One Step Forward, One Step Back:
Pollinator Strips and Honey Bee Health

by Joanna Voigt

“When one tugs at a single thing in nature, he finds it attached to the rest of the world.”

The quote above, widely attributed to John Muir, is actually a misquotation of a phrase Muir penned that reads, “When we try to pick out anything by itself, we find it hitched to everything else in the Universe.”

Either way, the idea expressed is a striking and important one, ecologically-speaking, and a recently-released report co-authored by entomologists Jonathan Lundgren and Christina Mogren on neonicotinoid pesticide contamination in pollinator strips brings the point home in a big way.

The Mogren/Lundgren report, “Neonicotinoid-contaminated pollinator strips adjacent to cropland reduce honey bee nutritional status”, details findings from a study initially aimed at determining if planting pollinator strips next to corn and soybean fields would serve to buffer pollinators from the harmful effects of the neonicotinoid pesticides currently being used as seed treatments on the vast majority of corn and soybean seeds. When the researchers discovered that the pollinator strips themselves – including those planted on and near organic farms – were contaminated with pesticides from the seed treatments, they changed the focus of their research to determine if planting pollinator strips in corn and soy dominated regions is actually detrimental rather than beneficial to pollinators. And the answer may be yes.

Continued on page 13
Small Farmer Commentary

Living in Interesting Times:
Get Out and Vote!
by Mary Fund

An old Chinese blessing says “may you live in interesting times.” Between the irregular weather patterns and extreme events experienced around the country this year and the strangest political campaign season in history, merely “interesting” seems mighty attractive. If only all could be resolved with something so simple as an election. On the morning of November 9, I can guarantee that we will all wake up to the same problems, uncertainties, and challenges. However, who comes out on top in those elections will make a huge difference in how we put our collective shoulders to the wheel and move forward.

The big question for the November 8 election is who will show up at the polls?

“About 45 percent of all eligible voters fail to show up to the polls for general elections in Kansas,” states an article published by the Kansas Leadership Center’s Fall journal. Why? Some point to pessimism about politics and whether their voice really matters, others to overwhelming day to day economic and personal issues that make them “tune out”. I personally have heard repeatedly that we just “do not know who to believe or trust”, which indicates not so much total cynicism just “do not know who to believe or trust”, which indicates not so much total cynicism but confusion.

Then there is the complexity of registering amplified by our new election laws. While recent court decisions have ruled in favor of those who had been purged from the voting roles, the question remains as to who will be inspired to get out and vote.

The League of Women Voters in Kansas has made the rounds explaining how elections--because of the low turn out--can be determined by a very small number of voters. Candidates and political action groups who buy ads and mail postcards, take advantage of big data to target specific groups or individuals often on one key issue just to increase those votes. Money can easily buy an election on one or two issues, when people choose to opt out or ignore the broader challenges at play.

It is also acknowledged by those who study voting/elections and citizen engagement, that people step up when the issues most important to them are at stake. We’ve seen this time and time again at KRC with our work – going back to the 1980’s farm crisis, the low level radioactive waste siting debates, the hog wars of the mid-90’s, and the local food movement today. People engaged, they debated, they listened, and they acted. The decisions that were made, while not always perfect, were better than if they’d stayed home.

Presidential election years usually show higher numbers than non-presidential years. Kansas may not surprise anyone in its overall national election results, although this is the strangest election year in history, so who knows? But the state level seats are in full play (See article on page 16 for details.) All seats in the State Legislature – both Senate and House–are up for election.

Look to page 4 of this issue for our detailed analysis of critical state issues (Kansas at the Crossroads), but here is a summary of the most important issues to consider with your vote. If you can’t find an issue important enough to get you out to vote, you are indeed totally “tuned out.”

Continued on page 3
**Small Farmer Commentary**

* Stabilizing State Revenues: how to stop the slide toward bankruptcy? A rebalanced revenue stream of income/sales/property taxes is needed.

* Funding public education K-12 and re-establishing funding for higher education institutions to ensure all Kansas children receive a quality education regardless of where they live and to make higher education accessible to more Kansans and ensure the quality of education at our universities.

* Maintaining an independent judiciary. There is a movement to politicize the current Kansas Supreme Court. This threatens to destroy the fabric of checks and balances of the judiciary, legislative and executive branches of government.

* Expanding health care by expanding Medicaid and protecting our hospitals: 150,000 uninsured Kansans could be receiving health care if Medicaid was expanded. Hospitals would benefit from greater reimbursements. Rural community hospitals would be more financially stable.

* Establishing energy conservation planning and more renewable energy options. Helping individuals and businesses adopt solar and wind energy via credits and minimal fees is essential to expanding renewable energy use.

* Enhancing local food production and diversified farming systems. Kansas is just beginning to assess the economic and health benefits of greater local food production. The farm economy is in a serious downturn. Farming practices that protect water quality, build soil health, and reduce erosion can also reduce input costs, which is critical to adapting to the changing economic climate. Programs that enhance food related enterprises increase local and regional economic development, as well as impact access to healthy food. These are all part of a diversified, ecologically based farming system that needs to be supported by policy.

**Briefs**

**OFRF Releases Report on Organic Research**

The Organic Farming Research Foundation (OFRF) recently released its analysis of organic research funded by the USDA Organic Research and Extension Initiative (OREI) and Organic Transitions (ORG) competitive research grant programs from 2002-2014. The report offers an in depth analysis of the progress these programs have made in addressing critical research needs, and also provides recommendations for future research investments by USDA. See more at http://ofrf.org/news.

**USDA Report on Land Tenure:**

**How are Beginning Farmers Affected?**

The U.S. Department of Agriculture’s (USDA) Economic Research Service (ERS) recently published a report, U.S. Farmland Ownership, Tenure, and Transfer, which sheds some light around the major barriers to land access faced by farmers, particularly beginning farmers, and also explores channels through which farming and non-farming landlords may consider transferring their lands. This timely report analyzes trends in U.S. farmland ownership and land tenure drawn from USDA’s 2014 Tenure, Ownership, and Transition of Agricultural Land (TOTAL) survey. The report can be accessed at www.ers.usda.gov/publications/eib-economic-information-bulletin/eib-161.aspx. Also the National Sustainable Agriculture Coalition’s analysis of the report can be viewed at http://sustainableagriculture.net/blog/land-tenure-beginning-farmers/?utm_source=roundup&utm_medium=email.

**Against the backdrop of a state economy in the tank, how will the state help producers address these problems? How will we afford the types of programs and assistance the state gave in the 1980’s?**

**The challenges facing the 2017 Kansas Legislature are serious. Another Chinese saying says something like “in crisis there is opportunity”.**

**Now is the time to reach out to candidates and to your friends and neighbors, and ask where they stand on the issues so critical to the future of the state. Get out and vote and hope for the best. Then the day after the election, roll up your sleeves and get down to the grassroots work of finding solutions to the above challenges.**

Mary Fund can be reached at mfund@kansasruralcenter.org
Kansas at the Crossroads: 2016 Election

by Paul Johnson

Kansas is at a critical crossroads. This crossroad will define the quality of life in Kansas for now and years to come. With the self-inflicted 'income tax reduction' revenue crisis, Kansas is virtually broke.

