

## SPONSOR PRODUCT SHOWCASE

TUESDAY 9:00-10:30 AM

## CONFERENCE SPONSOR

9:00-9:30 AM GREEN COVER SEED

ARENA

## DIAMOND SPONSOR

9:35-10:20 AM FARMERS EDGE, DIAMOND SPONSOR

ARENA

## GOLD SPONSORS

9:10-9:25 AM NEEDHAM AG

9:30-9:45 AM ARROW SEED/SOILBUILDER COVER CROPS

9:50-10:05 AM AGROLIQUID

10:10-10:25 AM ECO AG SOLUTIONS

NE HH

## BREAKOUT #1

TUESDAY 10:30-11:20 AM

## BUILDING HEALTHY SOIL WITH MOB GRAZING

ARENA

## GREG JUDY

Greg will cover how to implement high-density planned mob grazing on your farm. Learn how to monitor animals to ensure they are getting everything they need to prosper. He'll also discuss economical fencing and water development techniques, proper rest and recovery periods and how to build topsoil daily with a mob of animals while making a nice profit.

- Learn how to make a very good living from the land while healing it with your grazing management
- Learn proper rest and recovery periods between grazings
- How to monitor your animals and forages daily to ensure maximum performance
- Increased profits by grazing more animals over time
- Lower your cost of production by minimizing fertilizer, lime, seed, clipping and feeding hay

## A SYSTEMS APPROACH TO SOIL HEALTH

NE HH

## RUSSELL HEDRICK

Russell will present an overview of the benefits to practicing the principles of soil health on the farmer level. A systems approach to utilizing animals and new technologies to reduce fertilizer and chemical inputs while increasing profits on the farm. New technologies include PLFA soil test, Haney test and soil probes to monitor soil moisture and nutrient availability in real time.

*Also offered on Wednesday during breakout session #6.*

## WHO MOVED MY CHEESE: CATTLE, NO-TILL, ROTATIONS, NEW HOPE, THE NUMBERS

NW HH

## TOM CANNON

Tom was chopping ice in January 1997 when he got the call. His father was in a serious wreck; he was near death. Tom dropped out of college to help on the farm. Sometimes change comes quick and hard, his Dad never fully recovered and soon had leukemia (which he beat) and then Alzheimer's. He was always very supportive and loved the complete no-till grazing system that was developed over the remaining years of his life. Tom feels blessed beyond measure to have such a great mentor in faith and in agriculture. He grew up in the saddle, the tractor and the pew. Tom can't tell you much personally about change being difficult because he has always been trained to embrace it. And, change has always been good for the diverse operation: Cattle, no-till, long rotations, cattle again, grass finished, new hope and the numbers. *Also offered on Wednesday during breakout session #6.*

## A VIEW FROM THE NORTH

SE HH

## BRIAN HILDEBRAND

No-till provides both opportunities and challenges in any climate. Pesticide resistance, early and late frost events, growing season length, variable precipitation and market forces are all factors to consider. Brian will share his perspective and experience dealing with those challenges in Alberta, Canada. No-till has changed the game in many parts of the world, but northern climates provide some different challenges. This is a view from the North. *Also offered on Wednesday during breakout session #7.*

## COVER CROP ECONOMICS RODNEY RULON

SW HH

Rodney will share his experiences from over 27 years of no-till and 12 years of cover crops on their central Indiana farm. With a wealth of on farm data and experience, the Rulons have put a pencil to the value utilizing cover crops has added to the system. Rodney will discuss the challenges and benefits they attribute to cover crops and the data that backs it up. The Rulon's conclusion will be clear – they can't afford not to plant cover crops! *Also offered on Wednesday during breakout session #8.*

## THIRTY YEARS OF NO-TILL EXPERIENCE ON A BRAZILIAN SAVANNA FARM JONADAN MA

ROOM 200

Jonadan will discuss his family's operation spanning more than 40 years. They grow soybean, corn, sorghum, sugar cane, oat, buckwheat and cover crops. The main challenge in the savannah area of Brazil where they farm are the tropical conditions, with six months of low or no rain at all, the farm struggles to maintain dry matter production and to keeping lasting cover on the soil. The farm uses extensive cover cropping, crop rotation, double crops, crops and livestock integration. The farm also uses an integrated pest management strategy, traffic control of machinery, fertilizer application based on annual soil testing and variable rate application technology. All these tools are used to maximize yield potential, increase net profit/ha and improve soil improvement in tropical conditions. *Also offered on Wednesday during breakout session #8.*

