Field Notes

Kerr Center for Sustainable Agriculture

Kerr Center for Sustainable Agriculture Vol. 26, #3 • Fall 2000

It's A-maze-ing!

This three-acre field maze has been dubbed "Oklahoma is A-Maze-ing," by its creators, Alan and Jonna Way, of Jamberry Farm near Madill. Through October, visitors can venture down paths designed in the shapes of the year 2000, the abbreviation OK, a cowboy boot, and a fish.

"We chose these designs because they represent where we live. We are located between Lake Murray and Lake Texoma, so fishing is a favorite pastime. The year 2000 is the turn of the century and a cowboy boot is purely

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The Kerr Center for Sustainable Agriculture offers progressive leadership and educational programs to all those interested in making farming and ranching environmentally friendly, socially equitable, and economically viable over the long term.

The Kerr Center is a non-profit foundation located on 4,000 acres near the southeastern Oklahoma town of Poteau. It was established in 1985.

PROGRAMS INCLUDE:
- Oklahoma Producer Grants
- The Stewardship Farm
- Rural Development and Public Policy
- Communications/Education
- Vero Beach Research Station
- Overstreet-Kerr Historical Farm

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Oklahoma," say the Ways. "This is our first year to build a maze. It was quite challenging to get the idea from paper to a finished field," says Alan Way.

Plan on spending about an hour to go through the maze. "This isn't a little kid's maze, this is one even the adults enjoy," says Way. Older children, in particular, love it. For the little kids, they are creating a smaller maze, to be open in October.

Though corn mazes are more traditional up north, red-tipped cane was better for their location, says Jonna Way. The maze was funded in part by a grant from the Kerr Center's producer grant program. Steve Upson and Steve Swigert of the Noble Foundation cooperated on the project. The intent of the grant was to increase farm profitability by attracting more customers to the farm where the Ways sell jams, vegetables, pumpkins and fruits seasonally.

In cooperation with the Kerr Center, Jamberry Farm will hold a **field day Tuesday, October 17, from 2-4** for those interested in walking the maze and learning more about how it was created.

Visitors can also check out the maze and the farm's nine-acre Pumpkin Patch (pumpkins after Sept 26) Monday-Saturday from 9-5, and Sundays from 1:30-4:30.

The farm is family-oriented, offering a hay ride to the pumpkin patch to find the perfect pumpkin, and a picnic area. There is also a playground with a fifteen-foot-tall slide one can climb on to see the maze before trying it. School groups are also welcome.

Admission to the maze is $3, children 5 and under free with adult admission. Pumpkin Patch is $3 per pumpkin, combination maze and pumpkin patch is $5.

Jamberry Farm is located between Ardmore and Madill. From Ardmore go 15 miles east on Hwy 70, then south on McMillan Road 4 miles. From Madill go 9 miles east on Hwy. 70 and then south on McMillan Rd. 4 miles.

For more information call 580-795-3868 or visit jamberryfarm.com on the web.

Moonlight is A-maze-ing, too!

If the maze isn't hard enough for you in the daylight, try it by moonlight. The Ways will open the maze on the weekend of the full moon, October 13 & 14, from dusk until midnight. "We do not have many lights around," says Alan Way, "so bring your flashlight and a good sense of direction!" Admission is $5.

New Reports from the Kerr Center

Heifer Management by Brian Freking. Topics: heifer selection and nutrition, early puberty, target weight concept, proper feeding, breeding, calving difficulty and bull selection. Nine pages.

The Ogallala Aquifer by Manjula Guru and James E. Horne. Topics: Physical characteristics, history of use, current situation, water quality issues, water quality in the Oklahoma and Texas panhandles, sustainable development as an alternative, barriers to adoption of sustainable practices, policy recommendations. 28 pages.

The Ogallala Aquifer– a one page fact sheet taken from the report. See pages 10-11.

Ecologically-Based Communities by W. Joe Lewis and Marion M. Jay. Coming soon.

Contact the Kerr Center at 918-647-9123 for copies or download from www.kerrcenter.com.

All for Fun, Fun for All at Farm-fest

Both the young and the young at heart will enjoy the food, farm animals and old-fashioned crafts at the 9th annual Fall Farm-Fest at the Overstreet-Kerr Historical Farm on Saturday, October 14, from 9-3.

Visitors will see how they did things in grandma's day: how to quilt, churn butter, make soap, cook in a Dutch oven, make sauerkraut, weave baskets, and craft wooden items. A blacksmith will demonstrate his trade and an herbist will conduct tours of the Farm's herb gardens. An 1800s dry goods store and a display of antique farm equipment is planned.

For the kids: a petting area with donkeys, calves and goats. Buddy, the young buffalo, will also be on hand. The Farm is part of a national effort to conserve rare breeds of livestock.

One of the highlights of the day will be the sorghum milling and cooking demonstration. Sorghum is the South's answer to maple syrup. (Cross your fingers: the cool, wet weather in early summer meant the sorghum was planted late. We hope it will be ripe in time for Farm-Fest) The caramel-colored syrup was a favorite of pioneers and is still favored by many who have experienced its rich flavor. Today, fields of sorghum cane are rare, and cooking sorghum is now largely a lost tradition, carried on by only a few wise old-timers. At the Farm-Fest the sorghum will be crushed in an old-fashioned mill, and then cooked over a wood fire until it is thick and sweet.

New this year will be a display demonstrating electricity generation before Rural Electric Cooperatives were established.

Located at the base of Short Mountain, the Overstreet-Kerr Historical Farm is a stately 1895 home complete with antiques, a picket fence, cistern, smokehouse and potato house. The Farm won the Native Beauty Award from the Oklahoma Department of Tourism in 1998.