The essential infrastructures of education, highways, the judiciary, social services and public services are all at risk. The 2017 Kansas Legislature will have some difficult decisions to straighten out this mess before it gets any worse. At the same time - essential pillars of the Kansas economy such as affordable housing, energy planning and agriculture and water issues are ignored. 2017 could well be the defining time for governing and moving Kansas forward at these crossroads.

Kansas is at the crossroad of re-balancing revenues or watching the slide to inferiority continue. The income tax accounted for 28% of revenues in 2010. Exponential economic growth could not replace the lost revenue of $1 in income tax with 6.5 cents in sales tax. The politics were very clear with only 5% of the wealthiest Kansas taxpayers receiving 75% of the income tax reductions while all Kansans choked on a higher sales tax and increased property taxes.

Re-establishing the income tax cuts will take time while the revenue picture to Kansas continues to darken. To counter further destruction to essential state services in 2017, the gas tax could be increased at this time of lower gas prices thus freeing 'highway-bound' sales tax for other state services. The property tax for schools was 35 mills in 1995 and reduced to 20 mills by 2000. Some increase will be needed to stabilize public school funding.

Once the income tax is properly restored and state revenues are stabilized, there should be a planned reduction in the sales tax on groceries/food since Kansas has the second highest food sales tax in the country.

Kansas is at the crossroad of supporting public education. K-12 funding topped out at $4,400 for state base aid per pupil prior to the 2009 great recession and was subsequently cut to $3,852. Since 2010, public education funding has increased - but to cover shortfalls in the public retirement system for school employees - while basic funding for classroom instruction has fallen behind inflation and frozen in the two year public education block grant that ends June 30, 2017. A new school funding formula is the task for the 2017 Kansas Legislature at a time of very questionable state revenues.

During the same period of 2008 to 2017, higher education has experienced budget reductions of near 30%. Higher tuition (59% increase) and greater student debt has been the result. Higher education is one of the key economic development drivers training the workforce for the 21st century but budget cuts are curtailing those capabilities and de-touring the brightest educators from taking a position at underfunded Kansas universities and community colleges.

Kansas is at a crossroad in regards to an independent judiciary. Several legislative attempts - in the past four years - have been made to politicize the selection of Kansas Supreme Court justices after the voters in the 1960’s established in the Kansas constitution an independent, nonpartisan process of selection. The plan now is to vote out - through retention elections - four of the seven sitting Kansas Supreme Court justices this fall. The most unpopular Governor in Kansas history could then select four new justices in the last two years of his term.

The Kansas Supreme Court, and their peers across the country, has increasingly been asked to step in to decide divisive issues that lawmakers can’t or won’t reconcile. Then whoever disagrees with their decision attacks the court for being activist. The court’s purpose is to make decisions based on the law and the facts of the cases before it. To politicize the appointment of the judges by giving a governor more power in their appointment presents a Constitutional threat to separation of powers and weakens the judicial process.

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Kansas Crossroads...
Continued from page 4

Furthermore, the Justices are bound by state judicial canon that they act in a manner consistent with an independent judiciary. In other words, they can’t campaign or politic on their own behalf like politicians. But state law currently does NOT require those groups spending thousands of dollars to urge a no retention vote, to report who they are, who they represent, or what they are spending. A fair and impartial court system hangs in the balance in Kansas in the Nov. 8 election. Voting to retain the Supreme Court Justices would ensure the judicial process remains strong.

Kansas is at a crossroad in regards to health care. Over 300,000 Kansans have no health insurance. The expansion of Medicaid (KanCare) would cover over 150,000 of these uninsured Kansans. Several rural hospitals are in danger of closing without this expansion. With the continuing revenue crisis, KanCare was cut by 4% to help balance the State budget thus putting greater pressure on health care providers.

Mental health services have also been cut in these times of budget crisis. The State’s promise - to assist the 27 community mental health centers to cover the uninsured - has declined. The State’s mental health hospitals have suffered under budget challenges, staff shortages and the loss of federal certification. Children’s health insurance program balances have been raided to fund other state programs instead of covering more uninsured children.

Concerning adult obesity, Kansas has now vaulted to the 7th highest state with a rate of 34%. Last session, lawmakers passed a law restricting healthy food initiatives while 10 counties have established local food policy councils to promote healthy foods and counter the obesity epidemic. According to the Kansas Health Institute, one of six Kansas households in 2015 was food insecure and challenged to have enough food for the entire month.

The average age of the Kansas farmer is 59 while only 7% of Kansas farmers are under the age of 35.

Kansas is at a crossroad concerning affordable housing. Kansas has no comprehensive focus on affordable housing. During Governor Bill Graves’ tenure, there was a statewide affordable housing task force that compiled detailed data on housing needs for all Kansans and specific groups such as the elderly, the disabled and the mentally ill.

Kansas has approximately 1.2 million housing units with 68% owner-occupied and 32% rental. 40% of these renters (around 160,000 units) are cost burdened paying over 35% of income for housing thus stressing the household’s ability to pay for utilities or food or medicine. A number of these renters are single women with children and many of them are facing food insecurity.

While Kansas is promoting the repopulating of 86 counties as rural opportunity zones with income tax cuts and student loan assistance, available and affordable housing is a primary barrier to new residents. Rural communities struggle to entice new businesses - such as manufactures - without providing the assurance of adequate housing.

Kansas is the only state in the country that does not have a true statewide first-time home buyer program that is subsidized by the federal ‘private activity bond’ tax credit program through the Kansas Department of Commerce. Kansas operates this program for the entire state through Sedgwick and Shawnee counties with inadequate staffing and resources.

Kansas is at a crossroad in terms of energy planning. In the last 15 years, Kansas has made significant progress in renewable energy by now generating 20% of all electricity from several large wind farms. For the investor owned utilities that provide 80% of the state’s electricity and natural gas, there are three important general docket before the Kansas Corporation Commission (KCC) that will impact future energy opportunities.

In docket one, the KCC will determine what fees will homes with solar panels or small wind systems pay to the utility to be hooked up to the electrical grid. There are now financing options with banks to assist home-owners with installing solar panels and pay for the system with affordable monthly payments. Besides a fair monthly charge for utility connection, there will be a debate over what utilities should pay for the extra power supplied by these solar panels.

Continued on page 15
Jefferson County Food Council Seeks Vision of Healthy Residents & Vibrant Local Food System

by Jean Stramel

There is a movement across Kansas where like-minded folks are gathering together to influence and change the current food system so that more food is grown locally and access to healthy fresh food is easier. The Kansas Rural Center’s “Feeding Kansas” report, published over a year and a half ago, called for support of local food and farm councils who would provide guidance in communities and to local governments around the issue of raising more food locally.

One of these groups is the Jefferson County Food Council, comprised of citizens who share a passion for the idea that people should have access to fresh, healthy, local food, and that more support should be available for farmers. Jefferson County clearly has its finger on the pulse of this growing movement.

Jefferson County, located in northeast Kansas, is considered an agricultural county but, like the majority of Kansas, imports most of its food. In fact, over 90% of the fruits and vegetables Kansans eat come from outside the state. The Jefferson County Food Council is dedicated to changing that. They know demand for local food is there, and that the challenge is to provide support that enables more farmers to grow it and to get a distribution network set up for their products. The Jefferson County Food Council believes that the health of citizens will improve by increasing the diversity of agricultural products grown in the county, and that this will foster community and environmental resilience.