## GENERAL SESSION

TUESDAY 1:10-2:40 PM

## BETTER SOILS, BETTER FARMING DR. RAY WEIL

ARENA

You probably already know that your soils are the most important resource on your farm. Your soils are at the heart of what makes your farm productive and profitable. Probably the best thing you ever did for your soils was to stop tilling them. But you still may not be properly feeding them, clothing them, and managing your below-ground workforce in them. Soils, plants and animals are all part of a system and all need to be in balance to keep it healthy and profitable. Crop rotations, cover crops, perennials, grazing and proper fertilization all work together to transform sunlight and water into food and income. A major goal of management is to ensure that every drop of rain and melted snow enters the soil for later use and leaves the soil only through the roots of crops. Another goal is to be sure that soil biology chemistry and physics all work together to ensure that crop can get the nutrient they need, when they need them in the amounts they need. Anytime your soil is without living roots, resources are being wasted and your soil is being starved.

## BREAKOUT #2

TUESDAY 2:50-3:40 PM

## MAKING A DIFFERENCE WITH LIVESTOCK, COVER CROPS AND NO-TILL DARIN WILLIAMS

ARENA

Darin and wife Nancy live in Waverly, KS. Their 2,000-acre operation includes a complex rotation of non-GMO corn and soybeans, grain sorghum, cereal crops such as wheat, triticale, rye and barley, and cover crops that include sudangrass, millet and sunflowers. In addition, the Williams' raise herds of grass-fed British White cattle Katahdin hair sheep, and small flocks of heritage turkeys and chickens. They purchased the cattle in 2013 and have grown to about 70 head, with the hope to raise many to sell as direct market, grass-fed beef. The Williams' latest venture is Natural Ag Solutions LLC, a seed storage and distribution center. The facility will show what cover crops along with no-till practices can do for improving the organic material in the soil. They will carry a full line of cover crop seed, deer plot seed, deer corn, public varieties of soybean seed. Darin will discuss how he uses soil health principles to drive decisions. His innovation and willingness to try something new have proven to be an asset in the operation. *Also offered on Wednesday during breakout session #7.*

**CHANGE YOUR SOIL: USING COVER CROPS AND GRAZING TO IMPROVE SOIL**

NE HH

**MICHAEL THOMPSON**

Michael will discuss how he integrates farming and ranching in a low rainfall dryland environment. He will discuss how he uses high stock density grazing of multi-species cover crops on farmland to increase overall profitability of their operation, which has been essential to weathering the current downturn in the farm economy. Grazing has been a way to eliminate fallow, increase water infiltration, increase groundcover, increase organic matter, and cycle nutrients. He'll also address soil health, fencing, limiting compaction, and cash cropping after grazing a cover crop. *Also offered on Wednesday during breakout session #7.*

**MAKING WEATHER WORK FOR YOU IN 2017**

NW HH

**BRIAN BLEDSOE**

Brian will discuss how farmers and ranchers can make business decisions based on weather preparedness for 2017 and beyond. *Also offered on Wednesday during breakout session #5.*

**USING YOUR WATER EFFICIENTLY, KNOW YOUR BUSHELS PER GALLON**

SE HH

**RICK BIEBER**

In north central South Dakota, Rick farms in a 16-inch precipitation zone on 5,000 acres of cropland and 5,000 acres of rangeland for a 400 head cow/calf operation. Using continuous no-till for more than two decades, his main crops are hard red spring wheat, hard red winter wheat, corn, flax, peas, soybeans, sunflower and alfalfa. Rick is intensely interested in keeping the farm operation economically viable and gets to the heart of a problem quickly before it becomes major. He has spent the last 25 years learning about and improving the soils and understanding their ability to adapt to changing conditions. He will share how he makes each inch of precipitation on his farm work to his advantage. *Also offered on Wednesday during breakout session #7.*

