



Field Notes

Kerr Center for Sustainable Agriculture

Vol. 36, #1 • Spring 2010

Raising Goats Sustainably

—Maura McDermott

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■ PHOTO CREDITS:

Maura McDermott:
pgs. 2, 5, 6, 8, 10, 11

Wylie Harris:
pgs. 12, 13, 14, 16, 17

Since 2006, the Kerr Center has been working with OSU Extension, Langston University, and Oklahoma goat producers to answer this question: **How can goats be raised sustainably in Oklahoma?**

Two Kerr Center-sponsored events this spring will provide some answers for both current and prospective goat producers. Experts will share the approaches, tools and techniques needed to raise healthy meat goats, adapted to conditions in Oklahoma (and the southeast U.S.).

On Saturday, May 8, livestock producer and extension veterinarian Dr. David Sparks, DVM, will host a free field day on multi-species grazing (cattle and goats) from 10-4 on his farm near Porum.

Sparks will focus on sustainable goat management and the benefits of raising both goats and cattle using management intensive grazing.

Some of the topics he will cover include: non-chemical parasite management, managing kidding and newborns, composting waste and goat mortality, inexpensive working facilities, and performance testing. Attendees will have the opportunity to see the Sparks operation and walk the pastures.

Sparks received a producer grant from the Kerr Center in 2008. For the past two years, he and his wife Linda have been looking at the joint grazing of Kiko goats with summer grazed stocker yearlings.

The couple has been monitoring the

impact that multispecies grazing and rotational grazing has had on parasite populations, forage composition, and economics.

“We are now entering into a new phase where we will be looking at grazing Kiko goats with low input cows,” he explains. “We currently are using about 100 does and 40 cows.”

More people are raising goats in Oklahoma than ever before and demand for goat meat has never been higher. But as Sparks puts it, goats are not small cattle. They have unique needs. And raising goats in the wet, humid climate of Oklahoma, in a way that is profitable, presents many challenges.

One challenge is managing parasites; a related problem is resistance to dewormers, which Sparks calls the biggest threat to goat health in the next 3-5 years

“Cattle are an end-stage host for the major internal parasites of goats and have the ability to cleanse the pastures by consuming the infective larvae of sheep or goat parasites,” says Sparks. “These larvae are simply digested since they cannot develop into adults in the non-host species. Pasture rotation is also important in limiting the parasite load.”

On the Kerr Ranch near Poteau, project manager Mary Penick has established a meat goat program with Kiko and Kiko-cross meat goats on ten acres of native grass. Along with herdsman Andy Makovy and intern Cortney Loyd, Penick manages a doe

continued on page three



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 south-eastern Oklahoma town of Poteau. It was established in 1985.

For further information contact us at:
P.O. Box 588, Poteau, OK 74953
918/647-9123 phone,
918/647-8712 fax
mailto:mailbox@kerrcenter.com
www.kerrcenter.com

Overstreet-Kerr Historical Farm
918/647-8749

Visit the Kerr Center web pages for information on programs, staff, history and for extensive information on sustainable agriculture.

STAFF:

James E. Horne, PhD.,
President and CEO

Simon Billy, Stewardship Ranch Technician

Bruce Branscum, Stewardship Ranch Technician

Jessica Castillo, Office Coordinator

Jim Combs, Development Manager,
Overstreet-Kerr Historical Farm

Wylie Harris,
Contract Communications Specialist

George Kuepper,
Sustainable Agriculture Specialist

Andy Makovy,
Ranch Herdsman/Technician

Maura McDermott,
Communications Director

Lena Moore, Administrative Assistant

Mary Penick,
Pineywoods Cattle/Goat Projects Manager

David Redhage, Director, Southern SARE PDP
Program, Natural Resources Economist

Liz Speake, Business Manager

Doug Walton, Community Foods Coordinator

Melanie Zoeller, Executive
Administrative Assistant

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Editor: Maura McDermott

Assistant Editor: Wylie Harris

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KOB Honors Kerr Center President

Citing his years of leadership in focusing "the world's attention on sustainable agriculture," Keep Oklahoma Beautiful (KOB) honored Kerr Center president Dr. James E. Horne with its Lifetime Achievement award on November 17th at the Skirvin Hilton Hotel in Oklahoma City.



Jim Horne

Lifetime Achievement recipients are chosen by the KOB board of directors "from among those Oklahomans who have shown a strong commitment to improving, preserving, beautifying and sustaining Oklahoma's environment."

"Dr. Horne has an extraordinary passion for transforming conventional agriculture with daring innovation, creativity and rock solid research," said the group. "He continues to find ways to incorporate sustainable practices into the farming industry."

In its commendation, Keep Oklahoma Beautiful also said Horne is "known for championing the ordinary hard working farmer who is too often forgotten."

Horne said he would accept the award on behalf of the Kerr Center, and he thanked center staff and trustees for their work and support.

The lifetime achievement award is given "to a person for a body of work spanning at least 25 years, showing outstanding achievement in leadership and environmental stewardship through efforts producing obvious improvements and preservation of Oklahoma's environment."

Horne received the award during KOB's 19th annual Environmental Excellence Awards dinner. It was one of twenty awards given to Oklahoma communities, businesses and individuals for efforts as wide ranging as recycling to planting trees to monitoring water for pollutants.

For more information on KOB's community programs to improve Oklahoma's environment visit keepoklahomabeautiful.com or call them in Oklahoma City at 405.286.9141.

The Great American Cleanup™

in Oklahoma will start March 1 and end
May 31, 2010. Registered participants receive

free supplies compliments of the national
sponsors for Keep America Beautiful's Great American Cleanup™ - and
groups are eligible to compete for prizes. For more information visit
www.keepoklahomabeautiful.com/great-american-cleanup



herd and the annual “buck test.”

One goal of the program is to identify meat goats with the genetics that enable them to perform well on pasture. The goats are tested regularly for parasite resistance using FAMACHA scoring and fecal egg counts.

Why and how to perform these tests will be the subject of the “Le Flore County Goat Parasite Workshop” on Saturday, June 5, from 9-3. The Kerr Center will host at the center headquarters. The Oklahoma Cooperative Extension Service is co-sponsor.

The morning will be devoted to learning about internal parasites that afflict goats and the problem of resistance to dewormers. Dr. Steve Hart from Langston University’s American Institute for Goat Research will talk about worm biology and ways to effectively manage parasites without regular deworming.

After lunch attendees will receive hands-on training in the FAMACHA [eye (lid) color scoring] test and fecal egg counts.

These two simple, yet important techniques can reveal crucial information about the health of the goat and help goat producers manage their herds sustainably.

2010 Oklahoma Forage-Based Buck Test for Meat Goats

The Kerr Center is again teaming up with the OSU Cooperative Extension Service to conduct the 2010 test Oklahoma Forage-Based Buck Test (formerly called the Oklahoma Commercial Meat Goat Performance Test). It will be the fourth year for the test.

Meat goats are booming in Oklahoma agriculture, and it’s important to know which lines perform best on pasture. The forage performance test helps answer that question.

Goat producers wishing to test their bucks’ performance on forage are invited to enter bucks in the test, which will run from mid-July until the end of October.

Fee is \$120 per buck, and nominations are due by June 11, 2010.

For complete information on this year’s test, and the entry form, visit the Kerr Center website at www.kerrcenter.com/stewardship/goats.html or call the center. Reports on the 2007 and 2008 buck tests are also online there or available by calling the Kerr Center. The 2009 Report will be online later this year. Those interested can follow progress on the 2010 test via the online test blog at www.kerrosbucktest.blogspot.com.

For more information contact Mary Penick by calling the Kerr Center or email mpenick@kerrcenter.com.



Multispecies Grazing Field Day

MAY 8, 10-4

Preregistration required. Deadline: May 4. Space is limited. Free, lunch will be provided. Held rain or shine; bring lawn chair. Boots are advised for pasture walk.

Directions to the Sparks Farm:

From I-40: Take the Ross Road exit (exit is just west of the Muskogee turnpike exit). Go south 4-5 miles to Road 111. Go west 1 1/4 miles. Look for white house with white pipe fence just after low water crossing.

Le Flore County Goat Parasite Workshop

JUNE 5, 9-3

Preregistration required.

Deadline: June 2. Space is limited.

\$10 per person, covers cost of lunch.

Payable the day of the event. Held rain or shine.

Directions: The Kerr Center is located about five miles south of Poteau on highway 271. Look for signs or check website for a map.

Register for either event by calling 918.647.9123 or by emailing mailbox@kerrcenter.com.