Important components of the council’s work are environmental justice and access to healthy food. Specific priorities the council is working on include building and strengthening markets for local farmers, through such measures as a food hub and farmers markets, and development of commercial kitchens that allow growers to process their food into marketable items outside the growing season. The council also hopes to become the go-to resource center for landowners who want to use their land in a sustainable way.

The administrative tasks of the Food Council are handled by Brittany Chaplin, Jefferson County Economic Development Coordinator. The seed was planted for the council at a county commissioners meeting in 2014. Steve Moring, local farmer and current council member, gave a presentation on permaculture and what was happening on his farm and in the Lawrence area, and one of the commissioners said, “You need to meet that gal,” pointing to Brittany, who had recently been hired to her position.

She was exploring options for projects, and being somewhat of a “foodies” and grower herself, she and Moring talked and agreed there were likely enough interested citizens in the county to form an advocacy group for local and sustainable food policy.

An exploratory public meeting was held on December 20, 2014, in Oskaloosa, to discuss what a food council could be and how it could benefit communities in Jefferson County. At that time, there were only five other Food Policy Councils in Kansas – now there are at least eleven.

Chaplin and Moring put out a call through “word of mouth” to find stakeholders, and the food council grew from there.

In May 2015, Jefferson County Commissioners supported the development of a council by passing a county resolution which established a “Food council for the purpose of promoting local food policy to promote access to and consumption of healthy food options in Jefferson County.” From the beginning, they have found it very easy to proceed as they are “all on the same page” and continue to function very well as a group.

One of the first steps members took included developing a survey, which was sent out in spring of 2016 through newspaper notices, email and Facebook. Questions related to what crops are grown, size of farm, what is and is not working for the growers, policy issues needing addressed and the kind of help growers would like to have. The council made an effort to reach all sizes of operations, not just small growers. The survey results helped the council prioritize direction of work.

It is critical that farmers be a part of the council, and so far mostly small farmers have become involved. Others that have been involved include economic development representatives, health professionals, bankers, and youth, to name a few. Large producers generally have not seen where they fit in, but the council is hoping to change that, as well as the Continued on page 7
negative connotation that has been given to agriculture in recent years as farms have gotten bigger. Jefferson County Conservation District manager, Cheli Lopez, is excited about the Food Council, and senses that farmers are tired of low commodity prices and could benefit from agricultural diversification and awareness about practices they might not know about, such as cover cropping.

Though participants share a common purpose, each brings a unique perspective to the group. A recent meeting at member Susan Jones’ permaculture garden farm introduced some of their goals and intentions. Her small straw bale house was built on land that has been in her family for over 100 years. Jones came back to live on the land 30 years ago, and now shares it as a classroom and as her “nod to permaculture.”

Council member Steve Moring also has an education farm, building on the permaculture consciousness in the Lawrence area. He teaches a Permaculture Design course and has hosted an Apprenticeship Program since 2000. He was influenced early on by the ‘Club of Rome’ report, which discussed the effects of population growth, energy and resource depletion, and the need to build resiliency into food systems. He looks at Cuba as an example and cites the ‘Power of Community’ video as a resource.

The current demand for local foods is driving change, and Moring noted that recently when he visited the Oskaloosa School community garden and met with 2nd graders, finding that three-fourths have gardens at home and like eating the fresh food. The council feels there is hope to change their local food system and use this momentum to aid in their efforts.

Eric Youngquist is a stay-at-home dad, raising a family on his 80 acres. Although the cropland and pasture is rented out, he started researching and studying permaculture applications on his land, with a goal of “building soil.” He sold produce and volunteered at the Perry farmers market, and now manages it. “I’m learning as I go,” he said.

The market is in its ninth season, with ten vendors. Rather than competing for food dollars, the local grocery benefits from the increased traffic that the farmers market brings on the days it is open. “One day a week, for a few hours, the community is enlivened when the farmers market is happening and it brings folks to town to shop,” Youngquist said. The grocery store sells handmade soap and some other locally made items.

Council members Jenny and Tim O’Brien are passionate about helping initiate a new conversation about land policy in Jefferson County. They live on eight acres north of Lawrence, purchased in 2006 when they committed to a homestead lifestyle. While they were able to buy their small acreage through an “agricultural split” reserved for family members, current zoning does not allow large tracts of land to be divided into anything smaller than 40 acres. This discourages small homesteaders like themselves.

They see the Food Council as an entity that can bring data and examples to county government to show what has been done in other places and why it is important for the effort to diversify local food systems. They are encouraged by the young people who want to learn about this growing system and lifestyle. “We need more farms growing food for the local market,” O’Brien said, and access to smaller tracts of land for sale would offer opportunities for growers who cannot afford large acreages to raise high value crops such as fruits and vegetables.

“We contribute to the language,” claims Tim O’Brien, to encourage county officials to “think outside the box” when making considerations on spraying ditches, zoning restrictions, and seasonal labor regulations. The Jefferson County Food Council would not only like to act as a resource center for landowners but also as a clearinghouse to funnel ideas and provide education and resources on sustainability to citizens and their local government. They will continue to explore the creation of a local Food Hub, and building commercial kitchens in the county.

“The Food Council has been eye opening,” according to Susan Jones. “Efforts to create a regional or county Food Hub, pooling product and knowledge will allow everyone to benefit,” she added.

The idea is that growers can still market individually, but that the Food Hub can provide a place to take their extra product. This is a technical and adaptive challenge. Funds are not available yet, but they plan to apply for an “Implementation” grant to move forward on projects identified from the survey and in step with the goals of the group.

Continued on page 14
**Sustainable Farming News**

**The Art Behind the Science of Management-intensive Grazing**

By Tom Parker

*Photo by Tom Parker*

Billed as a hands-on management intensive grazing school, participants spent time outside in a variety of exercises. Above they look at a tire tank.

While many agricultural-based workshops rely heavily on big-name guest speakers, Power Point presentations and panel discussions, such was not the case with the 6th annual Eastern Kansas Grazing School.

Billed as a “hands-on management-intensive Grazing (MiG) school for beginning and experienced graziers,” participants were asked to calculate the size of paddocks needed to support a specific number of cattle per day and per grazing event, to determine the average height of available forage per acre and convert it into estimated dry matter per inch and per acre, and to judge the nutritional value of alfalfa bales by sight, among other things. It wasn’t going to be the easiest thing to do, David Kraft told them, but there would be tools and guidance available.

First, he warned, “We’re going to let you flounder a little. You might be a little angry at us, but don’t judge us yet. This is all about daily decision-making and how we go about this business. There’s an art to it, as well as a science.”

Kraft, USDA Natural Resources Conservation Service state rangeland management specialist, Emporia, was one of several speakers during the two-day workshop held on Sept. 20 and 21 at the Highland Community College Perry Center in Perry, Kans.

Other speakers included Mark Green, NRCS Lead Resource Conservationist, Springfield, Mo.; Dustin Schwandt, range conservationist, Holton, Ks.; Doug Spencer, NRCS rangeland specialist, Marion, Ks.; Wesley Tucker, agriculture business specialist for University of Missouri Extension; David Hallauer, Meadowlark Extension district agent, crops and horticulture; and Jody Holthaus, Meadowlark Extension district agent for livestock and natural resources.