Friday, October 13 is reserved for school groups; call 918-966-3396 or email– okhfarm@brightok.net to reserve space. The Historical Farm is located ten miles south of Sallisaw on highway 59. Admission on Saturday is $5 for adults, $3 for kids 6-18, under 6, free. This year there is a new, reduced rate of $3 per person for groups of ten or more senior citizens.

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Wanted in 2001: Innovative Grant Proposals

Farmers teaching other farmers how to be more profitable while also conserving natural resources and protecting the environment– that is the goal of the Kerr Center's Oklahoma Producer Grant program. The program brings farmers, ranchers, Extension agents, NRCS technicians, and researchers together to explore new ways of solving problems on the farm.

The program encourages producer innovation. Both research projects and demonstrations are funded. (Research projects are on-farm tests of an idea or technology. Demonstrations are on-farm presentations of a proven farming/ranching practice.) Grants are awarded on a competitive basis. Those interested must fill out a grant application. Proposals are evaluated by an independent technical committee of farmers, ranchers and agriculture professionals. Grants range from up to $3,500 for a one-year project to $7,500 for a two or three-year project. Twenty grants have been awarded since 1998.

Kerr Center specialists cannot help a farmer devise a specific grant project, but they are available to help grant recipients with problems and with planning outreach activities like field days. All projects must have a strong outreach plan for providing other producers, researchers, Extension personnel and the general public with the opportunity to learn from project results. Outreach plans may include workshops, field days, fact sheets or brochures.

Applicants are urged to link up with agriculture professionals from Extension, other agencies or non-profit organizations for assistance in analyzing and executing a project.

What kinds of projects might be eligible for a grant? A farmer who wanted to test a reduced spray program or a biological pesticide and then compare the new system to the old might have a viable project. Or a farmer who saved energy and money because of a new tillage approach might qualify. Or a farmer could experiment with growing a cover crop to stop erosion and build soil. Growing an unusual high-value crop or trying a new marketing approach could increase profitability and might be a worthwhile project. (For more ideas see the Kerr Center Fact Sheet, *72 Ways to Make Agriculture Sustainable,* available online or by mail).

Time Line 2001 Oklahoma Producer Grants

(both regular grant program and Alternative Crops special grants)

Call for Proposals Released October 23, 2000

Grant Proposals Due (Received by 5:00 p.m.) February 1, 2001

Award Notification March 1, 2001

■ ■ ■

To be eligible for funding, the project must fit into one of eight areas. These are:

1. Conserving soil and soil health
2. Conserving water and protecting its quality
3. Managing organic wastes and farm chemicals so they don't pollute
4. Selecting plants and animals adapted to the environment
5. Encouraging biodiversity on the farm
6. Managing pests with minimal environmental impact
7. Conserving energy resources
8. Increasing profitability and reducing risk

Producer Grants in Brief

- A Kerr Center producer grant funds development of a new idea or innovative practice.
- Grants are available exclusively to Oklahoma farmers and ranchers
- Grants are awarded on a competitive basis by an impartial technical committee, independent of the Kerr Center.
- The annual producer grant program (see p.4) funds grants in any of eight priority areas.
- There may also be special grants offered in addition to the annual program. This fall, special wildlife in agriculture grants are being offered. This winter, producers may apply under the regular program or apply for special grants that will fund projects demonstrating or researching alternative crops for Oklahoma (see below).
- For more information contact: Alan Ware, Director of Oklahoma Producer Grant Program Kerr Center for Sustainable Agriculture P.O. Box 588, Poteau, OK 74953 Phone (918) 647-9123 Fax (918) 647-8712 mailbox@kerrcenter.com or go to our Website: www.kerrcenter.com

Something New in 2001: Alternative Crops

The Kerr Center for Sustainable Agriculture is soliciting grant proposals from farmers across Oklahoma who are interested in testing the potential of alternative crops. This is a competitive grant program.

The goal of the program is to promote awareness of alternative crops, assess the market potential for such crops in Oklahoma, and advance the use of sustainable practices.

The program seeks to promote crop diversity in Oklahoma agriculture by funding crop- testing projects throughout Oklahoma which will explore the production and economic viability of an alternative crop.

General procedures and guidelines for the regular producer grant program also apply to this special grant program.

To apply for a grant, a producer needs to fill out a special alternative crops grant application. Grants can be funded for up to $3,500 for a one year grant and up to a total of $7,500 for a two or three year grant.

Alternative Crop Trials

This special grant program focuses on testing alternative crops in Oklahoma, and is intended to promote the growing of alternative crops not normally grown in Oklahoma.

The Kerr Center is especially interested in crops that provide an alternative to continuous wheat production or complement existing wheat production systems. The Kerr Center is also interested in alternative crops that diversify existing production systems.

Grant writers should convince the technical committee of the need for the trials. Trials could include a totally new crop to Oklahoma, a particular variety of a certain crop, or a unique or different livestock not raised in Oklahoma. Trials should be attempted on demonstration size plots. The test unit should give an adequate picture of adaptability, yield, economic data, and possibly some market acceptance.

All projects should have a sustainable agriculture emphasis. Projects should fit one or more of the characteristics described in the eight points of sustainability (see facing page).

A project in this category might include, but is not limited to, alternative crops such as fruits or vegetables not currently grown on a large scale in Oklahoma, production systems or rotations not normally used in Oklahoma, or a livestock enterprises not usually seen in Oklahoma. All projects must have an educational component to provide information to others about the project.

Producers applying for a grant should read the Alternative Crops information packet and sample application. Contact the Kerr Center or visit our website.

For ideas about alternative crops, contact ATTRA toll free at 1-800-346-9140 for free technical assistance, publications, and resources. AgVentures magazine is another source of ideas and information. For subscriptions or back issues, call 580-628-4551 or toll free 1-888-474-6397

Where Have All the Birds Gone?