2009 Commercial Meat Goat (Buck) Forage Test Results

Fifty-eight goat bucks from 14 farms in 6 different states competed in the 2009 test. Overall, the bucks gained an average of 0.07 pounds per day of the test; champions gained weight more than twice as fast. The scoring system used to rank the bucks included measures of parasite resistance, including fecal egg counts and FAMACHA (eyelid color test) scores.

GRAND CHAMPION

Breed: Kiko

Average Daily Gain: 0.25 lb.

Owner: Linda Sparks, Goat Hill Kikos, Porum, OK

RESERVE GRAND CHAMPION

Breed: Kiko

Average Daily Gain: 0.15 lb.

Owner: Duff & Laura Sandness, Double S Livestock, Kincaid, KS

1ST PLACE ENDING FECAL EGG COUNT

Breed: Kiko

Ending FEC: 50

Owner: Wes Pinneo, B Bar W Kikos, Kincaid, KS

TOP HERDSMAN BY AVERAGE DAILY GAIN

Linda Sparks, Goat Hill Kikos, Porum, Oklahoma (average of .15lbs/day)

TOP HERDSMAN BY FECAL EGG COUNT

Craig Adams, Adams Family Kikos, Litchfield, IL (FEC 1400 average)

Something Old, Something New: Heirloom Vegetable Trials and the Kerr Center Horticulture Program

– George Kuepper

The Kerr Center's efforts at preserving crop and livestock genetic diversity often give its pastures and plots an old-timey look, populated as they are by breeds and varieties popular a century or more ago.

Looks can be deceiving. The Kerr Center works with such "outdated" materials in order to retain its place on the cutting edge of sustainable agriculture.

"Heirloom" or heritage crop varieties are usually old cultivars, no longer in wide use by large-scale commercial growers. There are several reasons for the Kerr Center's interest in heritage varieties.

Preserving and re-evaluating heirloom varieties go to the heart of the fifth principle of sustainability: selecting plants and animals adapted to the environment.

In addition to providing a valuable genetic reservoir for plant breeders, many heirlooms also perform well in the field. They often provide profitable production and marketing niches for growers; home gardeners are showing increased interest as well.

Furthermore, the ability to save and re-plant seed (as can be done with non-hybrid, non-genetically engineered heirlooms) makes growers less dependent on the increasingly consolidated commercial seed industry, fostering food security.

Each year, the Kerr Center's heirloom variety demonstration trials focus on different crops. In 2008, okra and sweet sorghum took a turn; in 2009, tomatoes and summer squash went "on trial."

SQUASH TRIAL

All squash belong to the cucurbit family (*Cucurbitaceae*) – a large group that also includes melons, gourds, cucumbers, pumpkins, and chayote. Within the cucurbit family, the genus *Cucurbita* contains all of the squash and pumpkins.

Cucurbita is subdivided into five species. The most common squash, pumpkins, and decorative gourds grown in the U.S. belong to four of these species: *Cucurbita pepo*, *C. moschata*, *C. maxima*, and *C. mixta*. Most summer squash are *C. pepo*.

Summary of the 2009 Squash Trials

VARIETY	TYPE	RELATIVE YIELD	1ST HARVEST
ZUCCHINI LUNGO BLANCO	Bush	High	15-Jun
ZUCCHINI DARK GREEN	Bush	Medium	15-Jun
ZUCCHINI GOLDEN	Bush	Low	15-Jun
STRAIGHTNECK	Bush	High	15-Jun
ZUCCHINI, GREY	Bush	Medium	15-Jun
ZUCCHINI BLACK BEAUTY	Bush	Medium	17-Jun
MAYERAS	Trailing	V.V. High	17-Jun
YELLOW SCALLOP	Bush	Low	19-Jun
EARLY CROOKNECK	Bush	Low	19-Jun
ZUCCHINO RAMPICANTE	Trailing	V. High	19-Jun
MANDAN	Trailing	V.V. High	19-Jun
COCOZELLE ITALIAN	Bush	Medium	22-Jun
KAMO KAMO	Trailing	High	26-Jun
TRAILING GREEN MARROW	Trailing	V. High	29-Jun

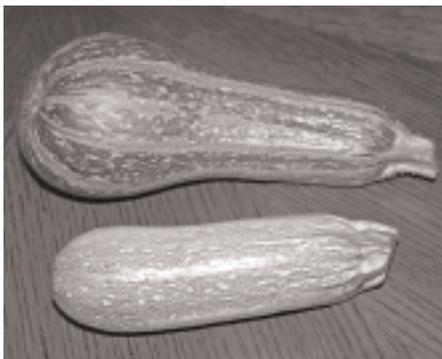
Summer squash should be of particular interest to both commercial and non-commercial growers. A Rutgers University survey of farmers' markets found that both zucchini and squash of all kinds were among the top ten consumer vegetable purchases. A 2009 survey conducted by the National Gardening Association found that roughly one-third of gardeners grow summer squash, making it the sixth most popular homegrown vegetable in the country.

One of the most interesting trial results was the great variation in summer squash fruit. Supermarkets rarely sell anything but a few popular forms of summer squash, such as green zucchini and yellow straightneck. There is much more variation, but investigation of heirloom varieties is required to find it.

All of the varieties tested yielded well, though some clearly produced much more fruit. All of the trailing varieties produced more fruit than even the best-performing bush varieties.

As experienced gardeners know, though, one can easily be overwhelmed with summer squash, and total yield may not be nearly as important as taste, marketability, or other characteristics.

Descriptions of a sampling of individual varieties follow. For descriptions of all varieties in the trial, as well as complete details of trial methods and results, see the full report online at www.kerrcenter.com.



TRAILING GREEN MARROW SQUASH

Mandan

The Sand Hill Preservation Center catalog describes the fruit as small, round, and flattened - a “Native American type,” with average quality but great insect tolerance. It exhibits a variety of green, orange and cream colors - very unconventional for a summer squash. Mandan was one of the best producers in the trial. Writer Amy Goldman describes two strains of Mandan, which she recommends more as a decoration than as an eating-quality squash. Grown by the Mandan tribe and stored like winter squash, it is perhaps one of the oldest kinds of squash.

Trailing Green Marrow

Also called Long Green Trailing Vegetable Marrow, this was the last variety in the trial to produce. Fruit are large and striped; they remain edible for a long time. It was highly productive.



ZUCCHINO RAMPICANTE SQUASH

Zucchini Rampicante

Also called Zucca D’Albenga, this squash belongs to the *C. moschata* species. The fruit is long and slender with a flat bulb at the bottom; it can grow quite large. It is a good tasting summer squash, but can be stored and used as a winter squash, also.

TOMATO TRIAL

Tomatoes belong to the nightshade family (Solanaceae), widely known for plants containing alkaloids. Among the most notorious are mandrake, belladonna (deadly nightshade), Jimson weed, and nicotiana (tobacco).

While the nightshade family has many toxic members, it is also replete with food plants: peppers, Irish potatoes, and eggplant, in addition to tomatoes.

Even these “friendly” plants can contain poisonous alkaloids. Parts of many solanaceous food plants are considered inedible because they are poisonous. For example, spoiled or “green” potatoes may contain dangerous levels of the alkaloid solanine.

The capsaicin in hot peppers is another example of a nightshade alkaloid, but one that humans tolerate and even enjoy; it even has well-known medical benefits. Still, at high concentrations, capsaicin is a powerful irritant, forming the active ingredient in non-lethal pepper spray.

A Rutgers University survey of farmers markets found that tomatoes were second on the list of vegetables most frequently purchased – barely edged out of the number one slot by sweet corn. A 2009 survey, conducted by the

National Gardening Association, found that 86% of gardeners grow tomatoes, making the tomato the most popular homegrown vegetable in America.

While insect pests reduced the marketability of some tomatoes in the trial, radial cracking and splitting were much greater problems. The high incidence of cracking and splitting was a consequence of the rainy growing season and heirloom genetics – few of the old heirlooms have been selected for crack resistance.

Mild cracking is not a great deterrent to farmers’ market and roadside sales. Severe cracking, however, is unappealing and can affect shelf life. To counterbalance cracking problems in the trial, fruit was often harvested slightly early, rather than waiting for “vine ripeness.”

From a commercial perspective, the best performing varieties were not only those with high yields, but also those with high marketing percentages (reduced cracking and insect damage). The heirlooms that did a good job of meeting these criteria in the trial were Ozark Pink VF, Principe Borghese, Beefsteak, Eva Purple Ball, Arkansas Traveler, and Old Virginia.

These criteria are somewhat less critical for home gar-

deners – especially those pursuing new taste experiences or novelty. Several of the varieties in the trial might fill that need.

Descriptions of a sampling of individual varieties follow. For descriptions of all varieties in the trial, as well as complete details of trial methods and results, see the full report online at www.kerrcenter.com.