Sponsored by K-State Research and Extension and the USDA Natural Resources Conservation Service, the school included tours of several area farms, field exercises in resource inventory, pasture allocation and stocking rates, and discussions and presentations on soil health, grazing arithmetic, economics, fencing and watering systems.

The art side of the equation relied heavily on resource management backed by a data-rich inventory of those selfsame resources collected throughout the year, Kraft said. The integration of appropriate technology was also important, such as the use of temporary fencing and improved watering systems, some of which utilized solar power. One of the most important elements in successful grazing, however, was the management of the components that make up a pasture—the plants themselves.

“Leaves are the key,” he said. “In essence, we’re managing leaves.” David Hallauer agreed. “We have to know how that plant will respond to our harvest management,” he said. “The purpose of this school is to get you to graze that forage as efficiently and as economically as you can, but do so appropriately.”

Because top growth is necessary for root growth, and vice-versa, maintaining a balance when grazing is critical. While the adage of “take half, Continued on page 17
2016 Conference Set for November 18-19 in Manhattan, Kansas
“Transforming Our Farms, Our Food and Our Future:
Building The Road As We Go”

Registration is open for the Kansas Rural Center’s 2016 Farm and Food Conference, Transforming our Farms, Our Food and Our Future: Building the Road As We Go”. The 2-day conference will be held Friday and Saturday November 18-19, 2016, at the Four Points Sheraton Hotel & Conference Center, Manhattan, Ks.

The conference will feature dynamite keynote speakers and two days of workshop sessions, presentations and panel discussions of how we transform our farms and our food system to better meet future environmental, economic and social challenges.

New just for this year, the North Central Region - Sustainable Agriculture Research & Education (NCR SARE) is co-sponsoring an entire track of SARE funded farmer research project sessions titled “The Farmer Forum”. SARE moves these forums around the 12-state region each year. Eight farmers from Kansas, Missouri, and Nebraska will provide sessions describing their farm research projects. NCR SARE staff will also provide a workshop on farmer grant writing for those interested in submitting their own proposals.

Friday, November 18: The first day will have focus on Conservation and Diversified Farming Systems with an emphasis on Pollinators and Soil Health. Dr. Jonathan Lundgren will kick off the day with a keynote presentation on the critical importance of biodiversity for food production, with a focus on soil health, beneficial insects, and pollinators and diversified farming systems.

Join us at the Four Points Sheraton
530 Richards Drive
(Just off Ft. Riley Blvd. near Seth Child) for the 2016 KRC Farm and Food Conference
November 18-19, 2016
Online registration at http://kansasruralcenter.org/conference-2016/

Dr. Lundgren is an award-winning scientist (entomologist/agroecologist), who worked for USDA ARS for 11 years before starting his current project- Blue Dasher Farm, a research and demonstration farm. Lundgren has published nearly 100 scientific papers on pollinators and insects, including recent research on neonicotinoids, the body of pesticides suspected of harming pollinators and other wildlife.

Jennifer Hopwood, Senior Pollinator Conservation Specialist with the Xerces Society for Invertebrate Conservation, will speak on the role and importance of pollinators in a healthy, sustainable agricultural system and how ecologically-based farming systems help support pollinator populations.

Saturday, November 19: The focus on day two will turn to how a local food system is part of any diversified farming system, and how collaboration and organizing is critical to development of a successful local and regional food system.

Dr. Liz Carlisle, a former fellow at the Berkeley Food Institute’s Diversified Farming Systems Project and now teaching at Stanford University as part of the School of Earth, Energy and Environmental Sciences, will be the keynote speaker. Carlisle is also the author of The Lentil Underground, a non-fiction book recounting her research and experience working with Montana’s sustainable, organic and local food movement and the social networks that organized to make it all work.

Carlisle brought her unique talents and voice to the story of a sustainable farm to table food movement in Montana—a place most people would never expect to see foodies, local food, and environmentally savvy farmers (and kind of similar to how some view Kansas). A Montana native, Carlisle worked for Senator John Tester, where she honed her real world knowledge of farmers and ranchers and the challenges they face, before returning to graduate school.

Continued on page 12
KRC 2016 Sustainable Farm and Food Conference

Kansas Farm and Food Conference 2016
November 18-19, 2016 at the Four Points Sheraton Hotel Manhattan, Ks.

Transforming Our Farms, Our Food and Our Future:
Building the Road As We Go

Agenda Friday November 18, 2016 Day One

8:00 a.m.  Conference opens, Registration
9:00 a.m.  Welcome and Introduction- Mary Fund, Executive Director, Kansas Rural Center
9:10 a.m.  Keynote Speaker- Dr. Jonathan Lundgren, “The Importance of Pollinators and Diversified Farming Systems to Farm and Food System Health”; award winning entomologist and agroecologist, Blue Dasher Farm, a research and demonstration farm.

10:15 a.m.  Networking, Exhibits Open

10:30 a.m. Concurrent Workshops Session 1

Adding Livestock to Urban or Small Scale Farms- Hank Will, Mother Earth News editor

Resources Available for Farmers- Bob White, USDA FSA; Jessica Bousier, USDA Rural Development; Dean Krebsiel, USDA NRCS; Kerry Wefald, KDA

Crop Enterprise Budgets for Specialty Crop Profitability in Ks.- David Coltrain & Natalya Louther, Seward Co. Com. College; Tom Baller, KRC

Benefits of Forest Management for Climate Change and Biodiversity- Bob Atchison, Ks. Forest Service; Rich Straight, National Agroforestry Center

Farm to School: Sourcing Local Food from KS Farms - Rachael McGinnis Millsap, KC Healthy Kids; Barb Depew, KSDE

 Noon to 12:45 p.m. Lunch featuring locally produced and sourced food.

1 p.m. to 2 p.m. Jennifer Hopwood, Xerces Society, “Pollinators and On-Farm Habitat”
2 p.m. Networking; Exhibits Open

2:15 p.m. - 3:45 p.m. Concurrent Workshop Sessions 2

NCR SARE Track- Grant Writing for Farmers - Beth Nelson & Joan Benjamin, NCR SARE; Kerri Ebert, KCSAAC/ Ks. SARE

Lessons Learned: Stories of Challenges & Successes on Limited Resource, Diversified Farms- Farmer panel: Andi & Kurt Dale; Todd Griggs

Opportunities in Certified Organic Grain Markets- Ed Reznicek and Martin Eddy, Kansas Organic Producers


Update on Local Food & Farm Councils in Ks.- Missty Lechner, Chris Sramek, Erin Laurie, Julie Hettinger, Sen. Tom Hawk

3:45 p.m. Break
4 p.m. to 5:30 p.m. Concurrent Workshop Sessions 3. Day One ends at 5:30 p.m.

Creating Depository of Local Honey Bee Strains/Sustainable Beekeeping- Leo Shanashkin, Ava, MO; and Economics of Haying/ Grazing cover Crops- Josh Roe, Manhattan, Ks.