Eastern meadowlarks, those cheery musicians of the fence row, are disappearing– their numbers down by half nationally since 1965, and currently down each year by another 2.5 percent. Pesticides that kill insects the birds feed upon and the clearing of prairie habitat are blamed.

Other birds are also in trouble: our state bird, the scissor-tailed flycatcher, the American kestrel and the painted bunting, have shown significant declines since the mid-60's. Other birds in decline: little blue herons, Baltimore orioles, orchard orioles, Bell's vireos, even blue jays and wood thrushes. Why? While the exact causes are not yet known, habitat loss is thought to be a major culprit.

Can Farmers Help?

Northern bobwhite quail numbers have been declining in the southern U.S. since the 1970's. Pesticides, predators, habitat modification, and hunting have all been listed as factors contributing to decreased quail numbers.

What can farmers do to reverse this trend? Quail are known to spend considerable time in and around crop fields. A North Carolina study in the early 90's found that cropped areas with field borders supported about six times more quail than areas without field borders. (From 1994 Southern Region SARE/ACE Annual Report, p. 93)

Focus of Fall Grants: Wildlife in Agriculture

This fall, the Kerr Center, in cooperation with the Oklahoma Department of Wildlife Conservation, the United States Fish and Wildlife Service, and the Oklahoma Wildlife in Agriculture Committee, is soliciting grant proposals from agricultural producers across Oklahoma who are interested in conducting wildlife habitat demonstration projects.

Projects should focus on developing or improving wildlife habitat. Grants can be funded for up to $1,500 for a three year grant.

This is a competitive grant program, with the goal of funding innovative, long term solutions that incorporate wildlife habitat within existing agricultural production systems. Any active resident landowner/producer in the state of Oklahoma is eligible to receive a grant. Projects must be developed, coordinated and conducted by farmers/ranchers.

This program provides producers with opportunities to demonstrate practices and educate others about developing and improving wildlife habitat throughout Oklahoma's diverse environment.

Educational programs should be a key component of any proposal submitted. All projects must have a strong outreach plan for providing other producers, researchers, Extension personnel, and the general public with the opportunity to learn from project results. Outreach plans may include workshops, field days, fact sheets or brochures.

To apply for this grant, a farmer/rancher must complete an application describing a project and how it will help other producers understand and adopt wildlife habitat projects. The project must fit the priority areas listed on the next page. Proposals are reviewed by a qualified technical committee and are scored on technical merit.

Farmers will be encouraged to link up with cooperators: people from state or federal agencies or nonprofit organizations, other farmers, or other specialists who will assist the grant recipient in executing the demonstration project.

Time to Be Concerned

Western bird-voiced tree frog. Redbreast sunfish. Regal fritillary butterfly. Meadow jumping mouse. These native Oklahoma species are not household names. But it is time to be concerned about them, together with more familiar wildlife such as the Texas horned lizard, the river otter, the common barn owl, and dozens of mussels, insects, fish, crustaceans, birds, and mammals.

One priority area in the Kerr Center grant program is "species of concern": species exhibiting a decline in population or habitat. The fate of these creatures is largely up to Oklahoma landowners, who control 95 per cent of the land in the state.

For lists of Oklahoma's species of special concern, rare and vulnerable plant species, and state and federal endangered and threatened species, the Oklahoma Natural Heritage Inventory web site, www.biosurvey.ou.edu is the place to go. Questions about management of species of concern can be addressed by the U.S. Fish and Wildlife Service in Tulsa at 918-581-7458 or the Oklahoma Dept. of Wildlife, 405-521-4616.

Wildlife in Agriculture: Priority Areas

All projects must fit a priority area. Projects should focus on only one priority area, but might relate to other areas.

The following is a brief guideline showing, in general, the kinds of projects that fit. Because this program focuses on innovative methods, proposals may roam outside the examples mentioned here. (Please remember that developing a proposal to fit these examples does not guarantee funding).

1. Riparian Area Management

Riparian areas are the transition zone between the upland and a body of water. These areas are critical for wildlife habitat, clean water, and reducing sedimentation into our lakes and streams. Restricting livestock grazing, or establishing buffer zones along tilled fields all increase potential wildlife habitat.

2. Forestry Management Techniques to Increase Wildlife Habitat

Forests are important to Oklahoma wildlife, especially in the eastern part of the state. Some things which improve wildlife habitat are shelter belts, reforestation, mast crop production, and agroforestry.

3. Native Grassland Establishment and Management for Wildlife

Native grassland is an important component of Oklahoma's wildlife habitat. Reestablishing native grassland or improving the management of existing native stands can increase wildlife within an existing agricultural operation.

4. Invasive Plant Management and Control

Projects should focus on management techniques which target control of invasive plant species. Invasive species may outcompete native plants and reduce the overall diversity of an ecosystem. Methods stressing non-chemical/ IPM techniques will receive priority consideration by the committee.

5. Wetland Development

Oklahoma has lost much of its wetland habitat. These areas are critical to native and migratory wildlife species. Projects with the goal of preserving or developing wetland habitat for wildlife fit this priority area.

6. Encourage Biodiversity

Encouraging biodiversity of wild plants and animals helps the farmer take advantage of possible natural controls of pests. Leaving strips uncultivated provides habitat for grassland birds. Fencing cattle from ponds and waterways protects aquatic life. Rotations of hay and grain crops maintain small game populations.

7. Species of Concern

A species of concern is any species exhibiting a decline in population or habitat. Practices involving habitat management and improvement for a species of concern fit in this category.

8. Landscaping for Wildlife

These projects focus on developing small areas strategically within the landscape to enhance the diversity of wildlife or an overall landscape strategy which increases wildlife on the farm. This may include wildflower meadows, bat houses, birdhouses, wildlife travel corridors, and landscaping that provides food year round for wildlife.

