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Drugs in Rice Not Approved by FDA; Food Contamination Likely

Washington - Genetically engineered, pharmaceutical rice is not a safe or cost-effective solution for infants suffering from diarrhea, concludes an exhaustive report released in late April by the Center for Food Safety, as the U.S. Department of Agriculture (USDA) considers whether to allow planting of the rice in Kansas this spring. The report discusses potential adverse health impacts of the rice-grown drugs, which have not been approved by the U.S. Food and Drug Administration (FDA).

Developed by California-based Ventria Bioscience, the rice is engineered with modified human genes to serve as a "biofactory" for production of human milk proteins that have antimicrobial and other drug-like properties. Ventria has proposed using the rice-extracted protein drugs to treat infants with diarrhea, and as additives to yogurt, granola bars, and performance drinks, among other uses.

Small Farmer Commentary: Rice With Human Genetics Comes to Kansas: The Questions We Should Be Asking

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The report details Ventria's failed attempts to gain FDA approval of its rice-grown drugs dating back to November 2003. Ventria is seeking USDA approval to grow up to 3,200 acres of its rice in the Junction City, Kansas area.

"USDA must not allow Ventria to grow genetically-engineered rice containing drugs that our nation's food and drug authority has refused to approve," said Joseph Mendelson, Legal Director at the Center for Food Safety (CFS). "We call on USDA to unconditionally deny Ventria's permits."

"Policy makers in Kansas do not seem to have a sense of either the marginal benefits to be gained, or the high risks entailed in this enterprise," said Dan Nagengast, Executive Director of the Kansas Rural Center. "Clearly the food industry, and rice farmers elsewhere in the country, understand the risk to their businesses when contamination occurs." He points out that rice provides roughly 20% of the world's calories.

Nagengast notes that the USA Rice Federation, representing the rice industry, has asked USDA "in the strongest possible terms" to deny Ventria's requested permits.

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Rural Papers

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The Small Farmer Commentary

Rice With Human Genetics Comes to Kansas: The Questions We Should Be Asking

by Dan Nagengast

The Kansas Rural Center has been a frequent critic of bio-technology in agriculture. Let me reaffirm that the principle reason for this has been that these technologies, almost invariably, have been just another example of farming the farmer. Profits go elsewhere, a few individuals profit, and most farmers are often left with increased risks, increased expenses, diminished natural resources, and lower profitability from greater activity.

*If you look around and wonder why there are fewer farmers and they seem to get bigger and more industrialized each year, a path to understanding the phenomenon starts with understanding the goals of agribusiness, and increasingly, agropharmaceutical companies. A solvent rural America is **not** one of their goals.*

Ventria Biosciences, a California firm, has cleared most of the hurdles placed before it to begin planting paddy rice near Junction City, Kansas, this spring. Their proposed 3200 acres of rice is the nation's largest experiment of a genetically engineered, drug-producing food crop.

Rice farmers have chased them from California and Missouri, where rice is a crop. And opposition abounds from the food industry, including the Grocery Manufacturers Association which fears contamination of any and all foods by pharmaceuticals grown in food crops. Even Anheuser-Busch was an opponent in Missouri because they use rice in some of their beers.

Here are the important questions as I see them:

Are these food industry critics hysterical environmentalists or zealots

(take your pick), or does a real risk exist of food contamination?

Will the introduction in Kansas of crops modified with human genetics, enhance widespread rural economic viability, or will there be a few who profit while the rest of Kansas crop production becomes suspect?

And finally, the agronomics. Can rice be grown successfully here, year after year, in a relatively small geographic area? Does it really take about the same amount of water as corn?

The Risks. *No matter how much people like to say that "We already grow genetically modified crops in Kansas", we do **not** commercially grow food crops genetically modified to have pharmaceutical expression of human genetic traits or for industrial uses. The crops we grow have commonly had resistance to herbicides, or species specific pesticides bred into them. Even those crops have more generally been used for livestock feed.*

Crops which are mostly consumed by humans, like wheat, haven't gotten a foothold because the markets reject them. People (consumers) perceive a risk to them, with no corresponding benefit to them.

The promoters at Ventria would explain that there is indeed a benefit to be gained from their rice: the pharmaceutical they will be harvesting. That may be true, but those who may "need" this drug are few, compared to all those who eat rice. And therein lies the big conflict with the food industries, like the Grocery Manufacturers, which represents companies like Dole, Gerber, and General Mills.

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Briefs

Groundwater Declines Made a Higher Priority

Rapid massive growth in the ethanol industry in Western Kansas and its demand for irrigated corn recently pushed the issue of groundwater declines in the Ogallala Aquifer to a higher place on the state's priority water issues.