Beefsteak

The term “beefsteak” is commonly used to describe a type of tomato, as opposed to a specific variety. Beefsteak varieties typically produce large, somewhat flattened fruits

with thick, solid flesh and few, small seed cavities.

According to the Baker Creek catalog, the variety known as Beefsteak is a popular, standard variety, with rich, “old time” tomato taste.

Mortgage Lifter

There are numerous lines of mortgage lifter varieties. The beefsteak-type fruits are mild tasting, large, and



George Kuepper hefts a Mortgage Lifter tomato

smooth, often weighing in at a pound. On the down side, they crack and catface readily. Stems, too, are often hard to remove. These characteristics are apparently shared by all the mortgage lifter varieties. Mortgage Lifter has an indeterminate growth habit and plants tend to grow large.

Summary of the 2009 Tomato Trials

VARIETY	COLOR	BEST USE	RELATIVE YIELD	MARKETABILITY %	1ST HARVEST
MARMANDE	Red	Fresh Mkt.	Low	Medium	26-Jun
BRANDYWINE	Pink	Fresh Mkt.	Low	Poor	1-Jul
BLACK FROM TULA	Purple	Fresh Mkt.	Medium	Medium	1-Jul
OZARK PINK VF	Pink	Fresh Mkt.	V. High	Good	1-Jul
PRINCIPE BORGHESE	Red Roma	Drying/Canning	High	Good	1-Jul
BEEFSTEAK	Red	Fresh Mkt.	High	Good	1-Jul
EVA PURPLE BALL	Pink-Purple	Multi-purpose	High	Good	3-Jul
MORTGAGE LIFTER	Pink	Fresh Mkt.	High	Medium	6-Jul
CHEROKEE CHOCOLATE	Purple	Fresh Mkt.	Medium	Medium	6-Jul
HOMESTEAD	Red	Fresh Mkt.	Medium	Good	6-Jul
ARKANSAS TRAVELER	Pink	Fresh Mkt.	High	Good	8-Jul
OLD VIRGINIA	Red	Fresh Mkt.	High	Good	10-Jul
T.C. JONES	Yellow	Fresh Mkt.	Medium	Medium	10-Jul
RUTGERS	Red	Canning/Fresh Mkt.	V. Low	Good	13-Jul
BIG MONTH	Red Roma	Canning/Fresh Mkt.	Low	Good	13-Jul
CHEROKEE PURPLE	Pink-Purple	Fresh Mkt.	Medium	Poor	16-Jul
LONG KEEPER	Red	Winter Fresh Storage	*	*	*

* No harvest; see “More about the Varieties”



T.C. Jones

T.C. Jones is a beefsteak fruit type that originated from Kentucky. It was the only yellow-fruited variety in the trial and it proved a favorite for its taste. Its growth habit is indeterminate and the vines grow quite large.

Cannon Horticulture Project

The Kerr Center's heirloom variety trials take place on the Cannon Horticulture Project, a 5-acre demonstration site on the Stewardship Ranch that began transition to certified organic status in 2008.

The variety trials are only a small part of the Cannon Horticulture Project's overall objectives, which are to:

- provide demonstrations and practical research results on small-scale sustainable organic food production, and
- serve as a teaching laboratory for student interns and others interested in learning organic methods.

The Cannon Horticulture Project demonstrates most of these the Kerr Center's ten steps to sustainability, but none more than the first: "to conserve and create healthy soil." Today's organic agriculture evolved from "humus farming" – a sustainable system based on building a diverse and vibrant soil food web using natural principles and materials.

One of the core practices of organic/humus farming is crop rotation – the sequenced planting of crops so that plants of the same family do not follow each other year after year. Crop rotation is one of the most important elements of a well-planned organic system. Good rotations address fertility, weed, insect pest, and disease management, as well as diversifying crops for nutrition and income.

At the Cannon site, demonstrations rotate among three plots, ensuring that every plot will "rest" one or two out of every three years under season-long, green manure, cover crops. Cover crops may include sorghum-sudan grass, purple hull peas, or buckwheat during the warm season, and rye, vetch, clover, rape, and/or field peas in winter.

Since the Cannon Horticulture Site is being developed from improved pastureland, crop rotation, and the selection of cover crops, play a vital role in suppressing bermudagrass. Sorghum-sudangrass has been an especially effective

combination in smothering and largely eliminating this warm-season grass before the next season's vegetable crops are established.

Cover crops like sorghum-sudangrass also produce abundant biomass which, when incorporated, feeds the soil food web and helps sustain organic matter. Leguminous cover crops, like peas, clovers, and vetch, are also used to increase the levels of soil nitrogen for subsequent vegetable plantings.

Cover crops are also selected, in part, for their ability to draw and support populations of beneficial insects, including both pollinators and a host of species that parasitize or prey on vegetable pests. We have begun interseeding some of these cover crops, such as buckwheat, between vegetable rows, where they also help by smothering weeds.

Completing the Cycle: Composting, Fall Gardening, and Internships

To supplement cover crops' soil fertility contributions, the Cannon Project uses compost. Compost is not only a waste management tool, it is the cornerstone fertilizer for many organic farms and gardens. Compared to raw manure, compost is more stable, better able to build soil organic content, and less likely to carry disease pathogens and viable weed seeds.

The Kerr Center makes its own compost, both on small-farm and garden scale. The small farm production site is located on the Kerr Stewardship Ranch, less than a mile from the Cannon Horticulture site. Poultry litter from local farms is used, as well as sawdust from area sawmills.

The Cannon site features garden-scale composting, using waste resources from the ranch including goat, cattle, and chicken manure, garden debris, old hay, and kitchen scraps. Organically acceptable supplements may also be added on occasion to make especially high quality compost that is used to make compost tea for pest control and soil improvement.

Most gardeners in southeastern Oklahoma are accustomed to gardening in the spring and summer. Very few take advantage of the fall season. In most years, one can grow an abundance of fresh vegetables well into the winter.

Because most of the necessary soil preparation, irrigation, and pest and weed management begin in the summer months, fall gardening is an excellent learning activity for Kerr Center's summer interns.

Kerr Center Student Internships

Each year, Kerr Center offers a limited number of opportunities for students to participate in our horticulture, livestock, and educational programs as interns. Details are available online via both the Kerr Center (www.kerrcenter.com/stewardship/interns.html) and ATTRA (attra.ncat.org/attra-pub/internships/). Specific questions should be directed to George Kuepper at 918.647.9123 or gkuepper@kerrcenter.com



Salad Days

—Maura McDermott

As a child who grew up eating only iceberg lettuce from the grocery store, I was pleasantly surprised by my first bowl of fresh *Buttercrunch* lettuce from the garden. A butterhead (or Boston) type lettuce, it was melt-in-your-mouth tender, and actually had flavor. Who knew?

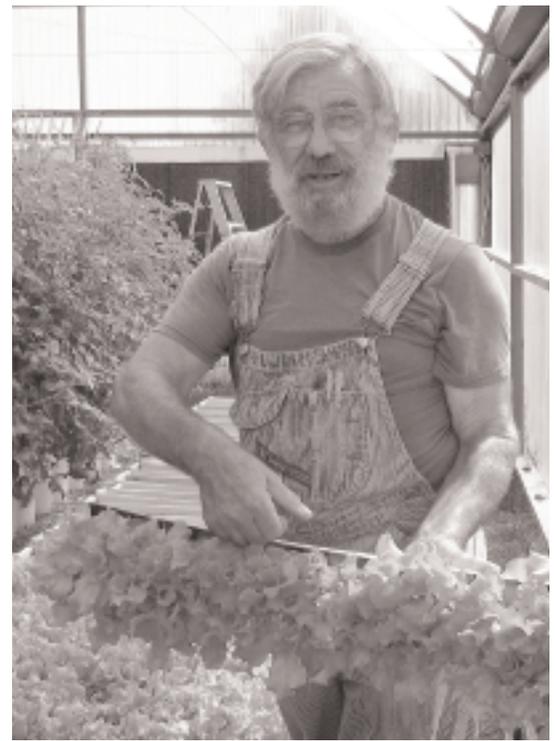
This was about thirty years ago. After many years of growing *Buttercrunch* I stumbled upon a catalog of “heirloom” or old-fashioned varieties of vegetables, which listed a few dozen varieties of lettuce, with names like *Bronze Arrowhead*, *Red Velvet* and *Webb’s Wonderful*. The photos and descriptions were irresistible. I ordered several packets, planted in early spring and after a month began picking leaves.

Those were my salad days. I began making salads that can only be described as beautiful. A typical concoction included an oak-leaf lettuce, a crisphead, a red-spotted romaine, and assorted leaves of chartreuse and magenta—crinkled, frilly or wrapped in tight rosettes.