Time Line–
Wildlife in Agriculture Grants

Call for Proposals Released
September 1, 2000

Grant Proposals Due
(Received by 5:00 p.m.)
November 15, 2000

Award Notification
December 15, 2000

Call 918-647-9123 for an application or go to: www.kerrcenter.com

It Stays and Stays and Stays...

Whoa, Bubba. Before you throw that traffic ticket you just got out the window of your speeding car, think again. Besides the problems you may face in traffic court, you are adding to the trash littering Oklahoma's highways and country roads. That ticket doesn't disappear into thin air– it takes 2-4 weeks to break down (and that is quick compared to many common trash items).

A partial list:

- Rope– 3-14 months
- Wool sock– 1 year
- Painted wooden stake– 13 years
- Tin can – 100 years
- Aluminum can– 200-500 years
- Plastic six-pack ring– 450 years
- Glass bottle– undetermined

The Oklahoma Department of Transportation spends $4 million each year on trash cleanup on state highways! ***Don't lay that trash on Oklahoma!***

Healthy Land

by Maura

Let's K.O.B.!

Oklahoma has a trashy image. When corporate heads visit to assess whether Oklahoma is the place for their businesses, too often what they notice is the litter strewn along the sides of our roads and the unsightly, illegal trash dumps scattered in rural areas. Then they read about the water pollution in some of our watersheds. Finding a half-eaten barbecue sandwich on a Styrofoam plate, a dirty diaper, and a pile of beer cans along the shore of one of our lovely lakes sends an unfortunate message: too many Oklahomans do not care about keeping their own state clean.

In contrast to the litterers among us, there are many individuals, organizations and government agencies doing their part to keep our roadways trash free and our water and air clean.

Some of these folks were honored along with the Kerr Center at the tenth annual Keep Oklahoma Beautiful Summer Environmental conference on August 3-4 in Oklahoma City. Each year KOB bestows awards for environmental improvement, education and promotion, and beautification/ landscaping. Winners this year included businesses such as Phillips Petroleum, governmental entities such as the Cherokee County Board of Commissioners, educational institutions such as the Jay High School Blue Thumb Stream Team, and youth organizations such as the Hobart Trash Container Project. The Kerr Center won in the non-profit organization category. Secretary of the Environment Brian Griffin gave the Neill Cattle company the Award of Environmental Merit.

Most of the projects honored were group efforts with many people, often volunteers, putting in long hours to make their project a success. Winners were selected by out-of-state judges.

Keep Oklahoma Beautiful is a statewide non-profit organization. Each August it sponsors a conference with a different theme. This year's subject was "Living without Litter." It also sponsors the environmental excellence awards. For more information on membership, the awards, and the conference visit the KOB web site at www.keepoklahomabeautiful.com or call 405-844-6543.

Why Do They Do That???

(from a Texas survey)

Who Litters:

- Young adults under the age of 30 (litter the most).
- People who eat a lot of fast food.
- People who do not feel connected to a community.
- People with low self esteem, who feel they are at a dead-end.

One Reason They Litter:

Litterers believe someone else will clean up after them.

For more information visit:

www.keepoklahomabeautiful.com

, Clean Water

cDermott

And the Award Goes to...

The Kerr Center won a prestigious Merit Award at the annual Soil and Water Conservation Society (SWCS) conference July 9-12 in St. Louis.

SWCS recognized the Center's protection of the riparian areas (streams, ponds, rivers) on the Kerr Stewardship Farm and for educating landowners about protecting their water and soil.

Projects over the last few years have included fencing riparian areas and planting trees in these buffer strips, adding new ponds with limited access watering points for cattle, and building stabilized stream-crossing points. The projects are an integral part of the Kerr ranching operation.

On hand to receive the award was Kerr Center president Jim Horne (left). Also attending the conference was natural resources economist David Redhage, who has managed the riparian area projects. Manjula Guru, an agricultural policy analyst from the Center, presented her findings on farm bankruptcies to the conference.

The SWCS is a national organization with state and student chapters. Annually it honors individuals and organizations for their contributions to the conservation of soil, water and related natural resources, particularly on private lands. The theme of the organization is "Healthy Land, Clean Water...For Life."

Other Merit Award recipients included The Nature Conservancy in Indiana, the Santee Sioux Tribe of Nebraska, and the Mississippi and Illinois River Beautification and Restoration project in Illinois.

And the Winner is...

Kerr Center's Oklahoma Producer Grant Program received an Award of Excellence for Environmental Improvement from Keep Oklahoma Beautiful (KOB) in August. Alan Ware, director of the program (left), accepted the award. David Redhage (right) works closely with Ware on the program.

Producer grants are not only helping to keep Oklahoma clean and beautiful, but also improving the quality of life for farm families and rural residents. Seven grants have focused on improving the quality of water on Oklahoma farmland. Measures demonstrated or researched have included establishing buffer zones around ponds and streams, converting erodible crop land to grass-covered pastures, and using chicken litter as a fertilizer without causing pollution. Other grants have addressed increasing wildlife habitat, decreasing soil erosion, managing weeds without chemicals, and improving soil fertility in ways that are low-cost and good for the ecology of the farm.

Ware thanked the producers who have received grants for their efforts, as well as grant cooperators from Oklahoma State Cooperative Extension, the National Resources Conservation Service, and the Noble Foundation who have helped make the program a success.

Oklahoma Nabs Six Conservation Awards

Oklahomans were big winners this year at the SWCS conference. Oklahoma won six awards; only one other, state, Indiana, won more honors.

"It was pretty exciting to get that many awards, " says Becky Ross, president-elect of the Oklahoma chapter of the organization.

Individual award winners included Sherry Britton, Student Leader Conservation Scholarship; Mason Mungle, Honor Award; Wayne Fjeseth, Commendation Award; Larry Caldwell, Outstanding Service Award.