The Kansas Water Authority (KWA) raised groundwater consumption in Western Kansas to the priority list in the Kansas Water Office's (KWO) new five-year strategic plan.

The KWO had earlier identified surface water management, primarily an eastern Kansas issue, as the highest priority, calling for a plan to be in place by summer of 2008. After lengthy discussion, the KWA elevated the High Plains issue of groundwater decline in the Ogallala Aquifer and called for more immediate attention.

Part of the state's effort will explore the barriers to reducing consumption of groundwater and how to reduce those barriers. Renewal of or changes in U.S. farm policy currently under debate will impact use.

"Part of the effort," KWA member Lisa French stated, "will explore the barriers to reducing consumption and how to reduce those. There are policy barriers, and a lot of social and political barriers," she noted. "Four dollar corn is certainly a barrier. But at some point reductions [in groundwater pumping] will be forced."

The plan will establish a High Plains Aquifer Management

Advisory Committee to review current and proposed research and programs, examine future impacts on water needs, and make recommendations to improve management, conservation, and diversification.

Other top state issues are managing sedimentation going in to state reservoirs, management of demand for public water supplies, and the impact of climate change on future water supplies. □ (Taken from the *Hutchinson News*, April 6, 2007)

Groundwater Declines Continue

The annual survey of state groundwater levels performed by the Kansas Geological Survey and the Kansas Department of Agriculture in early 2007 showed a trend of continuing decline last year. Some areas showed a more than two foot drop.

The survey measures the depths of about 1400 high-volume wells. Major factors influencing water levels are participation rates or drought, energy costs associated with pumping water, and corn prices.

Mark Rude, executive Director of Groundwater Management District No. 3 in southwest Kansas, stated that a rise in corn prices, fueled by the ethanol boom, has caused farmers to plant more corn, which depends on extensive irrigation in western Kansas, which then contributes to groundwater declines. □ (From *Daily Kansan*, April 16, 2007).

Ag Market Concentration Increasing

According to a study released April 16 by the National Farmers Union (NFU), agricultural market concentration is increasing. NFU released the findings of an NFU commissioned study conducted by Dr. Mary Hendrickson and Dr. William Heffernan of the University of Missouri. Statistics revealed concentration in every industry except the ethanol production.

The study documents that the top four beef packers dominate 83.5 percent of the market, four pork packers control 66 percent of that market, and the top four poultry companies process 58.5 percent of the broilers in the United States. Tyson Food is listed in the top four of each of these categories. The retailing industry has been increasing its degree of concentration, with the top five companies controlling 48 percent of U.S. food retailing, compared to 24 percent a decade ago.

The study also found that ethanol production is the only agricultural sector in which concentration has steadily decreased. Today the top four companies control 31.5 percent of the marketplace. In 1987 the top four companies owned 73 percent. Farmer owned ethanol plants account for 39 percent of total capacity.

The full report is available at : <www.nfu.org/wp-content/2007-heffernanreport.pdf>. □ (From NFU, April 16, 2007)



Teleconference Calls Bridge Farmers' Markets

by Mercedes Taylor-Puckett



KRC has built a communications bridge between markets like the Dane County, Wisconsin one above, and farmers markets in Kansas via teleconference calls.

Lawrence, Ks. - Kansas is home to a diverse group of more than 70 farmers' markets ranging in size from fewer than ten to more than 80 vendors. Market managers and vendors gather each winter for the Kansas Farmers' Market Conference organized by the Kansas Rural Center. This conference has included keynote speakers such as Randii MacNear with the Davis Farmers' Market, Jeff Cole with the Federation of Massachusetts Farmers' Markets and most recently in February Larry Johnson with the Dane County Farmers' Market in Madison, Wisconsin. In addition to the keynote speaker, tracks for vendors and managers explore topics like marketing, safety regulations, and market management.

In an effort to further build relationships between markets, KRC has started a long-distance bridge among Kansas markets. Through the use of teleconferencing, two follow-up discussions were arranged with

Larry Johnson, the keynote speaker at the most recent farmers' market conference. The Dane County Farmers' Market, managed by Larry, operates year round and its outdoor location, surrounding the Wisconsin State Capital Building, attracts more than 200 vendors and 20,000 shoppers each week.

The first teleconference call focused on building relationships with vendors, customers and the media. Larry believes that consistent interaction during market (he visits with each vendor present) goes a long way towards diffusing conflict and ensuring safety compliance within the market. Newsletters and an annual membership meeting are used to keep vendors abreast of coming events and regulatory changes.

The emphasis on communication continues in building relationships with customers. The Dane County Farmers' Market (DCFM) uses a weekly e-newsletter to keep shoppers informed about the market's products,

vendors and special events. Larry's market also benefits from the Friends of the Dane County Farmers' Market, a not-for-profit organization, which provides educational and children's activities during market.