**NOT YOUR FATHER'S FARM, BUT YOUR GRANDFATHER'S FARM**

SW HH

**DAN RICE**

As manager of Prairieland in Firth, NE, Dan will explain the dairy's direct marketing philosophy around producing milk, meat and manure. The dairy is a cooperation between four family farms adding value to their current farms by producing, processing and marketing dairy products, fertilizer made from manure and food waste. Dan will explain how the dairy uses cover crops in their cropping rotation to build healthier soil to feed the cows and produce an added-value end consumer product. The operation produces milk, cream products and ice cream. They service 100 different schools and 75 retail outlets with their dairy products. They recently started a bio-refinery producing fertilizer from the dairy manure and food waste. They will produce compost, a solid phosphorus fertilizer, a liquid nitrogen fertilizer and recycle water to use on their fields and sell to other crop farmers.

**MAKING "DIFFERENT" WORK ON THE FARM**

ROOM 200

**ALAN MINDEMANN**

Alan will discuss his cropping experiences with the perils, risks and rewards of farming and marketing differently. He takes thinking outside the box to extremes, breaking local and family traditions of mono crop wheat, massive tillage and single point marketing. Alan will discuss finding and exploiting niche crops and markets and providing service and quality over the competition. He will also address dealing with failures and finding solutions, building relationships with end users, taking full responsibility for everything you produce and dealing with landlords and family members who don't share your vision.

**BREAKOUT #3****TUESDAY 3:50-4:40 PM****IMPROVING WATER RETENTION WITH COVER CROPS**

ARENA

**JIMMY EMMONS**

Jimmy will discuss how important a cover crop-grazing system is on the success of soil health. He will focus on water use by cover crops and variations in water use based on timing and goals. He will also discuss the importance of armor and the height of armor in a snowstorm. Jimmy will share his economic information on the profit that can be achieved from grazing cover crops as a supplement of the total system. Jimmy emphasizes water infiltration and the need to store and keep water in the lower profile. Keeping the soil covered at all times is one of the main goals on land they operate. *Also offered on Wednesday during breakout session #9.*

**NEVER-TILL, CONTROLLED TRAFFIC AND COVER CROPS IN SOUTHERN AUSTRALIA**

NE HH

**TOM ROBINSON**

Tom Robinson farms in South Australia with his parents Ashley and Kaylene, and partner Cassandra. They farm 4,000 acres of red-brown clay soil, with 14-18 inches of annual rainfall. Growing wheat, barley, canola, beans, lentils, and also adding summer crops, cover crops, and companion cropping. Twenty-five years ago Ashley progressed the farm into a minimum tillage system with a one-pass hoe drill, trying to keep as much stubble residue as possible. Ashley purchased a low disturbance disc seeder 15 years ago, and the never-till, high residue approach to farming started there. Tom has learned a huge amount from researchers and other farmers about soil health and the need of plant diversity in the farming system. From the information he learned overseas, Tom has been trying summer cropping, winter and summer cover cropping, and adding companion planting into his rotation. Five years ago the Robinson's started the transition to Controlled Traffic Farming (CTF). This farming method matches all machinery widths, and machinery tires (or tracks) so that only the same areas of the field are compacted by wheel traffic. He will discuss how this system has improved efficiency on the farm. *Also offered on Wednesday during breakout session #8.*

**LEARNING FROM MY MISTAKES**

NW HH

**TERRY MCALISTER**

A second-generation farmer/rancher, Terry McAlister runs a diverse operation in the Texas Rolling Plains extending south from the Red River, just below Oklahoma. He and son Kevin manage acreage stretching over two counties encompassing a variety of soils and terrain to raise wheat, cotton, hay, canola, milo, sesame, barley, and cover crops in addition to thriving cow-calf and stocker cattle production. A no-till pioneer in his area when he first began implementing the practices in 2005, McAlister has successfully employed grazing and multispecies companion cover crops to bring increased value to no-till, push yields to the limit - ultimately leaving the land healthier and more viable for future generations. Battling chronic drought conditions and other challenges, Terry will share what they have found to be most effective, as well as mistakes made over the past decade that he admits decidedly enhanced their learning curve. *Also offered on Wednesday during breakout session #9.*