Nothing beats fresh-from-the-garden lettuce, for tenderness, flavor and show. I plant it spring and fall, and it is a high point each season. While days to harvest range from 45 to 65 days, one does not have to wait for the plant to be full-grown to begin harvesting; I start picking the outer leaves as soon as they get a decent size.

For those who want to hold out for a big beautiful head of lettuce, plant early. Lettuce loves cool weather. Apparently, longer days, hot weather and dry conditions or some combination of these cause lettuce to bolt (put up a flower/seed stalk) and the leaves become bitter-tasting.

Because in Oklahoma hot weather can come pretty early, it is a challenge to grow



McClain County farmer Robert Stelle

lettuce. But for several weeks at the beginning and end of the growing season, and in cold frames to extend the season, it can be done. And it’s worth the trouble.

These days people don’t look askance when served leaf lettuces and salad mixes of young lettuce and other greens. And gardeners and market farmers can find a broad variety of lettuces as well as salad mixes in traditional seed catalogs, as well as in heirloom seed catalogs.

I look for “slow-bolting” varieties, but confess I have yet to find one I thought was truly slow to bolt, though some seem to “hold” a little better than others. It is worth experimenting to see which works best for you. I try a new variety every year.

Enterprising farmers and gardeners can save the seed from non-hybrid lettuce varieties to plant in the next season. In south Texas, there is a semi-legendary variety of lettuce called “Crawford,” adapted to the hot and dry of the Lone Star State. Perhaps someday an Okie gardener will come up with a lettuce that is big and pretty and thrives in red clay dirt under clear blue skies.

Oklahoma Red has a nice ring, don’t you think?

Lettuce shows up early at Oklahoma farmers’ markets, and they are good places to get your first taste of spring. Go to www.kerrcenter.com/buy-fresh.htm or www.okgrown.com/markets/

Farm Made: A Guide to On-Farm Processing for Organic Producers has a chapter on fresh salad greens. Available on the Kerr Center website or by calling the center.

To view color photos of Maura’s lettuce and her favorite varieties visit www.kerrcenter.com and click on blogs. Tell us your experiences growing lettuce, (heirloom and otherwise)! Do you have a favorite variety?

Call your local OSU Extension office for fact sheets:

- HLA 6032 Vegetable Varieties for the Home Garden in Oklahoma
- HLA 6004 Oklahoma Garden Planning Guide
- HLA 6009 Fall Gardening

Seeds for Success: Sustainable Grazing Conference at Wilburton April 30 – May 1

On April 30 – May 1, Eastern Oklahoma State College will host trailblazing ranchers Walt Davis, Wes Downing, and Kit Pharo at the second annual “Seeds for Success” grazing conference in Wilburton.

Walt Davis switched his southeastern Oklahoma ranch from high-input to ecologically based management in the early 1970s. The ranch has used no purchased fertilizer, and few pesticides, in the past 20 years, yet soil productivity continues to increase.

A past president of Holistic Resource Management of both Oklahoma and Texas, Davis will speak on “Hard Time Economics and Grazing Management.”

Kit Pharo has taken his eastern Colorado ranch through a similar transformation from high-production to high-profit management. With his wife Deanna and son Tyson, he now sells Black and Red Angus bulls with genetics that fit low-input production.

Pharo also publishes a widely-read bimonthly newsletter discussing his management principles of rotational grazing, calving in sync with nature, and raising cattle that can survive on the ranch’s own resources. He will discuss cattle genetics in relation to these principles.

Wes Downing raises all-natural pastured beef, pork, and poultry in northeastern Oklahoma. His talk will detail Downing Family Farms’ experiences with marketing these products, both direct to customers and through retail outlets.

In addition to these speakers, the conference will feature two breakout sessions. One will cover the basics of electric fencing, while the other will offer a tour of EOSC’s Meats Processing Lab.

Conference registration costs \$200 and includes meals and an electronic copy of the proceedings. RSVP with a \$50 deposit by April 16 to Troy Walker, Eastern Oklahoma State College, 1301 West Main, Wilburton, OK 74578.

For more information or to register, call Walker at 918.448.7300. Space is limited, so early registration is encouraged.

The “Seeds for Success” conference is sponsored by Eastern Oklahoma State College and the Kerr Center.

Proceeds from the “Seeds for Success” conference are used to incorporate new ideas, extend educational opportunities for Eastern students, and improve management practices on the Eastern Oklahoma State College Learning Farm.

SEEDS FOR SUCCESS: SUSTAINABLE GRAZING CONFERENCE April 30 - May 1, 2010 REGISTRATION FORM

NAME

ADDRESS

CITY

STATE:

ZIP:

PHONE

EMAIL

TOTAL ENCLOSED

Conference registration costs \$200 and includes meals and an electronic copy of the proceedings.

Mail registration form and \$50 deposit by April 16 to:

Troy Walker
Eastern Oklahoma State College
1301 West Main
Wilburton, OK 74578

For more information call Walker at 918.448.7300. Space is limited, so early registration is encouraged.

Mediation: a Cost Effective Option in a Tight Economy

—Andrea Braeutigam and Alan Ware, Oklahoma Agricultural Mediation Program

The economic crisis in the United States over the past year has been a challenge for every American family. Agricultural producers are among the hardest hit by the crisis.

The challenges of being in agricultural production in Oklahoma began many years before the present crisis. Falling market prices and increased input costs have taken most of the profit out of agricultural production.

These factors, combined with increased land and equipment cost, a shrinking credit market and loss of off-farm income have made it difficult for producers to stay profitable and therefore able to stay on the farm.

Every business person knows that disputes are costly in terms of time, money and damaged relationships. Producers lose out when they have no other recourse than to turn to the court to resolve conflicts that arise with agencies, other producers and customers.

Free mediation is available to agricultural producers, ag lenders, farm and ranch businesses and families throughout Oklahoma.

To contact the Oklahoma Agricultural Mediation Program visit www.mediation.okstate.edu or call toll free 1.800.248.5465.

However, there is a cost effective, quick and business friendly way to resolve matters through Oklahoma's free mediation service, Oklahoma Agriculture Mediation Program (OAMP). Mediation is a cost effective way to do business in today's economy. Mediation is a process in which two parties come together in a confidential and non-confrontational setting to work through a disagreement with the assistance of a neutral mediator. There are many advantages to using mediation to resolve disputes.

One is that OAMP mediation is free. In lengthy litigation or appeal, court costs and attorney fees can add up quickly. Although attorneys are always welcome and legal advice can be useful to people in mediation, oftentimes parties can resolve their differences without their attorney present.

Mediation gets parties to the table sooner—often, within



Alan Ware is Outreach Specialist for OAMP. For over twenty years, Alan worked for the Kerr Center in many capacities, including director of the Producer Grants Program.

30 days the parties meet for 2 to 4 hours and reach a solution. This short time frame reduces stress and allows the producer to focus more energy on the farming/ranching operation.

Another plus: mediation can sometimes bring to light new options for improving an operation's cash flow that a producer has not thought of.

An important difference between litigation and mediation is that while litigation leaves the outcome in the hands of a judge or jury, the parties involved themselves control the decisions that are made in mediation. Consequently, people are often more satisfied with the outcome and are more likely to uphold the settlement terms.

In mediation, parties talk freely about their differences in a respectful, informal environment. The mediator assists them in working through what is really important to them and helps them deal effectively with any miscommunications that may have contributed to the dispute.

Perhaps Abraham Lincoln summed it up best:

“Discourage litigation. Persuade your neighbors to compromise whenever you can. Point out to them how the nominal winner is often a real loser – in fees, expenses, and waste of time. As a peacemaker the lawyer has a superior opportunity of being a good man. There will still be business enough.”



Growers Learn How to Build a Hoop House Near Stratford

About forty people braved cool temperatures one Saturday afternoon last October to learn how to build a low-cost hoop house at Peach Crest Farm near Stratford.

The free event was sponsored by the Kerr Center for Sustainable Agriculture and Peach Crest Farm.

A hoop house is a kind of unheated greenhouse that is gaining popularity because it costs less to operate than a conventional, heated greenhouse.

Hoop houses are used successfully as far north as Maine.

Tod Hanley of Norman led participants step by step through the process of building the hoop house.

Workshop participants took turns bending the large hoops that hold up the plastic, pounding stakes, securing the hoops in the ground, and other building tasks. They then joined together to throw the plastic over the hoops and secure it with ropes.

Hanley's hoop house has several special features that make it inexpensive and easy to put up.

One way to save is by buying straight tubing and bending it rather than buying readymade hoops. Hanley designed and welded his own bender that easily shapes the hoops.