While the DCFM purchases only one newspaper ad annually-announcing the market's opening in the spring, the market has a strong relationship with the media. Larry works with the editors of the food, gardening and agriculture sections of his local paper to share events and promotions. Although the DCFM doesn't invest heavily in newspaper, television or radio advertising, it does produce a tri-fold brochure, buys ad space in a Madison map and hangs banners at key city intersections.

The second teleconference call switched focus to explore the job description of a market manager, the interaction between manager and market board and professional development opportunities for the manager. At the DCFM the manager is a full time, salaried employee. Larry's office is in his home and he appreciates the flexible schedule that permits him to also operate his cut-flower business (though he does not sell at the DCFM). Larry handles all the operations of the market including the budget and promotion while the board sets policy. Vendors may use the grievance process to appeal management decisions to the board.

The DCFM Board meets five or six times a year and Larry prepares a detailed agenda that is distributed a week in advance. Board members spend time familiarizing themselves with the agenda items and come prepared for spirited discussions. Meetings average three-hours in length. *Continued on page 7*

CWFP Profile

Addressing Farm Priorities

One Step at A Time

by Connie Pantle

Axtell, Ks. - "Milking this many cows in the bend of a creek" creates many concerns for Joe and Amy Schmitz, Axtell in Marshall County. Joe and Amy, who milk 70 cows, worry about runoff reaching the intermittent stream running behind the dairy farm. Three miles downstream it runs into the north fork of the Vermillion River, a tributary to Tuttle Creek.

To address their concerns, the Schmitzs completed the River Friendly Farm Project (RFFP) environmental assessment through KRC's Clean Water Farms-River Friendly Farm Project (CWF-RFFP). Amy said she became aware of the RFFP in **Rural Papers**. She thought, "All those ideas appeal to me. Why can't we try that?"

Once they completed the assessment, Amy said they prioritized the water quality issues on their dairy farm. "It made us sit down and set goals," she said. The RFFP highlighted the top priorities for the Schmitz family, including household waste, livestock and milk barn waste, containment or filtering of lot runoff, and abandoned wells.

"We've accomplished a lot since completing the (RFFP) notebook," Joe said. They have plugged two abandoned wells and installed a new household septic system. The couple also applied for and received a Kansas Agricultural and Related Waste Control Permit through the Kansas Department of Health and Environ-

ment (KDHE) to cover the livestock including the 70 milking cows, 100 replacement heifers, 15 bulls, calves and the family horses.

The RFFP also pointed out the need for soil testing on the Schmitz farm. Amy said after completing the soil testing they were able to cut the fertilizer bill by applying only the amount of nutrients needed.

To address the remaining priorities, they applied for cost-share through KRC's CWF-RFFP and through the Marshall County Natural Resource and Conservation Service's (NRCS) Environmental Quality Initiative Program (EQIP). Both cost-share grants addressed the water quality issues of livestock and milk barn waste and containment of lot runoff.

Because the couple tries to raise crops to support the dairy, they grow what they feed. To utilize the livestock waste on the 400 acres of hay and pasture, the manure pit is a huge asset to the whole farming operation. Amy said "you can put the manure where you want it, when you want it." She said before installing the pit, Joe was hauling manure at least once a week, year round in all types of weather. Amy said using the manure in the nutrient management plan was something they knew they should improve, but the RFFP made them make it a goal, and the manure pit made it manageable.

"Now the manure can be hauled when it is best able to be incorporated into the soil which



In addition to addressing their dairy waste issues, the Schmitz's tackled a streambank erosion problem with WRAPS demonstration funds. A cedar tree revetment was established this spring with help from KSU and the Tuttle Creek WRAPS Project.

minimizes runoff and maximizes nutrient utilization," Amy said. EQIP assisted with the cost-share for the manure pit while the CWF-RFFP funded the safety rail around the pit, as well as concrete from the freestall buildings to the pit. Now the manure can easily be scraped into the manure pit from the freestall barns where the cows loaf in between milkings.

Another water quality issue Joe and Amy addressed with CWF-RFFP cost share was the runoff from the building roofs crossing the lots and becoming contaminated, then entering the creek.

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2007 Farm Bill: Hearings, Budgets, and Reports Update

by Mary Fund

Hearings are currently underway on various parts of what will become the 2007 Farm Bill. According to Congressional spokesmen, Congress is aiming for a full bill by July 1 and passage soon after. Such efficiency would be historic. Nonetheless, the next two to three months are critical to the debate and decisions impacting our food and farming future.

For more timely updates or alerts, see KRC's website, or go to the Sustainable Agriculture Coalition's website at <www.sustainableagriculturecoalition.org>. But below are quick snapshots of several recent farm bill hearings and issues.