**BEYOND COVER CROP 101**

SE HH

**CHRIS TEACHOUT**

Chris will discuss the next step in finding cover crop systems that address the plant and microbe interactions for a greater change in soil improvement. He will share some of his experiences and trials. He will also discuss the view of some of the world's use of plants. *Also offered on Wednesday during breakout session #7.*

**PRACTICAL STEPS FOR IMPLEMENTING ADAPTIVE GRAZING ON YOUR FARM**

SW HH

**DR. ALLEN WILLIAMS**

Adaptive grazing is simply a practice that is goal oriented, highly flexible, requires keen observation, and is responsive to natural conditions. On the surface, it can appear to be a daunting task to plan and implement a sound adaptive grazing system in your operation. However, taken step by step, it is a practice that is easily implemented and produces substantial positive returns. In this presentation we will look at several key principles that govern effective adaptive grazing. These principles include: 1) The Principle of Three, 2) The Principle of Disruption, and 3) The Principle of Compounding. Taken together, these three principles allow the practitioner to make steady progress, push through ceilings, and significantly improve overall net margins. Proper design of and access to paddocks, water systems, and shade will facilitate effective livestock movement, and forage biomass production. Case studies and real life examples will be used to show cost efficient implementation.

**USE OF PRECISION AG TECHNOLOGIES FOR FINE-TUNING FARMING SYSTEMS**

ROOM 200

**IGNACIO CIAMPITTI**

Ignacio's presentation will focus on providing an overview on the use of precision ag technologies (e.g., small-unmanned aircraft vehicles (sUAVS), satellite imagery] for identifying crop production issues and for implementing successful on-farm research studies. The utilization of precision ag tools can provide a better understanding of the data collected and empower the interpretation and potential extrapolation of the results to the field. UAVS are currently gaining more popularity in agriculture with uses including identification of weeds and crop production issues, diagnosing nutrient deficiencies, detection of chemical drift, scouting for pests, identification of biotic or abiotic stresses, and potential applications in prediction of biomass and yield. Other tools for improving crop yield forecasting and zone management at the field-scale are related to the utilization of satellite imagery at varying growth stages. For the future, implementation of support decision tools will be needed for measuring the "real" contribution of precision ag technologies in assisting key stakeholders for facilitating the decision-making process and sustainably managing more challenging farming systems.

## BREAKOUT #4

TUESDAY 5:00-5:50 PM

**HEALTHY SOILS FOR BETTER YIELDS**

ARENA

**ODETTE MENARD**

Odette Menard loves soil and the science of soil. We know about soil degradation and we all agree that it does cost a lot economically and environmentally. But how can we change the system to improve it? What could be the steps to make the switch? First, we have to go back to the soil. Who is he? How can we define him? We have been talking about soil health for years, but it still has to become the first concern in our decision-making processes? For that, Odette believes we have to build our set of observations. By knowing our soils better, it will then be possible to choose the best strategies, the winning strategies to improve our agricultural system. *Also offered on Wednesday during breakout session #7.*

**NEXT STEPS TO SOIL HEALTH BEYOND NO-TILL**

NE HH

**STEVE TUCKER**

Farming is difficult and there are many challenges we continually face. Steve's presentation will be a thought-provoking look at why we no-till, and what are the next things we can do to become more efficient and more profitable. In today's agricultural environment profit and efficiency are very important for survival. Some of the biggest hurdles we face in today's agriculture lie directly between our ears and it's how we think. You will be challenged to think about the future of your operation and what changes you can make to "Do No-Till Better." *Also offered on Wednesday during breakout session #9.*

**COVER CROPS PROVIDE SOIL HEALTH BENEFITS TO YOUR CASH CROPS**

NW HH

**ADEMIR CALEGARI**

Ademir has been working with cover crops/green manure for more than 40 years and has learned from farmers and researchers around the world. Cover crops comprise all three principles of a no-till system: minimum soil disturbance, soil covered as much as possible (all year), and biodiversity (rotation & intercropping). Using these principles has resulted in increased farm profitability. He will share results obtained using cover crop species based on soil testing to address soil deficiencies. Ademir will also discuss challenges like soil compaction, nematodes, soil root diseases, and addressing those challenges with special cover crop species, including the mixing cover crops (cocktail of species). *Also offered on Wednesday during breakout session #6.*