The Oklahoma Chapter of the SWCS captured the award for outstanding chapter in the southwest region which also includes Texas, New Mexico and Kansas.

The chapter sponsors workshops each year aimed at ag professionals and interested landowners. Topics covered in past years have been soil quality, grazing land management, and waste management. They also give awards and scholarships to high school and college agriculture students. Its next workshop is planned for the fall.

For more information on the Oklahoma chapter of the Soil and Water Conservation Society, contact Becky Ross at the Seminole County Conservation District, 405-257-5578.

KERR CENTER

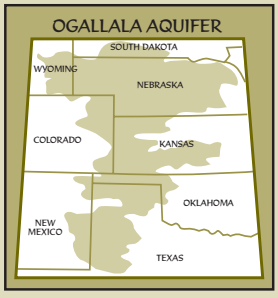
FACT SHEET

The Ogallala Aquifer

– *Manjula Guru*

The Ogallala Aquifer covers approximately 10,000 square miles from Texas to the Dakotas, and is a major source of water for the High Plains. The depth of the aquifer from the surface, and its natural thickness, vary from region to region. More than 90% of the water pumped from the Ogallala irrigates at least one fifth of all U.S. cropland. This water accounts for 30% of all groundwater used for irrigation in America.

The Ogallala is now facing declining water levels and deteriorating water quality.



Crops that benefit from the aquifer are cotton, corn, alfalfa, soybeans, and wheat. These crops provide the Midwest cattle operations with enormous amounts of feed and account for 40% of the feedlot beef output here in the U.S.

Since the advancement of agricultural irrigation in the earlier part of the 20th century, the Ogallala has made it possible so that states such as Nebraska and Kansas can produce large quantities of grain required to feed livestock.

PROBLEMS

Use of the Ogallala began at the turn of the century, and since World War II reliance on it has steadily increased. The withdrawal of this groundwater has now greatly surpassed the aquifer's rate of natural recharge.

The Ogallala is now facing declining water levels and deteriorating water quality. If the aquifer was unaffected by human activities, it would be in a state of equilibrium in which natural discharge from the aquifer would be approximately equal to natural recharge to the aquifer. However, activities such as pumpage from wells, surface-water diversions for irrigation and hydroelectric-power generation, and cultivation and grazing practices result in non-equilibrium in the aquifer. The result is that discharge does not equal recharge in many areas. This non-equilibrium results in substantial changes in groundwater levels.

Further, while once thought to be an unlimited source of pure water, the Ogallala is now increasingly threatened. While toxic waste dumps, cesspools, landfills, and septic tanks contribute their share of wastes to groundwater; agricultural chemicals contribute the most in sheer volume and affect the greatest area. Excess nitrates from fertilizer (and manure) can leach into ground water, and in high enough concentrations make such water dangerous to drink. Furthermore, some farm pesticides pollute ground water in agricultural areas.

SOLUTIONS

Our methods of farming often do not conserve water or avoid surface and groundwater pollution. What we need is a more sustainable agriculture.

The USDA definition is: An integrated system of plant and animal production practices having site-specific application that will over the long-term satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of non-renewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers

and society as a whole.

A switch to sustainable agricultural practices, or in other words, to strategies that reduce purchased inputs has the added benefit of reducing costs, increasing profits, and protecting natural resources.

Crops can be grown under both dry-land conditions or under irrigated conditions. In either case adequate soil moisture is necessary for optimal growth, as water can be detrimental to crops if the soil becomes saturated and literally suffocates roots by decreasing the oxygen in the soil. It is therefore in the best interests of the farmer to keep the right amount of water available to his plants.

One way to do this is by increasing the organic matter in order to make the soil more spongy and able to absorb water. Conservation tillage and green manure also improve soil structure, and cover crops slow down water movement. Retiring highly erodible land also conserves water quality by conserving soil.

Some classic soil conservation/water quality preservation measures include contour farming, strip cropping, contour strip cropping, fiber strips, and grass waterways. Most of these strategies are intended to slow water or trap sediment and chemicals before they reach bodies of water or wells. Also, techniques such as drip irrigation, which has been implemented at the Kerr Center to conserve water and to apply water where it is needed, reduces the evaporation rate and places the water in the plant's root zone.

Besides time-tested conservation techniques, new strategies such as integrated pest management (IPM) practices can help protect water supplies. IPM programs assess local conditions, including climate, crop characteristics, the biology of the pest species, and soil quality to determine the best method of pest control. Tactics employed include better tillage to prevent soil erosion and introduction of beneficial insects that attack harmful species.

BARRIERS TO CHANGE

It is a widely held misconception that adopting a sustainable agriculture would result in a heavy financial loss. Farms using alternative methods may have lower yields initially, but this is offset by lower costs for fertilizers and pesticides. In a drier region like the High Plains, sustainably or organically farmed soils offer the advantage of greater water-holding capacity than conventionally-farmed soils.

Farmers also worry that sustainable farming will mean a return to hard labor. Sustainable agriculture needs to be seen more clearly not as a throwback to hundred-year-old agricultural practices. Instead, it requires the farmer to be more knowledgeable about his farm's ecosystem and recognize its place in his life and society's.

Another possible barrier is that many sustainable agriculture practices (like rotational grazing) are hampered by federal programs that do not recognize them. For decades conventional farmers have received federal economic incentives that distort their profit picture. What they need instead are economic incentives to change their current unsustainable practices.