Budgets, Appropriations and Supplements. Supplemental appropriations for 2007 including emergency farm disaster funds and Conservation Security Program funds for an 07 sign-up plus other farm related dollars are tied to the Iraq war funding bill. Promised a veto by President Bush because it includes the deadline for getting U.S. troops out of Iraq, this bill will end up back in conference committee for revision. Then it will wind its way back to the president again- possibly before Memorial Day recess.

The good news is that the bill included funding to lift the cap on 2007 funding for CSP. This means there would be a sign-up, and contract modifications for earlier contracts could go ahead. It is believed that negotiations on the supplemental bill will include this funding.

Negotiations over the FY 2008 budget resolution for agricultural appropriations will also get underway in May. Total dollars for 2007 Farm Bill programs are significantly less than for 2002 programs. How much money will be available for the total discretionary spending cap depends on the outcome of these discussions. There is also a \$5 billion difference between the House and Senate's "reserve funds" for the farm bill. But the real issue is that offsets (through tax increases or spending cuts elsewhere) are required to make the reserve funds into something real. In other words, stronger conservation, rural development, energy and food stamp programs, will depend on finding ways to offset the costs against other budget items.

Competition Title hearings held. Competition Title hearings have been held in both House and Senate. House sub-committee testimony focused on the need for farm bill measures to ban packer ownership of livestock, preventing use of captive supply to manipulate market processes, and on the problems of contract poultry growers and their lack of control over inputs, prices and decisions.

Organic Agriculture Hearing Held. On April 18, the new Horticulture and Organic Sub-committee held the first ever hearing on organic agriculture for the House Agriculture Committee. The rapid growth in demand for organics was emphasized by all panelists. Farm Bill needs cited for organic farming included protecting the integrity of the organic label, more resources for staffing the

certification and accreditation process, more assistance to farmers wanting to transition to organic, and a serious increase in funding for research on organic agriculture.

Mark Lipson of the Organic Farming and Research Foundation (OFRF) argued that lack of knowledge of the best organic management practices is the greatest limiting factor in the ability of farmers to meet the increasing demand for organic production in the U.S., and urged greater funding for research and extension services in organic agriculture.

OFRF has a new report titled **2007 National Organic Research Agenda**. The report, Lipson's testimony and a press release can be accessed at : <www.ofrf.org>. □

CSP Drives Conservation

In mid-April, a coalition of Midwest farm organizations released a report on the implementation of the Conservation Security Program.

Opponents have criticized CSP as rewarding farmers only for conservation they have already done and that it does not result in new conservation.

However, the report entitled "Conservation Security Program Drives Resource Management: An Assessment of CSP Implementation in Five Midwestern States", documents that CSP recipients are actually kicking up their conservation efforts to higher levels.

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Ventria and GM Rice

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The Grocery Manufacturers of America and other groups representing the \$500 billion dollar food industry have also opposed drug-producing food crops.

“These genetically engineered drugs could exacerbate certain infections, or cause dangerous allergic or immune system reactions,” added Bill Freese, CFS science policy analyst and author of the report, which references numerous scientific reports.

“What developing countries need most is clean water and basic sanitation facilities to prevent diarrhea...”

Freese notes that mothers of two infants who participated in a Ventria-sponsored clinical trial of its rice-grown drugs in Peru reported that their children had developed allergic reactions to numerous foods, leading to a Peruvian government investigation of the trial.

“USDA simply cannot be trusted to keep this pharmaceutical rice out of our foods,” said Nagengast. “Just a few years ago, corn containing an experimental swine vaccine got mixed into soybeans and regular corn, which then had to be destroyed. Rice has twice been contaminated with unapproved genetically engineered rice in just the past year,” he added.

The report also disputes the need for Ventria’s pharmaceutical rice, and discusses cheap and effective solutions for prevention and treatment of diarrhea recommended

by the World Health Organization and other public health experts. The report notes that these existing solutions have cut deaths due to diarrhea from 4.6 million a year in 1980 to 2 million today, but are not adequately funded.

“What developing countries need most is clean water and basic sanitation facilities to prevent diarrhea, and improved access to oral rehydration solutions to treat it,” Freese said. “Even if Ventria’s rice-grown drugs eventually prove to be safe, they would be expensive, and divert funding from existing, cost-effective solutions that aren’t adequately funded,” he added.

The Center for Food Safety advocates a ban on drug-producing, genetically-engineered food crops, which have not produced a single FDA-approved drug despite outdoor field tests since 1991.