The user-friendly design also makes

the hoop house easy to vent by simply pushing up the plastic. The structure holds up well in the Oklahoma wind, too, says Hanley.

Tod and his wife Jamie have built a hoop house by themselves in an afternoon. They raise salad greens in their hoop houses during the winter.

The Hanleys received a producer grant from the Kerr Center in 2007 to experiment with various kinds of plastic in their hoop house.

This latest workshop was the last of three free events they have taught in the last year: the first on their small farm, Trebuchet Gardens, near Norman, and the second in Poteau.

Steve Upson of the Noble Foundation presented information on hoop house end wall construction. Upson has done extensive work with hoop houses.

Chris Kirby, coordinator of the state Farm-to-School Program, advised farmers of the opportunities that exist to sell fresh fruits and vegetables. She also explained programs of the Oklahoma Department of Agriculture, Food and Forestry designed to help small scale farms diversify and market their crops.

Get the Kerr Center publication *How to Build a Low Cost Hoop House* at kerrcenter.com/publications/hoophouse/index.htm or by calling the center.

USDA to Fund Hoop Houses in Oklahoma

Last November, USDA announced a new initiative to help farmers in most states, including Oklahoma, establish hoop houses (also known as high tunnels.).

The three-year, 40-state study will test whether hoop houses are effective in reducing pesticide use, keeping vital nutrients in the soil, extending the growing season, increasing yields, and providing other benefits to growers.

USDA's Natural Resources Conservation Service (NRCS) will provide financial assistance for the project through the Environmental Quality Incentives Program (EQIP), the EQIP Organic Initiative, and the Agricultural Management Assistance program. NRCS will fund one high tunnel per farm. High tunnels in the study can cover as much as five percent of one acre.

For more information, contact your local NRCS office.

Photo top:
Tod Hanley with a newly constructed hoop house at Peach Crest Farms near Stratford.

PRAWN SHOP:

Direct Marketing Pond-Raised Freshwater Shrimp

—Wylie Harris

Some might say that the closest thing to Oklahoma-grown seafood is a Rocky Mountain oyster. Cashion farmer Jeremy Eaton has other ideas.

Like others all over Oklahoma, Eaton's humble farm pond performs many useful functions: stock watering, erosion barrier, swimming hole. Nevertheless, he thought his pond was "underutilized," and worked out a novel way to make it pay – by raising freshwater shrimp, or prawns, in it.

Eaton has been pioneering the idea for two years with help from an Oklahoma Producer Grant from the Kerr Center. This past September, he hosted a crowd of over 50 people to explain what he's done and learned.

How to Have Your Pond and Eat It, Too

"Probably the best thing I could plant on this land would be houses, if I wanted to make money," Eaton says.

While he has no objection to making money, he'd rather do it in a way that will keep the farm in the family for the next generation. "Our kids are the fourth generation on this land," he says.

So, Eaton wondered, "What can we do as small producers to make a little extra money?"

In other words, "What can we do locally, with a resource most people already have, that's underutilized?"

From that line of questioning, the pond-raised prawn project was born.

Shrimp Temps (and Other Factors)

Eaton contrasts his pond-based approach to prawn farming with more capital- and labor-intensive commercial operations, which might stock 16,000 larvae per acre and need aeration 24 hours a day.

Eaton stocks his prawns at fewer than 10,000 per acre, in a pen only a fraction the size of his two-acre pond. The rest of the pond acts as a giant buffer, replenishing the oxygen in the prawns' pen and eliminating the need for active aeration.

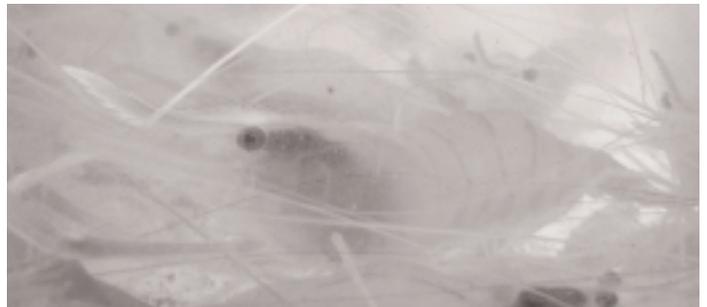
The same effect prevents nitrate buildup in the pond water. "You need a big buffer area," Eaton explains.

Even so, he tests oxygen levels regularly, two feet down, in the morning, when they're lowest. "You can use a water testing kit or a digital oxygen meter," he says. "They're about the same price."

The prawns are "pretty hardy," he says, able to survive oxygen levels down to 3 parts per million. They're less tolerant of some other extremes, preferring a pH between 5.5 and 10, with 7 being ideal.

Temperature is another important factor. The prawns become fatally stressed when the water temperature reaches 85°F. "We learned this June, with 110° days, how cool the water stays, even just a foot deep, because of all the mud," Eaton says.

Low temperature can be just as troublesome, with the prawns ceasing growth at 68° and dying at 55°. On the positive side, that sets a natural harvest date, in mid-September. It also keeps the prawns from spreading and becoming invasive.



A Prawn's Life

Prawn season in Eaton's pond begins in late May or early June, when he buys sixty day-old larvae from a hatchery in Weatherford, Texas.

Technically called "post-larvae" at this stage, the prawns are the length of a nickel, and half as wide as a pencil. Eaton buys them at seven cents apiece.

To haul the prawns back to his farm from Texas, Eaton used an old chest freezer filled with water. A compressed air tank connected to a regular aquarium-type air stone provided plenty of oxygen for the duration of the trip.

In the first year of his producer grant, Eaton stocked his pen with 1,000 prawns.

“The prawns have density-specific growth,” Eaton explains. “They’ll grow smaller if there are more in a given space.” That means that raising the stocking rate only increases harvestable yield up to a certain point.

Eaton’s pen is a circular net 100 feet around and 8 feet deep. “Pool noodles” float the upper edge, with T-posts to hold it up during periods of low water. The net, made of 1/16-inch mesh, is sewn together at bottom.

“Nothing gets in or out, though some catfish eggs did hatch in there,” Eaton says.

Care and Feeding

Eaton checks his prawns at least once a week, using a seine net, or sending his kids in for a cooling dunk in the pond.

“You’re farming blind – you can’t see what’s in there,” he says.

One of the best ways he’s come up with for checking the prawn’s numbers is to shine a flashlight over surface of the pond at night. The prawns’ eyes throw back a golden reflection.

That may not yield a very precise count, but not much precision is necessary. “If any die off, they all will,” Eaton jokes.

“Our net’s set out at least ten feet in the water,” he says, “to keep four-legged critters from damaging the nets.”

He also needs to watch what he and his two-legged neighbors are spraying in the pond’s drainage catchment. Many pesticides are also piscicides, harmful or fatal to fish.

Compared to this routine prawn surveillance program, the feeding regimen seems like simplicity itself. The prawns aren’t picky about their diet. As omnivores, they’ll eat catfish feed, alfalfa flakes – even, unlike saltwater shrimp, each other.

Eaton feeds regular sinking catfish feed once a day from the first day onward. “It cost \$26.50 for a 50-pound sack this time last year,” he says. “It’s \$13.50 now.”

To keep up with the prawns’ growth, he doubles the daily ration every month. “You can check the feeding rate just by scooping it up off the bottom,” he explains. “If there’s a layer of food three or four inches deep, you’re feeding too much.”

“You have to broadcast over whole surface, because the prawns are territorial,” he advises. Dumping all the food in one part of the pond would fatten a few prawns and starve the rest.



Greening the Waters with a Home-grown Shrimp Revolution

Eaton’s project aims for farm-based prawn production to turn the green of pond scum into the green of cash, but the idea also has a green side in the ecological sense.

As oceanographer Sylvia Earle points out, simply choosing shrimp over other seafoods can be a sustainable seafood decision. Some other popular food fish, like tuna and salmon, are carnivores; Earle likens using them as a food source to raising herds of lions or tigers for the table.

In contrast, marine shrimp eat low on the food chain, requiring fewer resources to grow a calorie’s worth of human food.

However, as Eaton has witnessed, freshwater shrimp are happy to eat animal protein, even from their own species. In common practice, commercially farmed freshwater shrimp fatten on an energy-intensive diet of other fish.

Shrimp’s popularity increased as its price fell, after researchers worked the last kinks out of pond-based production. In 1980, at the beginning of the global shrimp-farming boom, U.S. shoppers each put away a pound and a half of shrimp per year, on average. By 2006, the figure had risen to 4.4 pounds.

But while shrimp farming cheapened the economic side of the production equation, its ecological and health costs climbed.