Growing the Growers: Increasing Specialty Crops in Ks.- David Coltrain, SCCC; Stu Shafer, JCCC; Cary Rivard, KSU Extension; Matthew Kost, Cultivate KC

Weathering Hard Times: Lessons from the 1980’s Farm Crisis- Charlie Griffin, KSU; Ed Reznicek, Ks. Organic Producers; Donn Teske, Ks. Farmers Union

Spray Drift on the Farm: Impacts, Reporting & Strategies for Prevention- Joan Ratzlaff, KDA; & Farmers Andrea Tucker Myers; Jake Johannes

How to Frame Your Narrative: (or How to deliver persuasive messages on issues that matter to you) Deborah Ballard-Reisch, Wichita State University

5:30 p.m. to 7 p.m. Social Hour (local snacks and locally brewed beer)  Dinner on Your Own.
### KRC Sustainable Farm and Food Conference

**Agenda Saturday November 19, 2016 Day Two**

- **8:00 a.m.** Conference opens, Registration
- **9:00 a.m.** Welcome and Introduction  Mary Fund, Executive Director, Kansas Rural Center
- **9:10 a.m.** **Keynote Speaker: Dr. Liz Carlisle, “The Moral & Social Economy of Alternative Food Systems”**
  Stanford University, Lecturer in the School of Earth, Energy, and Environmental Sciences, teaching food and agriculture courses; and author of *The Lentil Underground*.
- **10:15 a.m.** Break: Networking, Exhibits Open

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<td><strong>NCR SARE Track:</strong> Economic Analysis of Cover Crops, Soil Health &amp; Livestock Mike McDonald, Palmyra, NE; Evaluating the Roller Crimper for Cover Crop Control Michael Willis, King City, KS</td>
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<td><strong>Farm Transitions, Mentorships, &amp; Alternative Models for Farm Ownership &amp; Management</strong> Mark Janzen, Hillsboro, KS; Dennis Demmel, Ogallala, NE; Jake Johannes, Perry, KS; Julie Mettenburg, Lawrence, KS</td>
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<td><strong>Food Hubs:</strong> What are they, how do they work, and Examples in KS? Marlin Bates, KSU/DG Co. Extension; Tom Buller, KRC</td>
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<td><strong>Opportunities for Renewable Energy in KS:</strong> Dorothy Barnett, Director Climate &amp; Energy Project; Bill Wood, Cromwell Solar; &amp; Jason Kaplan, United Wind</td>
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<td><strong>Raising Meat in KS:</strong> A Dialogue of Opportunities &amp; Future Vision for Small Farmers Natalie Fullerton, facilitator; others TBA</td>
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12:00 p.m. to 12:45 p.m. Lunch from Locally Sourced Foods

1:00 p.m. to 2:15 p.m. **What Kansas Citizens and the Legislature Will Face in 2017? Overview of State Budget Crisis**
Duane Goossen and Heidi Holliday, Kansas Center for Economic Growth

2:15 p.m. to 3:45 p.m. Concurrent Workshop Sessions 5

| **Feasibility, Planning & Purchase of Mobile Processing Unit for Poultry** Chris Sramek, High Plains Food Co-op; Viability of Small scale Aquaponics Gregory Fripp, Papillion, NE |
| **The New Farmer & The New Food Economy** Paul Stock, Tim Hassler, KU; Liz Carlisle, Stanford University |
| **The Next Farm Bill and What is At Stake?** Anna Johnson, Center for Rural Affairs |
| **Pollinator Habitat on the Farm** Farmers Nancy Vogelsberg-Busch & Lucinda Stuenkel; Mark Janzen, USDA Plant Materials Center |
| **Engaging Kansas Policymakers: The Political Landscape for Farm, Energy, Water, & School Finance** Paul Johnson, KRC; Dorothy Barnett; and Mark Tallman, Ks. Assoc. of School Boards |

3:45 p.m. Break

4 p.m. to 5:30 p.m. Concurrent Workshops, Session 6. Conference Ends at 5:30 p.m.

| **Growing Mushrooms on Local Ag Byproducts** Mark Lumpe, Lawrence, KS; **Cover Crop Based Reduced Tillage, Fall Production of Cabbage Using Roller Crimper** Tom Ruggieri, Kearney, MO |
| **Lessons Learned By Women Farmers Panel** Jackie Keller, Topeka; Judy Decker, Emporia; & Nancy Vogelsberg Busch, Home |
| **Grassroots Grazing for All Seasons** Dale Strickler, Green Cover Seed, Jamestown, KS; Alan Hubbard, Olisburg, KS; & Keith Long, Latham, KS |
| **Soil Health and Diversity on the Farm** Candy Thomas, USDA NRCS Regional Soil Health Coordinator |
| **Rural Health and Medicaid Expansion Impact on Rural Hospitals and Care and What You Can Do** Sean Gatewood, Alliance for a Healthy Kansas |
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While at Berkeley Food Institute’s Diversified Farming Institute, a research hub of internationally known faculty in agroecology, conservation biology, rural sociology, and political ecology, Carlisle worked with some of the best minds on the question of “How to Feed the Planet” and on the need to diversify food systems.

Who Will Attend: The two-day conference promises to have something for a broad spectrum of attendees—from conventional and organic farmers, to beginning and established farmers, conservationists and environmentalists, and local food advocates and community leaders.

Each day will include 15 workshop sessions ranging from the very practical how-to’s for farmers and ranchers to policy analysis and issue presentations.

Registration:
Registration is available online at KRC’s website: www.kansasruralcenter.org/conference-2016. Or you can print off a registration form and mail it in. Make checks payable to KRC, 2016 Conference, 4021 SW 10th St. #337, Topeka, Ks. 66604

Registration fees are $65 per day or $120 for entire conference. Lunch and break snacks and materials are provided.

A limited number of student scholarships are available. Contact Natalie Fullerton, conference coordinator:nfullerton@kansasruralcenter.org.

Sponsors for the 2016 conference to date include: North Central Regional SARE; Mother Earth News; The Land Institute; Kansas Forest Service; Kansas Center for Sustainable Agriculture and Alternative Crops; Kansas Department of Agriculture; Cromwell Solar; Center for Rural Affairs; Eastern Ks. Crop Improvement Association; Goods from the Woods; Kansas Agribility Project; Kansas Agricultural Mediation Services; Kansas Alliance for Wetlands and Streams; Kansas Farmers Union; Kansas Organic Producers; Kansas Wildlife Federation; Audubon of Kansas; Green Cover Seed; Kauffman Seed; and the Tallgrass Network.

For more information, contact KRC at 866-579-5469.

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KRC 2016 Farm and Food Conference
November 18-19, 2016

Registration Form– Deadline Monday, November 10, 2016

Thank you for your interest in attending our conference. Full Conference information and online registration can be found at:

Please select which days you plan to attend:
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___ $65 Conference, Saturday November 19, 2016
___ $120 Both Days Friday/Saturday Nov. 18-19, 2016
___ Total Payment Enclosed

___ Enclosed check payable to KRC. Send to: KRC Conference 4021 SW 10th St. #337 Topeka, Ks. 66604
Or register Online at http://kansasruralcenter.org/conference-2016/ and pay with credit card or paypal.