Center for Food Safety (CFS) is a national non-profit membership organization working to protect human health and the environment by curbing the use of harmful food production technologies and promoting sustainable agriculture. In 2000/2001, CFS was part of a coalition that discovered widespread contamination of the food supply with genetically engineered StarLink corn, which had not been approved for human consumption due to concerns it could cause food allergies. In the past year, CFS has won three cases against USDA for the Agriculture Department’s reckless and illegal approval of genetically engineered crops.

For more information, see the CFS website at: <www.centerforfoodsafety.org/> . □

Farmers Markets’ Teleconference

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Larry finds he appreciates the feedback provided from annual evaluations by both the market’s vendors and its board. Professional development and networking for the manager are supported by the board and Larry attends one national and several regional farmers’ market conferences each year.

The next conference call will focus on food safety regulations at farmers’ markets in Kansas and is scheduled for Monday evening, April 30 from 7:30 to 9 p.m. Market participants will be joined by Steve Moris, Kansas Department of Agriculture, and Angela Kohls, Kansas Department of Health and the Environment. Market managers are encouraged to submit questions in advance to allow answers to be fully researched before the conference call.

The Kansas Rural Center will develop a question and answer document on food safety to share on its website to serve as a reference for market managers. For details on how to join these conference calls, please visit <http://www.kansasruralcenter.org/publications/KFSRTcall.pdf>. A summary of each teleconference call is shared with Kansas farmers’ market representatives via e-newsletters.

These initiatives are possible through partnerships with USDA’s Risk Management Agency and the Sustainable Agriculture Research and Education Professional Development program. For more information on participating in Kansas farmers’ market networking opportunities, please contact Jerry Jost at 785-766-0428 or jjost@myvine.com. □ Mercedes Taylor-Puckett is the manager of the Lawrence Farmers’ Market.

Commentary

Genetically Engineered Rice Questions...

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This is also perceived as a huge threat to those who do grow rice for a living, our fellow farmers. The USDA has not been able to prevent unapproved GE rice varieties from contaminating rice crops in the South.

The most recent incident led to the withdrawal of Clearfield 131 rice, and cost farmers \$150 million in futures contracts. Much has been made of the fact that there is no rice grown commercially in Kansas and that the fields and equipment will be segregated.

I applaud those measures, but it still doesn't overcome the risks. Especially when you consider that many of the well-known contamination incidents have already occurred under zero-tolerance conditions with "little chance of cross-contamination" That cross-contamination generally refers to seed mixing within crops, e.g. experimental biotech corns with conventional corns.

But consider the 2002 ProdiGene case where a pig-vaccine corn mixed with soybeans in a grain elevator. And consider that the event was probably caused by crop residue from a previous crop being picked up at a subsequent harvest. When you learn that Ventria's milling plant is 11 miles from the proposed growing site, rice seed is light and can be wind blown to some extent, and that birds eating the grain is a common problem in rice growing regions, your risk radar starts to sound.

In Iowa, in a different incident, 155 acres of Prodigene corn were destroyed because of fear of wind-blown cross pollination. While cross pollination is not an issue for self-pollinating rice,

most rice is not tornado resistant. Rice seed will remain viable through our winters, and conceivably it may grow come spring, in your wheat, corn, sorghum, or millet field. But more on the agronomic issues later.

Trust the regulators? USDA, this February, was ordered by a Federal District Judge in Northern California to undertake an Environmental Impact Statement on Roundup Ready Alfalfa. Earlier, the Judge vacated USDA approval and halted sales. The regulators are not considering all the issues. They have consciously blindered themselves to look only at cross-contamination within a crop, and this, in my humble opinion, is shameful.

Who gets rich? Ventria has made much of the economic impact. It cites plans to employ 50 to 100 people. It is offering farmers \$150 per acre over their most profitable crop. They plan to grow 3200 acres in the short term, or an extra \$480,000 total per cropping year early on. I assume this presupposes that all goes well and a usable crop, with significant yield is harvested. I don't know whether that \$150/acre is calculated over and above profits with regular commodity supports on conventional crops.

Ventria envisions as much as 30,000 acres eventually growing all the way to Topeka. I do not know if that projected acreage is for a single gene expression, but if it is for multiple drugs, each of those crops would also need to be isolated from each other and conventional cropping fields and then harvested with dedicated equipment for each variety.

Costs? On the outgo side, the press reports that the state, and Junction City, are offering more than \$6 million in grants and loans. I am unsure whether there will be additional tax abatements.

I am unsure whether Ventria would own all the dedicated harvesting, transportation and storage equipment or whether the farmer or farmers would be expected to purchase the equipment and dedicate it solely to the single crop.

I do not know if insurance companies will even underwrite the risk of escape, and if so, what they will charge. I assume that tort law will come into play if these genetics escape and befoul other farmers' crops.