**INTENSIVE GRAZING AND WINTER GRAZING TO ENHANCE SOIL HEALTH, WILDLIFE & INCOME ON BLACK LEG RANCH**

SE HH

**JERRY DOAN**

Jerry's great grandfather came from Canada in 1880 to what was then Dakota Territory. In 1882 he homesteaded and built a sod house. From those humble beginnings, Jerry is the 4th generation on the ranch, now including all four of his children. They intensively graze their rangeland, moving cattle every 1 to 7 days depending on the resource and holistic goals. They have seen tremendous improvement of highly erodible sandy soils with little production becoming diverse communities with many species; increasing production and improving the bottom line. They have incorporated cover crops into the no-till crop rotation to fulfill three goals: to reduce or eliminate winter feed costs, to improve the soil health of cropland that has eroded over the years from tillage and to try to propagate wildlife. Jerry will discuss their ventures including Rolling Plains Adventures a hunting/guiding operation and an agri-tourism operation that has attracted consumers from every state and 30 countries. They have changed many traditional practices allowing them to regenerate and improve the natural resources while creating economic stability to be sustainable for future generations. *Also offered on Wednesday during breakout session #8.*

**NRCS STAFF SOIL DEMONSTRATIONS, INCLUDING A RAINFALL SIMULATOR**

SW HH

**DAN GILLESPIE & JARRED KNEISEL**

Dan Gillespie and Jarred Kneisel will use several demonstrations to show the importance of soil structure and crop residues to improve water infiltration, reduce erosion and improve soil health. A rainfall simulator will demonstrate how important keeping the soil covered is to water infiltration and reduced erosion. *Also offered on Wednesday during breakout session #9.*

**USING CURRENT TECHNOLOGY TO MAXIMIZE NITROGEN FERTILIZER USE AND GRAIN YIELD**

**ROOM 200**

**DR. BRIAN ARNALL**

In the midst of the current economic and environmental atmospheres the need to maximize nutrient use efficiency has never been as critical. Of all of the plant essential nutrients nitrogen inputs cost the most and carry heavy penalties if miss managed. This session will address methods of improving nitrogen use efficiency to optimize input utilization and maximize outputs. Topics will include variable rate technology, models, reference strips, imagery, and optical sensors. Focus will be placed on the N-rich Strip approach, a technique that has been used for several years with proven on farm results.

**SPEAKERS QUESTION & ANSWER SESSION TUESDAY 6:00-6:40 PM**

Get your questions answered and listen in as speakers team up for an interactive session.

**ARENA**

Jimmy Emmons  
Odette Menard  
Greg Judy  
Darin Williams  
Dr. Ray Weil

**NE HH**

Russell Hedrick  
Michael Thompson  
Tom Robinson  
Ignacio Ciampitti  
Steve Tucker

**NW HH**

Tom Cannon  
Brian Bledsoe  
Ademir Calegari  
Brian Arnall

**SE HH**

Brian Hildebrand  
Rick Bieber  
Terry McAllister  
Jerry Doan  
Alan Mindemann

**SW HH**

Rodney Rulon  
Jonadan Ma  
Dan Rice  
Chris Teachout  
Alan Williams



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## BREAKOUT #5

WEDNESDAY 8:30-9:20 AM

**MANAGING TO UTILIZE THE WHOLE SOIL PROFILE**

ARENA

DR. RAY WEIL

Farmers usually think of soil as the part they see and feel every day, the part they used to till up before they became no-tillers. That is, the top 6 to 8 in. of so-called topsoil. Nearly all our soil samples are from this shallow depth, and that's where we get most of our information that guides soil management. But the deeper layers are important, too. Most of the water crops use is stored there. So are a lot of the nutrients crops take up. Some of you may sample soils as deep as 3 ft. deep to inventory the nitrate that might be left over from last year. These deeper layers are only useful if crop roots can grow down into them. Including perennial grasses or bio-drilling tap-rooted cover crops in our rotations can open the door to these deep soil resources by breaking through compacted layers near the surface. The key is knowing which kinds of roots can do this work and when they can do it. In recent years research has attempted to investigate changes taking place 3 to 7 ft. deep in farm soil profiles. We have found that large pools of N exist below 3 ft. deep and that this N can be accessed by cover crops growing during the cooler, wetter seasons. We've also found cover crops can markedly affect the composition of soil pore water at 4 ft. or deeper, even during the winter. Likewise, fertilization practices may alter soluble carbon deep in the profile. It's time we take our soil management to the next level – deeper down.