SOME POSSIBLE POLICY CHANGES

The following are some recommendations that policy makers need to adhere to and implement to ensure the future availability of the Ogallala waters:

- Support to make small, as well as moderate-size farms economically viable, because they can ensure social, economic, and environmental diversity;
- Ensure rural community and institutional viability because it provides a working social "surround" of goods and services as well as an extended lifestyle;
- Implement policies that provide incentives to farmers to adopt sustainable practices;
- Promote long-term environmental integrity together with long-term productivity by supporting policies for conserving soil and water and reducing dependence on capital intensive equipment and chemicals;
- Introduce new crops more suited to soil conditions and encourage diversity of crops, as good environmental stewardship is based on locally-specific knowledge;
- Promote individualized on-site response to climate and geography; and
- Ensure that trade and agriculture policy take into account total-cost accounting.

SOURCES:

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The Ogallala Aquifer. High Plains Underground Water Conservation District No. 1.

1990 Farm Bill (Title XVI, Subtitle A, Sec. 1603)

Kerr Center report *The Ogallala Aquifer* by Manjula Guru and James E. Horne, July 2000

It's Wasps Vs. Worms in the Corn

– *Maura McDermott*

Can a tiny parasitic wasp be as effective as an insecticide?

That's what Jesse Snyder hoped to find out when he received a producer grant from the Kerr Center in March. The grant was to demonstrate the use of a beneficial insect, the tiny wasp *Trichogramma pretiosum*, against corn earworm.

Snyder is a full-time farmer who raises peanuts, wheat, corn, soybeans, milo, pumpkins, cattle, goats and sweet corn, near Prague.

Anyone raising sweet corn has to contend with the corn earworm– the little green worm that loves to eat ripe corn as much as people do. Most growers spray to control the worms. However, Snyder says that insecticidal control of the pest can be costly, time consuming, unhealthy for pickers, and sometimes not that effective.

> "If it works, it's cost effective, and it's safe– why not use it?

On the other hand, doing nothing to control the worm can result in disappointing crops. So Snyder went looking for an alternative and learned about *Trichogramma* wasps.

These pale yellow micro-wasps (1/100 of an inch long) are the world's most widely-used, commercially-produced beneficial insects. The different species and strains of the wasp destroy the eggs of over 200 pest moth species. They have been used to control caterpillars in a wide variety of agricultural settings, from field, row, and vegetable crops to orchards and vineyards.

How the wasp gets the earworm is pretty simple, says Snyder. The corn earworm moth lays her tiny eggs on the corn silks. Enter the wasp, which lays its eggs inside the ear worm eggs. When the wasps hatch out, they destroy the worm eggs.

Snyder tried the wasps last year on a limited basis and was pleased by the results. "I got as good a control as I have had using labeled chemicals," he says. In addition it was safer for his pickers, and "a lot easier than spraying."

On June 29, Snyder held a field day and barbecue at his home to unveil the results. As visitors waited for the hamburgers and fresh sweet corn to cook, he explained how to use the wasps.

Jesse Snyder explains how to use the wasps during a field day at his home.

Beginning at the end of May, when the corn started tasseling, he released two hundred thousand wasps in his five acres of sweet corn each weekend. Each Wednesday the wasps arrived as eggs attached to a card. When the wasps began hatching out by the weekend, Snyder divided the card into small pieces and put each in the crook of a leaf on corn plants throughout the patch.

Snyder estimated that the cost of the wasps was about the same as the cost of chemicals. Due to the record rains in June, this year's control was not quite as good as last year's. Overall, Snyder says of using the wasps as pest-controllers, "If it works, it's cost effective, and it's safer– why not use it?"

Fighting Diaprepes at Vero Beach

The Kerr Center's Vero Beach Research Station (VBRS) continues to fight against the weevil *Diaprepes abbreviatus* and the fungus *Phytophthora*, which is associated with it, both damaging to citrus trees. Last October, VBRS held a field day for about sixty people, including members of the Diaprepes Task Force, a state-sponsored group looking for solutions to this pest problem. "*Diaprepes* just goes like a buzz saw through shallow roots and then you have a perfect environment for *Phytophthora*," said VBRS executive director, Bob Adair, in the December 1999 issue of *Citrus Industry* magazine.

Adair presented the Center's *Phytophthora/Diaprepes* IPM program at the field day and at the Indian River Citrus Seminar at Ft. Pierce in March. At a *Diaprepes* short course later that month, he explained the use of GIS technology for assessing tree decline.

Reprints of an article co-authored by Adair on using aerial photography and videography to inventory citrus groves is now available from VBRS.

For more information on the Center's publications on *Diaprepres* or its IPM program to combat the pest, contact VBRS at 7055 33rd St. Vero Beach, FL 32996, 561-562-3802 or email kerrvbrs@sunet.net

Do We Really Have Competition in the Market Place?

by Jim Horne, President, Kerr Center

Recently, I became associated with a group called the Organization for Competitive Markets (OCM). Fred Stokes, OCM President, called me last winter and we started talking about competition, the power of big business, the decay of farming communities, and the loss of farmers. After several conversations, I became convinced that we were on the same page. He also made the same determination about me after reading a letter I had sent to Agriculture Secretary Glickman. (See *Field Notes*, v. 25, #1, spring 1999).

After serious consideration I sent a check to OCM. The group seemed to be right on target with what we in sustainable agriculture believe. It was addressing basic issues of freedom, democracy, and social justice, and I wanted to be part of it. Composed of farmers, ranchers and other concerned citizens from across the country, the organization was established in 1998. Their mission: to reestablish fair and truly competitive markets for agricultural products; and to protect those markets from any abuse of power. They are a member-driven, democratic organization. Some have called OCM "the Marine Corps of American agriculture": small, but standing tall.

In a short while, I found myself agreeing that the Kerr Center would help sponsor a food and agriculture policy retreat with the American Farmland Trust, under the direction of OCM. The Retreat, held from April 29 to May 1, 2000 in Parkville, Missouri, was a unique meeting of perhaps the most diverse and highest quality thinkers ever convened on farm and food policy. The impetus for the retreat stemmed from the widespread dissatisfaction with the current status of agricultural policy and market structure; the increasing consumer concern about the quality of their food and how food is produced; and the belief that progress must come from an approach that considers a wider range of stakeholders than merely agribusiness.