Finally, I would like to call attention to the financing of these sorts of ventures, especially if a crop is planted and harvested. A cynic might worry that if there is some success, a public stock offering would occur, with a quick cash-out by the founders. Steps need to be taken to assure that any subsequent investors are bound by at least the conditions and terms in effect at the beginning, and perhaps greater standards if it is later determined they are necessary. Doing any less means the Kansas taxpayer takes on the risk for someone else as they grow their fortune.

Is rice going to grow here? Rice can grow much farther north than Kansas, and has been cultivated near Albany, New York. Certainly, if you look at the plant's requirements, it should grow here. But it is a tropical plant native to Southeastern Asia and Africa. It is the world's third largest crop and provides about one-fifth of the calories in the human diet.

The rice growing regions of the U.S. are mainly in more temperate climates, often blessed with abundant rainfall. Major rice producing states are Arkansas, Louisiana, Mississippi, Texas (the rice belt) as well as California and

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Commentary

Genetically Engineered Rice... Continued from page 8

Missouri (primarily in the southeast along the Mississippi). Rice is grown in paddies because of its tolerance to water, which prevents weed growth. Weeds can be controlled chemically when it is grown on dry land or under pivot irrigation, for example.

It has been stated that rice uses about the same amount of water as corn to grow. But when I think of paddy rice, which is the method of cultivation in this country and most areas of the world, and consider a bermed field with saturated soil and 4 to 6 inches of water being maintained throughout plant growth and seed set until the fields are dried for harvest, I start to question that assumption.

In a report entitled "Water Resources, Agriculture and the Environment" by a team of researchers at Cornell led by David Pimintel, the issue is discussed. (See <http://dSPACE.library.cornell.edu/bitstream/1813/352/1/pimintel_report_04-1.pdf>)

Corn requires 50% to 70% soil moisture, while in China it is reported to require at least 80%. About 8 million liters/ha of rainfall are needed during the growing season for corn production to yield around 9,000 kg/ha. A hectare of high yield rice would require approximately 11 million liters/ha. to yield 7 metric tons average. So, more water usage but lower yield than corn, for well-grown rice.

I have personal experience with growing rice, and lots of other crops. I grew three crops of paddy rice on my farm south of Topeka during the mid-1980's. I had exceptional water control, and built 7 paddies below a pond. (This was a hobby I continued after my many years growing rice and

other crops in West Africa).

In those 3 years, I got one outstanding crop, one so-so crop, and one crop failure. I trialed maybe 10 varieties from Arkansas and California. By the way, there are at least 100,000 varieties, most bred for growth and climate characteristics, yield, taste, ease of hulling, etc.

It takes years of agronomic research to find and/or breed varieties that do well in specific situations. I am sure that can be made up for, to some extent, in high input systems. But there is an element of skill and art to rice farming, just as there is to any crop. I would never expect even an adapted crop to always do well in a small geographic area of Kansas. Corn yields, soybean yields, sorghum yields, wheat yields all fluctuate greatly year after year on any farm.

We've inadvertently compensated by stretching our plantings out over huge areas where production is suitable. That's why we have a corn belt, and that's why there is a rice belt. 3,200 acres around Junction, or even 30,000 acres between Junction City and Topeka seems inadequate. Does Ventria's business model project for crop failure? What about reduced yields, poor milling quality, pests, disease, and every other affliction?

Is all this too good to be true? What do you think?

The Kansas Rural Center, the Eastern Kansas Chapter of the Organic Crop Improvement Association, and the Farmer to Farmer Campaign on Genetic Engineering, submitted testimony in opposition to final USDA approval of the Ventria Bioscience request on March 30, 2007. (See our website for the text).

We await their ruling. □

Farm Policy

Farm Bill... Continued from page 6

Farmers enrolled in CSP, according to the report, are taking advantage of the program's incentives to add new practices to their farms. Once enrolled, the majority of farmers are adding new conservation practices to their operations.

These practices include adding new wildlife habitat to their farm, such as planting native grasses, fencing off wetlands and wooded areas, adding winter cover to cropland or adding grassed field borders. They are also adding practices that address nutrient management, reduce pesticide use, and address farmstead conservation issues.

The report reviews CSP in five Midwest states including Illinois, Iowa, Minnesota, Missouri, and Wisconsin.

CSP was created in the 2002 Farm Bill and is up for reauthorization in the 2007 Farm Bill. Nationwide nearly 20,000 farms are enrolled. Funding limitations forced the Natural Resource Conservation Service (NRCS) of USDA to restrict access to selected watersheds around the country, instead of nationwide as originally intended. Funding cuts also resulted in only a third of the farmers who qualified for CSP in 2006 being able to enroll.

Advocates are working to restore funding and make the program available nationwide.