**MAKING WEATHER WORK FOR YOU IN 2017**

NE HH

BRIAN BLEDSOE

*Also offered on Tuesday during breakout session #2. See description on page #20.*

**CONSERVING FARMLAND WITH COVER CROPS AND THE IMPORTANCE OF BIODIVERSITY: "A CANADIAN PERSPECTIVE"** NW HH

BLAKE VINCE

Blake will highlight his farming practices in southwest Ontario. No-tilling since the early 80s, his global perspective was gained while traveling in 2013-14 on a Nuffield farming scholarship. Blake will share his passion in respects to soil management and intensive use of multi-species cover crops and how soil management at the farm level has a direct impact on water quality around our planet. He will share his perspective that the agriculture industry needs to shift the emphasis away from physical yield and the focus on the farm needs to be financial yield. *Also offered on Wednesday during breakout session #9.*

**PANEL: STRATEGIES FOR ACCESSING AND SELLING TO DIRECT MARKETS FROM THE FARM**

SE HH

DAN RICE, DR. ALLEN WILLIAMS, ALAN MINDEMANN

Each panelist will spend 10 minutes discussing strategies they use to direct market products from their operation. A 20-minute questions and answer period will follow the presentations. Panelists include Dan Rice, Firth, NE, dairyman and producer; Dr. Allen Williams, founder of Grass Fed Beef LLC; and Alan Mindemann, Apache, OK.

**MAKING THE TRANSITION TO THE NEXT GENERATION OF NO-TILL FARMERS**

SW HH

RALPH HOLZWARTH

Ralph farms north central South Dakota with his wife Betty and son Ted. They raise spring wheat, winter wheat, corn, soybeans, sunflowers and lentils, all in a no-till system. The philosophy on the farm is low disturbance, crop rotations and sanitation. The Holzwarths have been no-till for 26 years and have learned the importance of high residue to improve organic matter levels. They have incorporated cover crops and precision planting to round out the system. Ralph will address some of the results and benefits of higher organic matter in the soils, higher yields, increased wildlife and an overall better future for the farm.

**LABORATORY SOIL HEALTH TESTS: WHAT, WHEN AND HOW**

ROOM 200

LANCE GUNDERSON

Soil is teeming with life! Billions of bacteria and miles of fungal filaments act as micro nutrient stores and miniature highway transport systems that help a soil function to support a healthy plant community. Measuring a soil's biological system, however, is quite complex and very different from more traditional soil testing methods aimed at a soil's fertility, but the two are intimately tied together. Tests such as Solvita®, Haney and PLFA help evaluate the soil's biological system, and we are now beginning to understand and appreciate what this means for soil health and function. Lance will introduce these tests, their components and how to interpret the results while discussing how on-farm management may influence the soil's biology and overall health.

## BREAKOUT #6 WEDNESDAY 9:30-10:20 AM

### COVER CROPS PROVIDE SOIL HEALTH BENEFITS TO YOUR CASH CROPS

**ADEMIR CALEGARI**

*Also offered on Tuesday during breakout session #4. See description on page #22.*

**ARENA**

### DEVELOPING ECONOMICAL GRAZING LEASES

**GREG JUDY**

Greg's presentation will cover all the details on building an operation with leased land. With very little equity you can start your own enterprise and start building your own nest egg by using other people's land. Greg will go into detail on how to find it, how to work with landowners to secure long-term leases. The economics and development of the leased land will be covered with what works and does not work. Learn how to implement different high profit enterprises on the leased land.