OCM assembled top thinkers in a host of knowledge systems, or disciplines, relevant to food and agriculture. The participants in the retreat included lawyers, political scientists, community advocates, sociologists, agricultural historians and agricultural economists. What I liked about the group was that they were able to abandon the practice of using a Cartesian reductionist model of breaking the dynamic world into pieces and analyzing the resulting components in an incomplete approximation of full reality. Instead, the retreat provided a forum where the participants no longer discussed problems and solutions in the exclusive company of others of their profession. Instead, antitrust lawyers were challenged by rural sociologists who were, in turn, challenged by agricultural economists and so on.

This approach has resulted in a report which more fully captures the dynamic world of the farm and food system in multiple planes. For example, the proper balance among market forces, government actions, and civil society values is closely examined. At the same time, this report deals extensively with the proper structure of the industry at the production, processing, marketing and consumption levels. Topics range from supply and demand concerns of conventional farm policy to the needs of poor urban consumers.

Titled *A Food and Agriculture Policy for the 21st Century*, the report is now receiving a lot of press and a number of decision makers have it under study. It sets forth a valuable model for food production in the century to come, a model that ensures fairness through a level playing field, and one that will protect natural resources for future generations.

More About the Report

Edited by Michael C. Stumo, *Food and Agriculture Policy for the 21st Century* provides guidelines for a better farm and food system that focuses on four areas: antitrust policy, conventional farm programs, whole food system strategies, agricultural research policy.

Additionally, many of the seventeen participants contributed individual papers addressing cutting-edge issues of public concern.

Kerr Center president Jim Horne co-authored, with William J. Weida of the Department of Economics, Colorado College, "Agricultural Research Policy: Serving Public, Rather Than Private Interests." Horne also contributed, with Manjula Guru, "The New Biotechnological Age."

Visit the OCM website, www.competitivemarkets.com, for membership information and to download the report. Or contact OCM, P.O. Box 6486, Lincoln, NE 68506; 662-476-5568.

Don't Miss... Goat Management Field Day

Care and management of goats in northeast Oklahoma will be the subject of a field day Saturday, October 7, from 10-2 at the Kelley Ranch near Vinita. This free event is sponsored by the Kerr Center. Bring your own brown bag lunch. To reach the ranch: Take route 66 west from Vinita to White Oak. At White Oak turn right on the only road that crosses the railroad tracks, after crossing the tracks immediately turn left (White Oak school will be on the right). Head west 3 1/2 miles on road 27 to Mayes water tower, turn left, go 1/2 mile to Kelley Ranch sign. For more information call Wally Olson at 918-256-8195.

Basic Training for Entrepreneurs

Let the specialists at OSU's Food and Agricultural Products Center (FAPC) get you started in your own food business. Their popular Basic Training workshops continue through November on the 3rd Thursday of each month from 9:30-4:30. Topics covered will include: planning your business, health regulations, product and market evaluation, labeling and UPC codes, patents and trademarks, processing and co-packing, legalities and liabilities, assistance available to entrepreneurs. $30 fee includes lunch, refreshments, materials. Call 405-744- 6277 for more information.

POLICY BRIEFS

British Supermarket Chain Goes Organic

One of the largest British supermarket chains has announced plans to switch to organic food at no extra cost to consumers. The 760-store chain, Iceland, announced in June that it was buying 40 per cent of the world's organic vegetables for 9 million pounds ($13.5 million U.S.) to replace conventionally grown food in its frozen foods cases. The company has also donated more than one million pounds to encourage environmentally-friendly farming. The investment was reportedly prompted by a survey suggesting three out of four customers would prefer to buy organic foods if they were cheaper than at present. Another survey reported that more than 4/5 of the British public want pesticides banned from supermarket food.

Minnesota Gives Certification Relief

Minnesota is offering cost share of up to 2/3 of the cost (or $200, whichever is less)of organic certification to qualified applicants. This year 186 applicants were funded. Contact Minnesota Dept. of Ag, 651-215-0367

Tyson Pays for Anti-Union Activity

Tyson Foods has agreed to pay $18,000 in lost wages to three workers at their Vienna, Georgia plant. The workers had filed charges with the National Labor Relations Board charging that the company illegally intimidated and fired the workers because of their support for the United Food and Commercial Workers Union (UFCW). The Board-negotiated settlement with Tyson supports the UCSW view that the results of an election held to decide whether to go union or not, was tainted by illegal conduct by the company, including threats. The UFCW is the largest private sector union in North America with 1.4 million members in poultry, meat packing, food processing, retail food and other industries. The union currently represents Tyson workers in 20 of its 60 poultry plants.

Price Discrimination Laws Challenged

In many states, higher prices are offered for large shipments of cattle or hogs, effectively discriminating against smaller producers providing identical products. Several states in the Midwest have passed price discrimination laws. However, some of these laws have been resisted by meat packers and come under legal challenge by the American Meat Institute, an industry trade group.

EPA to Review Bt Corn, Cotton

The EPA will do a comprehensive scientific and public review of its current approval for Bt corn and cotton seeds. The reassessment is intended to assure that decisions on the renewal of these approvals "are based on the most current health and ecological data," the EPA said. EPA will publish its risk assessment for public comment, and will conduct a scientific peer review.

States Passing Country-of-Origin Statutes

Wyoming, Kansas, North and South Dakota have passed statutes

requiring all meat retailers to clearly label imported meat with the country of origin. Florida requires country of origin labeling of fresh fruits and vegetables and honey, and allows "Produced in Florida" labels. Maine requires country of origin labeling of any produce imported from countries with pesticide standards lower than the U.S. regulations.

