for their help in making the 2015 conference successful.

Thank you to Crowder College for helping to support the printing of this proceedings handbook.