The above report is available at <www.sustainableagriculturecoalition.org> □

Mixed Prairie Grasses Better Source of Biofuel Than Corn Ethanol or Soy Biodiesel

Diverse mixtures of native prairie plant species have emerged as a leader in the quest to identify the best source of biomass for producing sustainable, bio-based fuel to replace petroleum. A new study led by David Tilman, an ecologist at the University of Minnesota, shows that mixtures of native perennial grasses and other flowering plants provide more useable energy per acre than corn grain ethanol or soybean biodiesel and are far better for the environment.

The research was supported by the National Science Foundation and the University of Minnesota Initiative for Renewable Energy and the Environment.

The study is based on 10 years of research at Minnesota's Cedar Creek Natural History Area, one of 26 NSF long-term ecological research sites. It shows that degraded agricultural land planted with diverse mixtures of prairie grasses and other flowering plants produces 238 percent more bioenergy on average than the same land planted with various single prairie plant species, including switch grass.

Tilman and his colleagues estimate that fuel made from this prairie biomass would yield 51 percent more energy per acre than ethanol from corn grown on fertile land. Prairie plants require little energy to grow and all parts of the plant above ground are usable.

Fuels made from prairie biomass are carbon negative", which means that producing using them actually

reduces the amount of carbon dioxide (greenhouse gas) in the atmosphere. Prairie plants store more carbon in their roots and soil than is released by the fossil fuels needed to grow and convert them to biofuels. Using prairie biomass to make fuel would lead to the long-term removal and storage of from 1.2 to 1.8 U.S. tons of carbon dioxide per acre per year. In contrast corn ethanol and soybean biodiesel are "carbon positive" meaning they add carbon dioxide to the atmosphere although less than fossil fuels.

To date, all biofuels including crops such as switchgrass, elephant grass, hybrid poplar and willow, are produced as monocultures in primarily in fertile soils. The researchers estimate that growing mixed prairie grasses on all of the world's degraded land could produce enough bioenergy to replace 13 percent of global petroleum consumption and 19 percent of global electricity consumption. Using degraded land for biofuels would also provide stable production of energy and have additional benefits such as soil fertility, preservation of wildlife habitats, and water quality protection.

The NSF report findings were published in the December 8, 2006 issue of the journal *Science*. □

(From NSF News Release)

2007 Agroforestry Field Day Scheduled

The third annual Agroforestry Field Day is scheduled for Thursday May 31 from 9 a.m. to 3:30 p.m. in Washington, Kansas. This year's event features a half day of presentations in the community room of the First National Bank at 101 C Street. The afternoon session will be held at Wildhawk Farms, owned by Scott Bokelman, located 2 miles south of Washington, and 3/4 miles West of Hwy 15 on 15 Road.

The morning will feature sessions on the role windbreaks can play to reduce odor from livestock operations, the economic and environmental benefits field windbreaks provide, and innovative agroforestry ideas .

The afternoon sessions at Wildhawk Farms will feature riparian forest buffer design, how to renovate and improve mature windbreaks, native grass management, and proper design and maintenance of homestead windbreaks.

A \$10 registration fee will cover costs of lunch and other expense. Additional information can be obtained by calling Bob Atchison at 785-532-3310, or e-mail at <atchison@ksu.edu>. □



Farmers, Consumers and Supermarkets Subject of Conference

by Jerry Jost



Jeanie Wells, manager of the Lawrence Community Mercantile, spoke at the Farmers, Consumers and American Way of Agriculture Conference, about the need to connect consumers with local farmers, healthy foods, and good nutrition.

Lawrence, Ks.- “We have become blind to the ritual of going to the grocery store,” warned Tom Giessel, a Kansas farmer and long-time leader in the Kansas Farmers Union. Giessel, along with a host of college professors and supermarket managers, spoke at the “Farmers, Consumers and the American Way of Agriculture” Conference at the University of Kansas in mid-April. The conference focused on farmers, consumers and the American grocery store system.

Giessel warned that the complexity and consolidation within our food sector has created a disconnection between farmers and consumers. After calculating the sharp decline in commercial size farms and independently owned grocery stores, Giessel concluded “our grocery system is very fragile.” Reflecting on Hurricane Katrina, Giessel noted that within three days after the devastating storm, hungry residents were breaking into supermarkets.

Jeanie Wells, general manager of the Lawrence Community Mercantile, shared a conversation with a shopper, who after learning that the local peach harvest was over, asked when would the second planting of peaches be?

“Consumers too often experience a disconnection with the food we raise,” reflected Wells. Wells stated that the growth among natural food stores across the country is a response to the consumer need to know more about their food. Stores like the “Merc” invest in consumer and school education about the importance of local farmers, healthy foods, and good nutrition.