Unique coastal ecosystems, mangrove forests possess high biodiversity, flood-buffering roots, and carbon-storing biomass. All these ecosystem services are lost when mangroves forests are cleared for shrimp ponds – a process that still continues in some areas of the coastal tropics.

Mangrove forests declined in area by 35% worldwide during the 1980s and ‘90s. As much as a third of that loss resulted from new shrimp farmers’ clearing them, mostly in Asia and South America.

Intensive shrimp farming also makes heavy use of synthetic fertilizers, pesticides, and antibiotics. Some of these substances, along with antibiotic-resistant strains of bacterial pathogens, end up in the shrimp served at tables all over the world.

Switching from freshwater to saltwater prawn farming just adds soil salinization to this list of problems. Catching shrimp from the ocean dodges all of them – but shrimp trawling, while generating two percent of the global fish catch by weight, also causes over a third of the total “bycatch,” or unwanted species also caught and killed, including whales and dolphins.



This Pond is Your Pond, This Pond is My Pond...

Such thinking seems to be catching on. According to the 2005 Census of Aquaculture, U.S. aquaculture generated farm-level sales of \$1.1 billion, a growth of 11.7% over the preceding seven years. Still, when it comes to putting food on tables, aquaculture both in Oklahoma and in the nation has barely scratched the surface of what's possible.

Of the \$672 million worth of food fish that U.S. aquaculture does produce, Oklahoma contributes only \$421,000 – roughly half of it catfish,

and the other half grass carp. Most of the country's farmed prawns come from Kentucky, Tennessee, and Ohio, with Mississippi alone producing half of the catfish.

Commercial catfish monoculture, making up half the value of Oklahoma aquaculture, averages 2,000 pounds of fish per acre, but requires heavy external inputs of feed and fertilizer.

The bass-bluegill biculture common in southern farm ponds averages 200 lbs. per acre – a much lower production level, but without feed or fertilizer. By adding caged shrimp to that setting, Eaton achieves around 120 additional pounds per acre.

Some of the oldest and most productive farming methods in the world integrate aquaculture with terrestrial crop and livestock farming to attain much higher fish production.

Traditional intensive Asian polycultures, for instance, integrate grain and vegetable crops, poultry, pigs, and several different fish species to achieve aquacultural harvests of up to 7,000 lbs. per acre, with few to no off-farm inputs.

Even without such phenomenal yields, Oklahoma and U.S. aquaculture could still make great strides in local fish production with little additional investment.

According to aquaculture researcher William McLarney, the U.S.'s estimated two million half-acre ponds could, without feeding or fertilization, yield 100 million pounds of edible fish every year.

That works out to one-sixth the 2005 yield of U.S. catfish farming (this country's most productive aquaculture industry), and 1.5% of all food fish landed in the U.S. in 2008, “all at a fraction of the cost of conventional commercial fishing or aquaculture.”

In McLarney's words, “What are we waiting for?”

Ocean-Front Marketing in Oklahoma

Thanks to the boom in cheap but environmentally costly forms of shrimp farming, shrimp now flies off the shelves faster than any other seafood in the United States, but this country doesn't produce nearly enough of it to satisfy that demand. The U.S. imports about sixteen pounds of shrimp for every one pound raised here – a \$4 billion market ripe for capture by domestic producers.

Eaton harvested 50 pounds from last year's initial stocking of 1,000 larvae. With all the kinks worked out of his system, he estimates that he could up that figure to 80 pounds – an 80% survival rate.

By tripling his current stocking rate, and charging \$10 a pound for live shrimp, Eaton projects a potential yearly net income of over \$1,800 from the enterprise.

“That's not enough to sustain a family or farm,” he acknowledges, “but it's a significant supplemental income.”

As Maura McDermott wrote in *Oklahoma Today* magazine, “With 250,000 ponds to call its own, Oklahoma has a shoreline for almost every one of us.” Combined with Eaton's small-scale approach to prawn farming, that fact translates into ample room for additional farmers.

If every one of those quarter million ponds raised 240 pounds of shrimp a year, the total catch would be 60 million pounds of shrimp – about four times the amount that Oklahomans eat in a year, but still only about five percent of total U.S. shrimp imports.

RESOURCES

Citations in this article are from the following works:

- *Bottomfeeder*. Taras Grescoe. Bloomsbury USA, New York, NY. 2008. 327 p.
- Census of Aquaculture (2005). Census of Agriculture 2002, Volume 3, Special Studies, Part 2. AC-02-SP-2. USDA National Agricultural Statistics Service. October 2006.
- Fisheries of the United States 2008. National Marine Fisheries Service, Office of Science and Technology, Fisheries Statistics Division. July 2009
- *The Freshwater Aquaculture Book*. William McLarney. Cloudburst Press/Hartley & Marks, Inc. Point Roberts, WA. 1984. 583 p.
- "Pond Country." Maura McDermott. *Oklahoma Today*, August-September 1996.
- *The World Is Blue*. Sylvia Earle. *National Geographic*. 2009. 304 p.

These materials may offer helpful information for those wishing to begin small-scale aquaculture projects:

- Kerr Center online resources on aquaculture and aquaponics: kerrcenter.com/resources/raising_livestock.htm#aquaculture

- *Backyard Fish Farming*. Paul Bryant, Kim Jauncey, and Tim Atack. Prism Press. Dorchester, UK. 1980. 170 p.
- *Home Aquaculture: A Guide to Backyard Fish Farming*. Steven D. Van Gorder and Douglas J. Strange, edited by Nancy R. Volk. Rodale Press, Emmaus, PA. 120 p.
- *The New Alchemy Back Yard Fish Farm Book: Growing Fish in Floating Cages*. William McLarney and Jeffrey Parkin. Brick House Publishing Co., Andover, MA. 1982. 77 p.
- Eastern Oklahoma State College aquaculture program www.eosc.edu/academic/ag_div/farm/aquaculture.html

These materials contain background information on the ecological impacts of seafood and suggestions for finding sustainable sources of seafood:

- **FishBase**
www.fishbase.org
This site, hosted by the Fisheries Center at the University of British Columbia, helps eliminate the confusion stemming from some fish having several different names. Users can enter one name into a database to see all other names used for the same fish.

- **Got Mercury?**
www.gotmercury.org
This site features a calculator that estimates mercury doses as the percentage of the EPA recommended limit, based on the user's body weight, type of fish, and portion size.

- **IUCN Red List**
www.iucnredlist.org
The searchable database on this site shows information on the risk of extinction faced by different species, as assessed by the International Union for the Conservation of Nature.

- **Marine Stewardship Council**
www.msc.org
The MSC runs a third-party sustainability certification program for seafood; the site contains an online guide to MSC-certified "fish to eat."

- **Seafood Watch**
www.seafoodwatch.org
Hosted by the Monterey Bay Aquarium, this resource offers region-specific "pocket guides" to ecologically-friendly seafood choices, along with extensive background information on particular species.

Urban Harvest Makes a Splash to Help the Hungry

—Wylie Harris

From the front, the Regional Food Bank of Oklahoma in Oklahoma City has the warehouse look of most other large food banks around the country, perhaps with better-tended landscaping. With a closer look at the greenery, though, that similarity begins to fade. The food bank's front grounds are covered with edible landscaping and demonstration gardens.

Pass through the entry doors, and the scene begins to conform once more to expectations: warehouse, loading dock, offices and meeting rooms. (All a bit nicer than average, thanks to a recently completed expansion.) But step on out the back, and it's right back down the rabbit hole: compost bins, greenhouses, even a fruit orchard.

Step inside the greenhouse, and things get even fishier – literally. While Oklahoma farmers are beginning to dip a toe into alternative aquaculture on the back forty (see p. 12), the food bank's Urban Harvest program aims to bring it into urban backyards.

Leaves and Fishes

Urban Harvest's greenhouse has lush green plants growing in long floor-level rows, just like many others. What sets it apart is that these plants are supported by floating sheets of styrofoam, with their roots dangling through holes into the water below.

Tracing the water through a maze of piping leads back to its source: a 1,500-gallon cylindrical tank. A window allows a view into the tank's interior, below a sign warning, "Beware of attack fish."

Such a system, in which fish wastes nourish plants, and plant roots filter water to keep it healthy for the fish, is an example of aquaponics: aqua from "aquaculture," and ponics from "hydroponics" (growing plants in a soilless medium).

Aquaponics embodies the principle of sustainability that tries to make a useful input of every "waste" product and turn linear flows of matter and energy into self-sustaining cycles.

Urban Harvest's oversized aquarium holds 500 tilapia, a tropical fish whose popularity in the U.S. has grown rapidly in recent years.



Rows of aquaponic greens in one of the Urban Harvest greenhouses.