- Leasing land is much more profitable than owning it when beginning your grazing operation.
- The key to successful leases is learning how to work with landowners as you develop their land.
- How to secure land without incurring debt to begin your grazing operation
- Learn how to build your operation with minimal equity

**NE HH**

### A SYSTEMS APPROACH TO SOIL HEALTH

**RUSSELL HEDRICK**

*Also offered on Tuesday during breakout session #1. See description on page #18.*

**NE HH**

### WHO MOVED MY CHEESE: CATTLE, NO-TILL, ROTATIONS, NEW HOPE, THE NUMBERS

**TOM CANNON**

*Also offered on Tuesday during breakout session #1. See description on page #18.*

**NW HH**

### A SYSTEMS APPROACH TO CONSERVATION AGRICULTURE

**DWIGHT CLARY**

Dwight's presentation will be beneficial to beginners as well as those experienced in conservation agriculture. He will discuss how putting together a systems approach which includes no-till, in-furrow and foliar fertilizer programs as well as cover crops helps to build and maintain soil health while increasing yields, reducing cost and many other benefits. Dwight will share over 35 years of experience in his development of this system and the results that he has gained using this approach. Dwight also invented, designed and built the "Clary In-Stream Sediment Collector." The idea for these collectors was to develop an economically viable and ecologically friendly system for the capturing and easy removal of eroded sediments and the nutrients these sediments carry. *Also offered on Wednesday during breakout session #8.*

**SE HH**

### INNOVATIVE SOIL HEALTH DEMONSTRATIONS IN OKLAHOMA

**DR. JASON WARREN**

Jason will discuss research done through a Conservation Innovation Grant from the NRCS providing funding for implementation of on farm demonstrations of soil health promoting practices as identified by local conservation leaders. These demonstrations are located throughout the state and span from the panhandle to South Coffeyville and to south of Lawton. These demonstrations focus on the integration of cover crops into cropping systems that include continuous wheat, an irrigated wheat to corn rotation, dryland soybeans to corn and dryland wheat-milo rotations. This presentation will discuss both our positive and negative experiences with cover crops as well as provide an update on our efforts to develop a framework for soil health testing.

**SW HH**



**BREAKOUT #7**

**WEDNESDAY 10:50-11:40 AM**

**USING YOUR WATER EFFICIENTLY, KNOW YOUR BUSHELS PER GALLON**

**ARENA**

**RICK BIEBER**

*Also offered on Tuesday during breakout session #2. See description on page #20.*

**CHANGE YOUR SOIL: USING COVER CROPS AND GRAZING TO IMPROVE SOIL**

**NE HH**

**MICHAEL THOMPSON**

*Also offered on Tuesday during breakout session #2. See description on page #20.*

**PANEL: STRATEGIES FOR MANAGING CAPITAL RESOURCES AND SURVIVING LOW MARKETS**

**NW HH**

**ALAN STATES, DOUG PALEN, DR. MYKEL TAYLOR**

Each panelist will spend 10 minutes discussing strategies they use or have used to weather low commodity price economic environments. A 20-minute question and answer period will follow the presentations. Panelists include Alan States, Hays, KS, producer; Doug Palen, Glen Elder, KS, producer; and Mykel Taylor, professor at Kansas State University.

**HEALTHY SOILS FOR BETTER YIELDS**

**SE HH**

**ODETTE MENARD**

*Also offered on Tuesday during breakout session #4. See description on page #22.*

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**HILDEBRAND FARMS, OUR NO-TILL JOURNEY****BRIAN HILDEBRAND***Also offered on Tuesday during breakout session #1. See description on page #18.*

SW HH

**MAKING A DIFFERENCE WITH LIVESTOCK, COVER CROPS AND NO-TILL****DARIN WILLIAMS***Also offered on Tuesday during breakout session #2. See description on page #19.*

ROOM 200

**BEYOND COVER CROP 101****CHRIS TEACHOUT***Also offered on Tuesday during breakout session #3. See description on page #21.*

ROOM 201

**GENERAL SESSION****WEDNESDAY 1:15-2:45 PM****ADAPTIVE GRAZING & LIVESTOCK/COVER CROP INTEGRATION: YOUR KEYS TO BUILDING SOIL HEALTH****DR. ALLEN WILLIAMS**