Name(s): ______________________________________________________________________________________________
Company or organization if applicable: _____________________________________________________________________
Address: ____________________________________ City: ________________________ State: ______ Zip: ____________
Phone: ____________________________________ E-mail: ______________________________________

Registration for each day covers lunch and snacks.
Special Student Rate and Scholarships Available. Contact Natalie Fullerton at nfullerton@kansasruralcenter.org

No refunds after Nov. 5, 2016.
Sustainable Farming News

Pollinators....

Continued from page 1

For the study, pollinator strips, or strips of native grasses and forbs rich in pollen and nectar sources, were planted next to 16 corn fields. Eight were located on certified organic farms planted with organic field corn, and eight were located on farms planted with corn treated with thiamethoxam or clothianidin, both of which are neonicotinoid class systemic pesticides.

Four honey bee hives were located next to each pollinator strip. After two growing seasons, plant tissue, nectar, honey and bee bread (a mixture of pollen and either nectar or honey that bees produce and eat), were sampled for the presence of clothianidin.

The study found clothianidin pesticide contamination in leaf tissue from plants in the pollinator strips, and in nectar, honey and bee bread from hives located next to the pollinator strips, at levels that impact honey bee health. Pesticide contamination was found in similar percentages of plants in pollinator strips located on seed-treated farms and those located on organic farms.

Pesticides were found at similar concentrations in leaf tissue, nectar and honey on treated-seed farms and organic farms. Bee bread was found to have a significantly lower concentration of pesticides in hives on organic farms than hives on farms that use treated seeds. Increased levels of clothianidin in bee bread were found to correspond to decreased glycogen, lipids and proteins in the honey bees.

So, what does all this mean?

“An unintended consequence of prophylactic use of neonicotinoid seed treatments may be to reduce the benefits of pollinator conservation plans.” (Mogren, Lundgren 2016)

“An unintended consequence of prophylactic use of neonicotinoid seed treatments may be to reduce the benefits of pollinator conservation plans.”

(Mogren, Lundgren 2016)

The findings indicate that neonicotinoid pesticides are pervasive in the environment in regions where corn and soy dominate the landscape and that they are migrating through the environment by means other than planting dust, possibly via soil and water. The findings also indicate that previous notions of buffer distances required to preserve organic integrity do not apply with this class of pesticide and level of use. Furthermore, the study indicates these buffer distances do not protect pollinators from pesticide exposure. The study also indicated that neonicotinoids contribute to reduced “nutritional status” in honey bees.

Although neonicotinoids are known to be highly toxic to bees when encountered directly, such as when bees encounter planting dust from neonicotinoid-coated seeds, it has been difficult to definitively tie honey bee exposure to neonicotinoids at sub-lethal levels, such as would be experienced while foraging in a prairie setting, to negative impacts on honey bee health. The Mogren/Lundgren study found that honey bee nutritional status, as determined by glycogen, lipids and protein levels, decreased with exposure to clothianidin at sub-lethal levels, indicating a correlation between sub-lethal exposure and overall honey bee health. This is an important finding, given the pervasive use of neonicotinoids and the qualities they possess which make them particularly pernicious in the environment.

Neonicotinoids are a class of systemic pesticides used primarily to treat corn, soybeans, canola, cotton, sorghum and sugar beet seeds. They are the most widely used class of pesticides in the world, and because they are applied prior to planting, each crop receives pesticide treatment regardless of whether or not there is an actual pest problem, creating an unprecedented incidence of pesticide use.

In Kansas in 2015, 4.2 million acres of corn, 3.9 million acres of soybeans, and 3.4 million acres of sorghum were planted, with a huge majority of those planted with treated seeds. In corn, with the exception of the 0.2% that is grown organically, nearly all seed is treated prior to planting. In soybeans, approximately 50% of seeds are treated, despite hard evidence that there are no benefits from the treatment.

When they made their debut, neonicotinoid-treated seeds were touted as an environmentally superior alternative to spraying pesticides, but...
Pollinators & Neonicotinoids...

Continued from page 13

this has proven not to be the case. Only 2 – 20% of the pesticide coating on the seed makes its way into the plant, leaving the vast majority of pesticide in the soil and surrounding environment. Neonicotinoids are both water soluble and highly persistent, allowing them to permeate and accumulate in the environment, and pesticide contamination is becoming widespread.

Recent, particularly alarming declines in pollinator populations correspond to the rapid rise in use of neonicotinoid pesticides, and neonicotinoids have also been implicated in the decline of a number of species of songbirds. Birds are impacted by ingesting seeds coated with neonicotinoids and because insect populations are decreasing as a result of increased pesticide use.

This brings us back to the John Muir quote about things being connected. Nature does not operate in a vacuum and neither do farmers, pollinators, pesticides, insects or birds. An action in one place causes a reaction in another place and on down the line. A ripple upstream may cause a wave downstream.

While the impacts of neonicotinoids on pollinators and birds have gotten a fair amount of attention, the impacts of neonicotinoids on human health are only starting to be explored. It might behoove us to hurry this along. In the Mogren/Lundgren study, clothianidin was found in honey from the bee hives on the organic farms as well as from the farms that utilize treated seeds, and at the same concentrations. The current rate and application practices of pesticide use are quickly creating a farm and food system in which “pesticide-free” is no longer an option. For honey bees and for ourselves, we should think carefully about how to proceed.

As for protecting honey bees and other pollinators from neonicotinoids, in the immediate term we may need to reevaluate where and when to plant pollinator strips.

As the Mogren/Lundgren report concludes, “While pollinator strips and uncropped areas have the potential to serve as buffers to pesticide exposures for bees, our results indicates that their placement within the landscape needs to be carefully considered. In all likelihood, reducing bee exposures to these pesticides will require reductions in their use across the landscape and a movement away from prophylactic applications towards more integrated pest management strategies, as has been suggested elsewhere.”

(The Mogren-Lundgren report can be viewed at: www.nature.com/articles/srep29608)

Joanna Voigt can be reached at jvoigt@kansasruralcenter.org

Feeding Ks. News

JF Co. Food Council...

Continued from page 7

The group will continue their work with a vision that in the next 5-20 years a functional, vibrant local food system will be thriving in their county, with 4-5 farmers markets, local foods in restaurants, and a community garden in every school. They envision healthy citizens who have access to a wide variety of locally grown fruits, vegetables and meats.

The Kansas Rural Center (KRC) works with partners around the state including the Kansas Alliance for Wellness (KAW) who help communities begin conversations around forming food and farm councils or task forces. For anyone interested in learning more about how to form a food policy council or task force, contact Missty Lechner with KAW at 785-228-3419.

KRC will continue to advocate for the Feeding Kansas recommendations including support for food policy councils through its newly funded project, “Community Food Solutions: Civic Agriculture for Civic Health” which will focus on cultivating civic agriculture in Kansas and mobilizing grassroots Kansans. Anyone interested in learning more about this Initiative may visit www.kansarsruralcenter.org/CFS and sign up for information and emails, or contact Program Manager Natalie Fullerton directly at nfullerton@kansasruralcenter.org or 402-310-0177.