Pesticide Residue on Imported Food

Consumers Union, the non-profit organization which publishes the magazine *Consumer Reports* has studied 1998 USDA pesticide residue tests of thousands of fruit and vegetable samples, both domestic and imported, fresh and processed. Among the findings: Dursban (brand-name for chlorpyrifos) was found in 22 foods tested by USDA from 1994-1998. The highest residues were in apples from New Zealand, grapes from Chile, tomatoes from Mexico and domestically grown soybeans. The report is available online at http://ecologic-ipm.com

France Aids Small Farms

The government of France is planning to redistribute over $320 million in farm subsidies from large farms to smaller producers. Currently, 80% of French farm aid goes to just 20% of its farmers, mostly large producers. Under the new aid standards, French minister of agriculture Jean Glavany said, "Aid will no longer be calculated in terms of quantity but quality– respect for the environment, production quality, jobs created or maintained."

Oklahoma Ag Income to be Studied

A task force of Oklahoma legislators, the Secretary of Agriculture and reps from Farm Bureau and Farmers Union will conduct a two year study of the erosion of farm income and what actions can be taken by the state of Oklahoma.

West Virginia challenges state poultry industry

The attorney general of West Virginia filed suit against Wampler Foods in 1999 alleging "unfair methods of competition," and deceptive acts or practices under the state's Consumer Credit and Protection act. The state alleges that the company forecast false earnings projections and distributed poor quality chicks to its growers, causing their contracted poultry growers to lose money on their chicken farms. For more information contact the National Contract Poultry Growers Association, 1-800-259-8100

Chefs Support Local Farms

To encourage partnerships between chefs and small growers, the Chefs Collaborative 2000 was founded in 1993. The 1500 member national organization of chefs promotes sustainable cuisine by adding it to their menu and supporting local farmers. www.chefnet.com

Price Reporting Required

Last year Congress passed a requirement for meat packers to make daily reports of the prices they pay for cattle, hogs and lamb. Previously, price reporting was voluntary, leading some producers to report only the lowest paid prices and thereby artificially depressing the market. This legislation affects packers processing 125,000 head of cattle or 100,000 hogs annually, requiring them to make twice daily reports on price, volume and terms of trade. Both open market and forward contract transactions must be reported.

Learn About Holistic Management

The Allan Savory Center for Holistic Management is looking for new members during their membership drive through October. What does this non-profit organization stand for? Community-based conservation and economic renewal. Sustainable business development. Land restoration services. Education: a network of certified educators, a bimonthly magazine, website, training programs. Those bringing in five or more new memberships receive prizes. Memberships: $30 and up. For details, contact Ann Adams, The Savory Center, 1010 Tijeras NW, Albuquerque, NM 87102; 505-842-5252, www.holisticmanagement.org

Editor's Note: Many of the news briefs above were taken from *The Family Farm Rules Bulletin*, online at The New Rules Project at www.newrules.org. The web site is a resource for those looking for innovative public policies enacted around the world that can be used to make communities vibrant and strong. Actual text of pertinent legislation is on-line, making this site an invaluable resource for policy-makers. The New Rules Project is part of the Institute for Local Self-Reliance, 1313 Fifth St. SE, Minneapolis, MN 55414, 612-379-3815

CALENDAR

SEPTEMBER 28– *Recycling: Benefits for Oklahoma's Communities and Environment* statewide workshop, Oklahoma City, info: 405-744-6081, email–lawlerm@okstate.edu Sessions: Recycling is Big Business in Oklahoma, Community Approaches to Recycling Success, New Recycling Opportunities, Smarter Purchasing Strategies, Recycling Works in Oklahoma's Institutions, State and Federal Funding Opportunities

OCTOBER 17, 2-4 P.M.– *Oklahoma is A-maze-ing!*, Field Day at Jamberry Farm (between Ardmore and Madill) info: 580-795-3868, web: jamberryfarm.com See story on page 1

NOVEMBER 17-19– *Healthy Farms-Healthy Communities: Ingredients for Success*, 16th Annual California Farm Conference, 530-888-9206, www. CaliforniaFarm Conference.com. Forty seminars, workshops, short courses and tours on specialty crops and products, crop and livestock production, sustainable farming practices, farmers markets, farm and food policy, education about family farms and food systems

DECEMBER 9, 10-4 PM– *Merry Christmas from the Farm*, Christmas Open House, Overstreet-Kerr Historical Farm. info: 966-3396, okhfarm@ brightok.net Come share some Christmas cheer at the Overstreet-Kerr Historical Farm's annual Christmas Open House. The elegant fourteen-room Victorian home will be decked in its Christmas finery. Refreshments will be available and the gift shop will be open. Admission is $3; under 6 free. Proceeds benefit the Spiro Angel Tree.

FRIDAY AND SATURDAY, JANUARY 5 & 6, 2001– Arkansas and Oklahoma Horticulture Industries Show, Springdale, AR, info: 405-744-5408, jimmotes@aol.com Educational sessions in nine areas (vegetables, fruits, herbs, Christmas trees, public gardens, sustainable agriculture, pecans, farmers markets, grape growers/ winemakers), Trade Show

JANUARY 19-21, 2001– Southern Sustainable Agriculture Working Group (SSAWG) Tenth Annual Conference and Trade Show, Chattanooga, TN, info: 225-654-2017, tonihawk@txlnet.net. SSAWG's annual conference highlights interesting, successful farmers, farms and food businesses in the South.

FEBRUARY 8, 2001– *Towards a Sustainable Future– from Awareness to Knowledge to Action*, Environmental Education Expo 2001, Tulsa, info: 405-702-5166, susie.shields@deqmail.state.ok.us. Keynote Speaker: Paul Hawken, author of *The Ecology of Commerce, Natural Capitalism: The Coming Efficiency Revolution, The Next Economy*

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