The fish grow to a harvest weight of one and a half pounds in nine months. The floating foam sheets have room for 900 individual plants; in one trial, lettuce grew to harvest stage in just five weeks.

Most recently, the program has been selling aquaponic basil at \$8/lb., and microgreens at \$15-20 per tray, to local chefs. The tilapia have earned high praise from instructors at a local cooking school. Program director Bruce Edwards is trying to develop markets that will not involve Urban Harvest in processing the fish.

Wastes to Worms

Fish aren't the only unconventional enterprise cooking up at Urban Harvest. Edwards seems bent on nurturing a herd of every off-the-wall livestock species he can lay hands on, including one that squirms right through the fingers.

Urban Harvest uses vermiculture, or raising worms, as a means of processing leftover vegetable matter from its own gardens, along with any unusable produce that comes in as donations to the food bank.

The worms turn these materials into worm castings, a rich source of fertilizer. Urban Harvest has sixteen worm boxes, each capable of generating 400 pounds of worm castings every four months.

Urban Harvest sells the worm castings at farmers' markets for \$3 a pound. The program also offers worm box "starter kits," including the worms themselves (and one year of free email consulting to make sure they get off to a good start), for people interested in composting their own kitchen trimmings at home.

Reaching Out

The proceeds from everything that Urban Harvest sells go right back into its own projects, in an ongoing effort toward making the program financially self-sustaining. However, neither the income nor the food produced is

enough to have much direct impact on the food bank's budget or food supply.

Instead Edwards guides Urban Harvest to complement the food bank's efforts in less direct ways, by cutting overhead and enabling clients to answer some of their own food needs.

For example, a new initiative, the Red Dirt Soil Builders, puts Urban Harvest volunteers to work sorting more of the food bank's reject produce stream into the program's compost piles. The extra labor means that packaged produce, which formerly went into the trash for lack of time to unwrap each piece, now becomes valuable compost.

Volunteers learn composting skills, and, after 50 hours' time, are eligible for a share of the compost they're helping to make. Meanwhile, by reducing the Food Bank's trash removal bill, the Red Dirt Soil Builders free up space in the budget for tens of thousands of additional meals for Food Bank clients.

Food in Community

Urban Harvest's educational efforts don't end with compost. The demonstration gardens on the grounds serve as classroom sites for sessions on topics like 'Gardening 101,' 'Basic Composting,' and 'Edible Landscaping,' open to the public for a small fee (see calendar, p. 20).

In addition, Urban Harvest runs the community garden program in the 53 central and western Oklahoma counties that compose the Food Bank's service area. The tally of gardens is up to 29 (from



Urban Harvest Director Bruce Edwards displays the submerged roots of the plants protruding through holes in the floating sheets of the aquaponics system.

seventeen in 2004), with an additional ten slated to open this year (see list).

Some gardeners can reduce their own grocery bills by consuming their own crops; others contribute produce to those in need through programs like Plant a Row (see box) and other charitable pathways.

"There's much larger interest," Edwards says, "I think because of the economic times and also because people want to know where their food comes from and how it's grown."

"Last year we gave away 35,000 plants to community gardens, from the greenhouse." In addition, he says, Urban Harvest assists community gardens in other ways. Those can include, among other things, information and education, help with grant research, tools and equipment, materials (compost, manure, straw, etc.), and field operations with the Urban Harvest tractor, vehicles and other power equipment.

Urban Harvest also shares volunteers and helps to coordinate among gardens, and hosts meetings at the Regional Food Bank facility.

From worms in the compost, to fish in the greenhouse, to gardens in unused corners of the city and countryside, Urban Harvest offers many shining examples of ways to think outside the box – or inside the tank – to solve the all too common problems of poverty and hunger.

Oklahoma Community Gardens

The following community gardens are listed on Urban Harvest's website, www.regionalfoodbank.org/Programs/Urban-Harvest. The full document contains details and contact information.

- Central Park Neighborhood Community Garden (OKC)
- Channing Unitarian Universalist Church Community Garden (Edmond)
- City Care Pershing Center (OKC)
- City – County Community Garden (Spencer)
- Cleveland County Master Gardener Garden (Norman)
- CYO – Community Youth Outreach sponsored by Quayle United Methodist Church (OKC)
- The Earth Community Garden (Norman)
- Edmond Community Garden
- Fighting Hunger . . . Feeding Hope Demonstration Community Garden (OKC)
- Food and Shelter for Friends Community Garden (Norman)
- Moore Community Garden
- Mustang Kiwanis Community Garden
- Noble Community Garden
- Old Town Community Garden (Anadarko)
- Our Community Garden (OKC)
- Oklahoma State University in Oklahoma City (OKC)
- Presbyterian Urban Mission Kids Café (OKC)
- Selecman Community Garden (OKC)
- St. Charles Community Garden (OKC)
- St. James Episcopal (OKC)
- Wilson Elementary Community Garden (OKC)
- Unity Church Community Garden (OKC)

PLANT A ROW

Plant-A-Row is a program for people who want to help feed the hungry in their community by growing food themselves. Launched in 1995, Plant-A-Row was developed by the Garden Writers Association to encourage gardeners to grow a little or a lot extra and donate the produce.

Gardeners can deliver produce at the Regional Food Bank of Oklahoma, or call 405.972.1111 to find a neighborhood partner agency to drop off the donation.

NEWS BRIEFS

OKLAHOMA

Oklahoma Food Co-op Featured in Report on Community Food Enterprises

In December, the Wallace Center and the Business Alliance for Local Living Economies released a new publication, *Community Food Enterprise: Local Success in a Global Marketplace*. The report highlights and analyzes 24 locally owned food businesses (or “community food enterprises”) from around the world, including the Oklahoma Food Cooperative.

“The Oklahoma Food Cooperative is a new concept in food distribution,” reads the report. “It brings together regional food producers and consumers through an easy-to-navigate website. With a statewide network of volunteers, the enterprise pumps nearly \$1 million into the pockets of local food producers each year.”

The report is available free from www.communityfoodenterprise.org.

New Online Directory Connects Eastern Red Cedar Owners and Processors

In order to address the growing concern over eastern red cedar, The Oklahoma Department of Agriculture, Food and Forestry’s Forestry Services division has created an online eastern red cedar market directory.

The directory includes producers of cedar products, cedar cutters, and landowners with cedar wanting to have it purchased or removed. This free and voluntary directory is intended to stimulate the development of a market for eastern red cedar in the state.

ODAFF encourages buyers and sellers to sign up for the directory on the Forestry Services website at www.forestry.ok.gov/ercmarket. The directory is updated monthly, and information submitted will be included for a period of one year.

SOURCE: ODAFF

New Manual Helps Farm-Fresh Food Find Way into Schools

Oklahoma’s Farm to School (FTS) Program has released a new publication with tips and tools for producers and school service programs to help increase the availability of locally grown foods in schools.

The manual, titled “Tips, Tools and Guidelines for Food Distribution and Food Safety,” features several produce and cost calculators, as well as food safety logs for producers.

Chris Kirby, Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) FTS Coordinator, said the manual is intended to help increase participation in the program, not only in Oklahoma but throughout the nation.

“Farm to School is expanding all over the country,” she said. “We’re excited that Oklahoma is one of the nation’s leaders in increasing local food consumption in our school systems.”

“This “how-to” manual shows what people can do to get local foods into their schools.”

The manual was made possible through funds provided by the USDA Federal State Marketing Improvement Program (FSMIP). The Kerr Center, along with Oklahoma State University and the Oklahoma State Department of Education, assisted the state agriculture department by providing expertise and co-authoring the manual.

The manual is available online at www.okfarmtoschool.com. Requests may also be made by email from chris.kirby@oda.state.ok.us or by postal service: Chris Kirby, Oklahoma Farm to School, Oklahoma Department of Agriculture, 2800 N. Lincoln Blvd., Oklahoma City, OK 73105.

The Oklahoma Farm to School Program began in 2004 as a joint pilot project between the Kerr Center and ODAFF. In 2006, the state legislature made FTS an official state program within ODAFF, creating and funding the Coordinator’s position.

As of fall 2009, the program had grown to include 66 school districts and three universities.

SOURCE: ODAFF

NATIONAL

USDA Drops Plans for National Animal Identification System (NAIS)

In February, USDA announced that it would drop the much-maligned National Animal Identification System (NAIS) and instead develop “a new, flexible framework for animal disease traceability.”

Agriculture Secretary Vilsack stated that NAIS had received “a failing grade” and that the new system would only require animal traceback to the state of origin. In addition, the new system would:

- Only apply to animals moved in interstate commerce;
- Be administered by the states and tribal nations to provide more flexibility;
- Encourage the use of lower-cost technology; and
- Be implemented transparently through federal regulations and the full rule-making process.