Jean Stramel is a freelance writer, retired from the USDA NRCS who lives in Lucas, KS. She wrote this article as part of KRC’s Community Food Solutions Initiative.
State Policy News

Kansas Crossroads... Continued from page 5

In docket two, the KCC will determine how all ratepayers should fund energy conservation and energy efficiency programs. Kansas City Power & Light (KCP&L) has $60 million of energy conservation programs in Missouri for residences and small businesses. KCP&L secured legislation to give the KCC the latitude to introduce such programs in Kansas and secure the funding from all ratepayers similar to the funding of power plants.

Kansas has been 45th of the 50 states in having utility based or governmental energy conservation programs. Kansas has never fully assessed the energy efficiency savings of insulating more homes, upgrading older appliances/motors (especially air conditioners) and adopting ’state of the art’ lighting. Every dollar spent on these upgrades and not on Wyoming coal or natural gas is economic development for Kansas.

In docket three, the KCC will determine if the purchase of Westar - Kansas’ largest electric utility - by Great Plains Energy - the parent company of KCP&L - is in the best interest of Kansas ratepayers. If these utilities - with monopoly status in defined service areas - continue to expect 8-10% return to stockholders, they should be required to develop comprehensive energy efficiency plans.

Kansas is at a crossroad with the future of food, agriculture, and water. Kansas is just now assessing the opportunities to increase local food production. While a healthy diet involves five servings daily of fruits and vegetables, less than 15% of our residents meet that goal. Kansas imports 96% ($770 million a year) of the produce consumed in the state. Overall Kansans spend $7.2 billion a year on all food so a state goal of 10% local food would be $720 million kept in Kansas to circulate throughout the economy.

The average age of the Kansas farmer is 59 while only 7% of Kansas farmers are under the age of 35. Specialty/niche crops and livestock are opportunities for beginning farmers. Kansas has a Beginning Farmer Loan Program located at the Kansas Development Finance Authority that could be better promoted and expanded.

Consumer demand continues to skyrocket for local foods and natural, pasture-based meats. Kansas needs to assist with the expansion of local meat processors to meet this growing consumer demand. Kansas could work with food stamp recipients and WIC mothers to buy locally sourced foods. Kansas needs a local food coordinator to work across several agencies to enhance across the board coordination, to promote local food sourcing for state institutions, schools, medical facilities and food assistance recipients. Kansas needs to fund for research and extension specialists to serve the emerging specialty crop producer needs.

Water is a critical part of agriculture and economic development. The State Water Plan has been underfunded for several years. Now we have the state’s Water Vision Plan, created with input from hundreds of Kansans. Funding for addressing the very real water quantity and quality issues and challenges that every corner of the state faces is a part of the state’s revenue challenges. Climate change and the vagaries of drought and flood make this even more timely for debate and decision.

The crossroads are here. Kansas lawmakers will have the fundamental challenge to fix the revenue crisis and make key investments in essential infrastructures.

Kansas must rebalance revenues that are equitable and adequate to fund essential services.

Kansas must develop a balanced school funding system that provides adequate funding and flexibility between the State and local districts.

Kansas must support the independence of the judicial branch.

Kansas must expand KanCare to cover more of the uninsured and promote a wellness environment of healthy lifestyles.

Kansas must prioritize an affordable housing agenda to protect certain vulnerable populations and promote economic development statewide.

Kansas must create a balanced energy policy that expands energy efficiency, captures wasted utility dollars locally and benefits from less pollution with health care savings and water savings.

Kansas can develop a new agriculture, food and water policy that is more regional, more resilient to corporate consolidation and promotes health with local food production.

The challenge is now before the Governor and the newly elected 2017 Kansas Legislature in January.

Paul Johnson is KRC’s State Policy Analyst. He can be reached at pdjohnson@centurylink.net.
Kansas General Election Update
by Rob Gilligan

The November 8 General Election in Kansas will include all seats in the State Legislature as well as five seats on the Ks. State Board of Education. Below is a general overview of where things are currently heading into the fall and some interesting notes of changes.

The Kansas Senate has 40 districts that each represent roughly 70,500 people based on the 2010 census. The current make up of the Senate is 32 Republicans (27 conservative, 5 moderates) and eight Democrats. All 40 seats are up for election every four years. Of the 40 seats, eight incumbents did not run for re-election (including the Senate Vice-Pres.) and an additional six incumbents lost in the primary (including Senate Majority Leader). In addition, both the Chair and Vice-Chair of the Senate Education Committee will not be returning next January. This means there will be at least 35 new representatives in January 2017.

In 51 of the 125 districts there is only one major party candidate on the ballot in November. A total of 19 Democrats and 32 Republicans are all but guaranteed election, barring unforeseen circumstances. Two major party candidates will face off in the general election in 74 (59.2%) of the 125 seats. Just as in the Senate, the House will have new leadership in 2017 with the retirements of Speaker Ray Merrick and Speaker Pro Tem Peggy Mast. The House Education committee will also see at least a new vice-chair.

Now is a great time to reach out to the candidates in your districts and learn more about them. Rob Gilligan is Governmental Relations Specialist for the Ks. Association of School Boards. This article is reprinted with permission from the Kansas Association of School Boards (KASB) September 9, 2016 newsletter.

For more information, visit the KASB website at: www.kasb.org/

Local Food and Farm Task Reconvenes
by Mary Fund

The state established Local Food and Farm Task Force reconvened in late August to continue to develop recommendations for state action to promote specialty crop and local food production in state. SB 314 passed by the 2016 legislature re-established the task force which had had a sunset of Dec. 31, 2015.

The task force submitted its 2015 report to the Legislature in Jan. 2016. They had requested continuation of the task force to refine their recommendations. SB 314 continued the 2015 membership on the task force, and directed them to bring a report to the legislature in early 2017.

The task force met in August and September and will meet two more times this fall to develop their report under the following two revised directives: identify financial opportunities, technical support and training necessary to expand production and sales of locally grown agricultural products; and identify strategies and funding needs to make locally grown foods more accessible; and a new directive to identify factors affecting affordability and profitability of locally grown foods.

Although the committee may, due to the short time frame and body of information from 2015, limit presenters and new information, they did host presentations from Scott Thel- man, Lawrence farmer, on his scaled up vegetable production, and Marlin Bates Douglas County Extension agent and Helen Schnoes, Douglas Food Policy Coordinator, who both are active with the new Douglas County Food Hub.

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Art of Grazing Management...
Continued from page 8

leave half” was a good starting point, he said, there was more to it than that. Hallauer agreed with Kraft that most plants weren’t being overgrazed, they were being under-rested.

“Grazing and resting pastures allows roots to recover, sometimes as much as ten to twelve inches in two weeks at the height of the growing season,” Kraft said.

Determining the proper ratio of grazing versus forage was part of a pasture allocation exercise conducted at the Barrett Cattle Company in nearby Grantville, Kan. The registered Angus and custom A.I. operation is owned by Gene and Anna Barrett, whose family has farmed the area since 1865.

After distributing grazing sticks to each participant, Doug Spencer gave a brief overview of their basic functions. Formulas on each side of the sticks can be used to determine when grazing should be started, when livestock should be moved to another pasture, the amount of dry matter in a pasture, average pasture growth rates and other calculations.

“With this tool,” Spencer said, “you can take the measurements, make decisions and have some reasonable expectations as a result.”