A sturdy building starts with a strong foundation. Likewise, profitable farms and ranches must start with a solid foundation: The Soil. We know that 90% of soil function is mediated by microbes, yet those same microbes are dependent on plants for support. So, how we manage those plants is crucial to overall microbial population, and microbial community structure. In truly healthy soil, every acre should be comprised of more than three tons of soil bacteria, fungi, protozoa, earthworms, and soil level insects. So, the question is: How do we build our soil microbial population and soil organic matter to highly functional levels? Our research and on-farm/ranch case studies have shown that we can build soil OM, microorganism and macro-organism populations substantially within relatively short periods of time. We will examine data from multi-year trials that demonstrate the myriad benefits of implementation of adaptive grazing on livestock farms and ranches, and the benefits of cover crop-livestock integration into row cropping operations. Recent discoveries indicate that by implementing regenerative agricultural practices, farmers and ranchers can experience positive compounding and cascading results, rather than simple linear impacts. These compounding results start at the soil microbial level and expand through the plants, macro-organisms, livestock, beneficial insects, water quality, and full ecosystem impacts. The bottom line is healthy soil = healthy plants = healthy livestock = healthy environment. This equals opportunity for enhanced profits.

ARENA

**BREAKOUT #8****WEDNESDAY 2:50-3:40 PM****COVER CROP ECONOMICS****RODNEY RULON***Also offered on Tuesday during breakout session #4. See description on page #19.*

ARENA

**INTENSIVE GRAZING AND WINTER GRAZING TO ENHANCE SOIL HEALTH, WILDLIFE & INCOME ON BLACK LEG RANCH****JERRY DOAN***Also offered on Tuesday during breakout session #4. See description on page #22.*

NE HH

**NEVER-TILL, CONTROLLED TRAFFIC AND COVER CROPS IN SOUTHERN AUSTRALIA****TOM ROBINSON***Also offered on Tuesday during breakout session #3. See description on page #21.*

NW HH

**PANEL: STRATEGIES FOR MANAGING AND CONTROLLING HERBICIDE-RESISTANT WEED POPULATIONS**

SE HH

**BILL BUESSING, DALE STRICKLER, ANITA DILLIE**

Each panelist will spend 10 minutes discussing strategies they use or have used to manage resistant weed populations. A 20-minute question and answer period will follow the presentations. Panelists include Bill Buessing, Axtell, KS, producer; Dale Strickler, agronomist with Green Cover Seed and Courtland, KS, producer; and Anita Dillie, professor at Kansas State University.

**THIRTY YEARS OF NO-TILL EXPERIENCE ON A BRAZILIAN SAVANNA FARM**

SW HH

**JONADAN MA**

Also offered on Tuesday during breakout session #1. See description on page #19.

**A SYSTEMS APPROACH TO CONSERVATION AGRICULTURE**

ROOM 200

**DWIGHT CLARY**

Also offered on Wednesday during breakout session #6. See description on page #25.

**BREAKOUT #9****WEDNESDAY 4:20-5:10 PM****IMPROVING WATER RETENTION WITH COVER CROPS**

NE HH

**JIMMY EMMONS**

Also offered on Tuesday during breakout session #3. See description on page #20.

**NEXT STEPS TO SOIL HEALTH BEYOND NO-TILL**

NW HH

**STEVE TUCKER**

Also offered on Tuesday during breakout session #4. See description on page #22.

**CONSERVING FARMLAND WITH COVER CROPS AND THE IMPORTANCE OF BIODIVERSITY: "A CANADIAN PERSPECTIVE"**

SE HH

**BLAKE VINCE**

Also offered on Wednesday during breakout session #5. See description on page #23.

**NRCS STAFF SOIL DEMONSTRATIONS, INCLUDING A RAINFALL SIMULATOR**

SW HH

**DAN GILLESPIE & JARRED KNEISEL**

Also offered on Tuesday during breakout session #4. See description on page #22.

**LEARNING FROM MY MISTAKES**

ROOM 200

**TERRY MCALISTER**

Also offered on Tuesday during breakout session #3. See description on page #21.

**CLOSING QUESTION & ANSWER SESSION****WEDNESDAY 5:15-6:00 PM**

Get your questions answered and listen in as Wednesday's speakers team up for an interactive session.

ARENA