NAIS had raised considerable concern among small-scale livestock producers because of the burdensome costs required to install the tracing technology on animals, the excessive reporting requirements, and the invasion of privacy issues.

More information on USDA’s new direction on animal traceability is available at <http://www.aphis.usda.gov/traceability>.

SOURCES: ORGANIC FARMING RESEARCH FOUNDATION, USDA

Food Insecurity, SNAP Enrollment Continue Record-setting Rise

In November, the USDA released its annual Household Food Security in the United States Report based on findings from the Economic Research Service (ERS). The 2008 report shows the highest levels of domestic food insecurity in the United States since USDA began tracking these national statistics in 1995.

The report shows that 17 million (14.6%) U.S. households were food insecure in 2008, an increase from 13 million (11.1%) households in 2007. According to Secretary Vilsack, this was the largest increase in any one-year period in the history of this report.

According to USDA, over 49 million people lived in these households; thus, 49 million people went without access to sufficient food during 2008. The report also noted that more than one in five children went without enough food during 2008.

Rates of food insecurity were highest in households with incomes near or below the federal poverty line, with children headed by a single adult, and that are Black or Hispanic. Additionally, households in large cities and rural areas were more commonly food insecure than in suburban and outlying city areas.

As of December, more than one in eight Americans received benefits from the Supplemental Nutrition Assistance Program (SNAP), commonly known as food stamps, with the rolls increasing by about 20,000 people per day.

There are 239 counties in the U.S. where at least a quarter of the population receives food stamps. In over 750 counties, SNAP is helping to feed one-third of African Americans.

Children are being aided substantially by food stamps. In more than 800 counties nationwide, one in three children is getting this critical nutrition assistance. In the mid-American cities of St. Louis, Memphis, and New Orleans, half the children get food stamp benefits.

“Forty-nine percent of all U.S. children will be in a household that uses food stamps at some point during their childhood,” says Mark R. Rank, Ph.D., poverty expert at the George Warren Brown School of Social Work at Washington University in St. Louis. “Food stamp use is a clear sign of poverty and food insecurity, two of the most detrimental economic conditions affecting a child’s health.”

Despite this rapid rise in SNAP usage, approximately one in three people potentially eligible for the program do not receive benefits, according to an analysis of participation rates in 2007 recently released by USDA.

In that year, the rate at which eligible participants actually enrolled in SNAP ranged from nearly 100% in Missouri, to 47% in Wyoming. Oklahoma’s participation rate fell in the middle, at 69%, two points above the national average.

For an increasing number of people, food stamps are now the sole source of income. According to the Oklahoma Policy Institute, one out of every 37 Oklahomans now has no other income than food stamps, as compared to one of every 50 people nationwide.

SOURCES: CALIFORNIA EMERGENCY FOODLINK, COMMUNITY FOOD SECURITY COALITION, OKLAHOMA POLICY INSTITUTE, WASHINGTON UNIVERSITY

U.S. Food Waste Increasing

Despite the increasing importance of food stamps for preventing people in the U.S. from going hungry, an estimated 40% of all food produced in the country is discarded, according to a new federal report.

Each day, every person in the U.S. puts about 1,400 calories worth of food in the garbage, according to researchers at the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

Food waste has increased 50% since previous estimates were made in 1974, and now totals some 150 trillion calories per year. While some food waste occurs at the manufacturing level and during distribution, the researchers noted that more than half of the waste results from inefficient use and spoilage at the household level.

SOURCE: CALIFORNIA EMERGENCY FOODLINK

Geographic Preference Definition for School Meals Expanded

A November memorandum from the USDA Food and Nutrition Service (FNS) expanded the definition of “unprocessed” food that is allowed for local purchase by institutions, including schools, that receive funding through Child Nutrition Programs.

Previously, even simply slicing a locally bought apple was not allowed under the rules. In the new memorandum, USDA announced that “cooling, refrigerating, freezing; size adjustment through size reduction made by peeling, slicing, dicing, cutting, chopping, shucking, and grinding; drying/dehydration; washing; the application of high water pressure or “cold pasteurization”; packaging (such as placing eggs in cartons) and vacuum packing and bagging (such as placing

vegetables in bags); butchering livestock, fish and poultry; and the pasteurization of milk.” are all allowed for locally purchased products in school meals.

This is a huge step forward in helping to provide local, fresh, and nutritious meals to students while helping to rebuild local farm economies.

SOURCES: COMMUNITY FOOD SECURITY COALITION, USDA

USDA Launches Toll-Free Help Desk for Small Meat and Poultry Processors

In December the USDA Food Safety and Inspection Service (FSIS) announced the opening of its new small plant help-desk for small, and very small, meat, poultry and egg product processors. The help-desk also will provide assistance to state and local food regulatory agencies – FSIS’ partners in keeping meat, poultry and egg products safe for consumers.

The FSIS small plant help-desk will serve as a “one-stop shop” for plant owners and operators with questions. More than 90% of the 6,000 plants inspected by FSIS are small or very small. FSIS staff will assess callers’ requests and provide information and guidance materials that best meet their needs. In situations where the answer is not readily available, the staff will research the issue and follow-up with the caller. As appropriate, the help-desk will provide a portal to other services, such as Ask FSIS, FSIS’ existing Internet service offering official agency responses to inquiries on agency policy.

Inquiries can be made to the small plant help-desk by toll-free telephone or by email. The help-desk is open from 8 - 4 EST, Monday – Friday, excluding federal holidays. To speak to a staff specialist during this time, call 1.877.FSISHelp (1.877.374.7435). Customers may also contact the help-desk by email at InfoSource@fsis.usda.gov.

SOURCE: USDA



The Kerr Center for
Sustainable Agriculture, Inc.
P.O. Box 588
Poteau, OK 74953

Nonprofit Organization
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CALENDAR: SPRING/SUMMER EVENTS

CLASS/WORKSHOP:

Introduction to Aquaponics

March 27 - Oklahoma City

Hosted by the Urban Harvest program of the Regional Food Bank of Oklahoma, this workshop offers an introduction to the basic concepts of home or small commercial aquaponics. Students will be introduced to a commercial system developed by the University of the Virgin Islands and a home size model based on The Growing Power system. Students will help build a working model during the afternoon portion of the class. Registration costs \$25; contact Bruce Edwards at 405.604.7108 or bedwards@regionalfoodbank.org. (See p.16)

WORKSHOP:

Seeds for Success: Cattle Grazing

April 30 - May 1 - Wilburton

Eastern Oklahoma State College will host trailblazing ranchers Walt Davis, Wes Downing, and Kit Pharo at the second annual "Seeds for Success" grazing conference. Registration costs \$200 and includes meals and an electronic copy of the proceedings. Please RSVP with a \$50 deposit by April 16 to Troy Walker, Eastern Oklahoma State College, Attn: Ag Division, 1301 West Main, Wilburton, OK 74578. For more information or

to register, contact Troy Walker at 918.448.7300. (See p. 9.)

FIELD DAY: Multispecies Grazing

May 8 - Porum

Join Kerr Center Producer Grant recipient David Sparks, D.V.M., for this field day covering all aspects of multispecies grazing of goats and cattle. See p. 3. Check www.kerrcenter.com for updates.

Workshop: Goat Parasites

June 5 - Poteau

The Kerr Center and OSU Cooperative Extension will jointly sponsor this workshop to help goat producers learn the most effective strategies for parasite prevention and management. Registration costs \$10 at the door (noon meal included); pre-register by June 2 to ensure a place. To register, call the Kerr Center at 918.647.9123. See p. 3.

DEADLINE: Nominations for Meat Goat Forage Performance Test

June 11

Nomination forms are due on this date from goat producers wishing to test their bucks'

performance on forage in a test conducted by the Kerr Center and the OSU Cooperative Extension Service. For details and forms, visit the Kerr Center website at www.kerrcenter.com. (See p. 3.)

FIELD DAY: Lane Ag Center

June 12 - Lane

Details TBA.
Check www.kerrcenter.com for updates.

GRANT DEADLINE: Southern SARE PDP

June

Southern SARE's Professional Development Program funds agricultural professionals (such as Cooperative Extension, NRCS, FSA and other USDA staff, agricultural consultants, non-governmental organizations, farmer trainers, and others) to develop training activities (such as seminars, workshops, farm tours, or on-farm demonstrations) and training materials (such as handbooks or videos). Pre-proposals are due in June, with full proposals due in November. Full details for the 2010 PDP application process will be posted in March on the Southern SARE PDP page, www.southernsare.uga.edu/pdppage.htm.