Participants formed into two groups in two small paddocks about 50 feet wide. With the sticks, they were asked to determine the size of a paddock necessary to supply the animal’s forage needs versus the forage available within the paddock. For the first time, many of the participants finally got a glimmer of the science behind the art of calculating pasture allocation.

Following lunch and a presentation on soil and plant basics by Hallauer, participants carpoled to the MJ Ranch, Lawrence, owned by Melvin and Joyce Williams, and their son, Mark. The ranch, certified by the American Grassfed Association and Animal Welfare Approved, uses a rotational schedule where cattle are moved every 24 hours to neighboring paddocks each with its own watering system.

A water tank, buried four feet deep on a high point overlooking the long sweep of the pasture, provides gravity-fed flow to hydrants mounted along the fence line. At the base of the hill lies a small pond with a solar-powered pump. “It isn’t pretty, but it works,” Melvin Williams said.

It takes 30 days to cycle through the paddocks, so each paddock has an extended resting period. When cattle are relocated to an adjacent paddock, Williams follows behind them on a tractor dragging a harrow, which breaks up and spreads the manure. Livestock remain in the field year round.

An adjacent pasture is watered by a tractor tire tank fed by a pipe from upper pond. Because the dark rubber tread absorbs heat, the tank never freezes, even when the pond is frozen over, he said. A drainage pipe runs to a nearby ravine to prevent mud puddles forming at the base of the concrete slab.

Such tanks have a proven track record, said Mark Green, though concrete tanks are starting to be more common. But whatever you do, he warned, try not to use steel-belted tires. “A friend of mine didn’t listen and bought a steel-belted tire,” he said. “It took us four hours to cut two holes using a sawzall with a heavy blade. I did it once with a chainsaw, though I wouldn’t do it again.”

The importance of water in a grazing environment cannot be overemphasized, Green said. “Water is the the most limiting factor in grazing distribution,” he said. “If we can’t get water out there, we can’t graze there. You have to be able to deliver adequate amounts of quality drinking water—at the right location—to have a successful grazing system.”

Understanding the watering behavior and consumption of livestock is a first priority, he said. Cattle will come to water two to five times everyday and drink from one to four minutes at a rate of about two gallons per minute. Beef cattle and horses consume between eight to 12 gallons of water per day, but during hot weather that total can double.

Continued on page 18
Additional factors influencing water consumption include the moisture content of feed, the breed of the animal, the age of the animal and whether it’s lactating, he said.

Distance from water also plays a role. Cattle that only had to walk 600 to 800 feet to water drank 15 percent more than cattle that walked 1,000 feet to water, he said.

“When water’s closer, they drink more,” Green said. “You’ve seen it on big pastures where cattle will overgraze near a pond but undergraze the opposite side of the pasture. You’re wasting a lot of forage in that case.”

Making cattle travel farther to water has an added benefit of reducing the need for larger tanks with higher flow rates, he added.

For those producers contemplating the addition of a permanent water system, Green said it was critical to future-proof the plumbing. “How many shut-off valves do you need?” he asked. “Always one more.” Valves should be placed by every tank so that if a float needs work, that tank can be isolated from the rest of the system.

The same concept applies for hydrants. Hydrants should be placed along fences to prevent cattle from rubbing against them, and can be used to provide water to multiple paddocks.

While fixed water systems have their place in paddocks where livestock overwinter, portable water systems can be a more practical—and economical—solution for paddocks used during the growing season, Green said. Not only can they be moved around as needed, they don’t require excavation or trenching, the most expensive part of installing a grazing system.

“We have to build flexibility into grazing systems,” he said. “What if it rains, what if it doesn’t rain, what if the markets change—what if, what if, what if. We need to be able to make changes, and water is part of that.”

Following the school, Jeff Hammons, who attended with his wife, Laura, said he was impressed with the information provided by the instructors, especially the concepts behind both the science side of management-intensive grazing and its art side. The two own Synergistic Acres, Parker, Kan., raising heritage breed beef, pork and chicken.

“My wife and I manage though intensive grazing and have since the very beginning, but we never had anyone tell us how to do it like that,” he said. “We operated heavily on the art side of it, so it was nice to get the numbers to back it up. We had done some calculations before, but never with being able to discuss it with others. It was also nice to pick the brains of the extension agents. They’re a great resource.”

Tom Parker is a freelance writer from Blue Rapids, Ks. He covered the Eastern Ks. Grazing School for KRC.

When asked what the task force could recommend to help farms like his, he replied labor is a big issue. Maybe some emphasis on more vocational ag training for vegetable production. He also noted that cold storage is a problem for many growers especially as they scale up. Also reforming crop insurance to better fit specialty crops would help. He buys crop insurance, but the paperwork is complicated, and the return for a loss is not enough. He would also like to see a federal subsidy to incentivize transition to organic. The 3-year transition period without price premiums is too hard.

Bates and Schoes emphasized the value of collaboration in what Douglas County has accomplished with its local food council efforts, and the newly created Food Hub, which aggregates production from growers for marketing. Their recommendations to the task force included the need for an entity at the state level to support local food councils, and empowering local communities to make decisions.

“Local food system development is not farm development, but community development,” noted Bates.

The next meeting is October 24 at the KDA building in Manhattan, Ks. starting at 9 a.m.
### Organic Hotspots: Improving Local Communities

The Organic Trade Association (OTA) recently released research showing that organic agriculture can transform and lift rural areas and communities not just through more knowledge about healthy eating and access to organically grown food, but through real and long-lasting economic benefits. The white paper entitled, “U.S. Organic Hotspots and Their Benefits to Local Economies” was prepared by Dr. Edward Jaenicke, Penn State agricultural economist. The study finds that counties within organic hotspots—counties with high levels of organic agricultural activity—have lower poverty rates and higher median annual household incomes. The paper can be viewed and downloaded at [www.ota.com/hotspots](http://www.ota.com/hotspots).

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Join KRC at our booth at the Mother Earth News Fair in Topeka, Ks. on October 22-23, 2016! Kansas Expo Center For More information, visit: [www.motherearthnewsfair.com/kansas/](http://www.motherearthnewsfair.com/kansas/)

A hearty Thank You to all those Community Mercantile customers in Lawrence, Ks. who rounded up their purchases to support the Kansas Rural Center as the September Change Recipient at The Merc! We appreciate your Support!

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Join KRC for our Monthly Grazing Teleconference Call on the second Monday of every month 7:30 to 9 p.m. Hosted by Dale Kirkham, and joined by KSU’s Gary Kilgore and Keith Harmany. These informal discussions cover all aspects of grazing management. Join the toll-free call by entering 1-877-304-5632 and enter conference room number: 300 346 2424#

For more information, contact Dale Kirkham at 620-344-0202
Calendar

November 4-5, 2016 Women Food and Ag Network Annual Conference, Lied Lodge, Nebraska City, NE. For more information, Visit www.wfan.org

November 14-15, 2016, Governor’s Conference on Water, Manhattan, Ks. Go to: http://www.kwo.org/Projects/Governors-Conference.html

Nov. 18-19, 2016, KRC Food and Farm Conference Manhattan, Ks. Visit http://kansasruralcenter.org/conference-2016/

Please check the KRC website for updated and more detailed calendar and announcement information on the above and for additional events at: www.kansasruralcenter.org

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