Grocery stores continue to change, reflected Jim Lewis, general manager of Checkers, which is an independently owned supermarket in Lawrence. Consumers now buy much more olive oil than Crisco. Checkers now also stocks a wide variety of fruits and ethnic foods, responding to

KRC Launches New Policy Webpage

Whiting, Ks. - If you want information about sustainable agriculture and the 2007 Farm Bill, check out the new Policy and Advocacy page on KRC’s website at <www.kansasruralcenter.org>. Click on the Policy and Advocacy button to view numerous options.

The site includes KRC’s 2007 Farm Bill statement, KRC Policy Guidelines adopted by the board of directors, an Action Alert page showing KRC’s latest alerts, and links to other resources on the Farm Bill, such as the Sustainable Agriculture Coalition (SAC). KRC’s website includes direct access to SAC documents such as “No Time for Delay” and fact sheets on SAC recommendations for conservation, rural development and marketing, competition and commodity payments, research and education.

See it all at <www.kansasruralcenter.org>. □

changing consumer preferences. Lewis attributed the competitive edge of independently owned stores to their ability to make nimble business decisions grounded in the use of modern tracking technology.

“Think a little before you make a purchase,” suggested Dennis Karney, a professor in the School of Business at the University of Kansas. Karney concluded that “selling food should be a personal relationship.”

This second biennial conference was sponsored by the University of Kansas Department of History and the Kansas Branch of the National Farmers Union along with major underwriting from the CHS Foundation. □

Extension Agents Partner to Offer Farm Planning Workshops

by Connie Pantle

Whiting, Ks. --When Bill Wood, Douglas County Extension Agent, heard of an available water quality mini-grant through the Kansas Center for Ag Resources and the Environment (KCARE) office at Kansas State University, he knew it was something he could put to use in his area. Wood said he saw a need for small producers who need grazing management information, therefore he tailored the grant to include conducting workshops and presentations for these farmers.

The grant was a collaborative effort between three counties: Douglas, Osage and Shawnee. Wood worked with Dean Davis, Shawnee County Extension Agent, and Rod Schaub, Osage County Extension Agent, to host the workshops. Wood said he likes to work with other people on projects like this. "There is more synergy and more resources. We can develop better plans with a greater reach," he said.

The three agents also involved the Kansas Rural Center's Clean Water Farms Project (CWFP) Field Organizers Mary Howell and Dale Kirkham, and K-State Watershed Specialists Will Boyer, Lawrence, and Hershel George, Ottawa.

This particular grant was for Watershed Restoration and Protection Strategy (WRAPS) areas. The current WRAPS projects in Douglas, Osage and Shawnee Counties include: Marais de Cygnes WRAPS; Upper Wakarusa WRAPS; Middle Kansas River WRAPS; Melvern WRAPS, and Pomona Lake WRAPS. Wood said the workshops and

presentations emphasize the importance of water quality on farms and ranches, especially those within WRAPS areas.

The two-part workshop "provided resources for small to medium farmers to help them manage the farm," Wood said. To obtain this goal, the workshops were tailored around the River Friendly Farm Plan (RFFP) environmental assessment plan. According to Wood, the RFFP allows "farmers to take a step-by-step, comprehensive look at the farm and see where they might prioritize." "This workshop is a tremendous opportunity for farmers to do holistic planning," he said.

The workshop, "Managing Your Acreage: Small or Large," was held two nights, two weeks apart late last fall. Howell said the first session was to familiarize the farmers with the RFFP notebook. "The notebook consists of several different sections that are designed to make the farmer look at his farm with a different set of eyes," Howell said.

Wood said the first workshop session allows the agents to "bring the farmers in the first day and show them how the notebook works." Then he said they provided the participants "with a deadline to at least get started on the notebook before the next meeting".

Howell said breaking into two sessions doesn't overwhelm the farmers. "It gives them the opportunity to ask questions. Then they can go home and work on the notebook as a family," she said.

Over 18 farm families were represented at the first meeting with 10 families returning the second night of the workshop. While most farmers did not complete the notebook between the two meetings, CWFP staff is available to assist them with this process at anytime.

Howell said that a couple of families attending the meetings have completed the RFFP and she expects three or four more to complete the notebook before spring is over.

"In the next few weeks, over half of those attending the second meeting will have completed the RFFP. We're happy that these families have set goals to work toward better water quality on their farms," she said.

In Howell's opinion, the meeting was a success because "it raised awareness of water quality and management practices. There were a lot of people that got the drift of what they need to do and what they were doing right." Howell said. "We think this is a great example of how county extension agents can partner with other counties and groups like KRC and offer farmers some real beneficial information."

Wood said the water quality would benefit from the management changes that these farmers make. "Water quality changes are ongoing for years to come. It benefits the children and grandchildren of these producers," he said.

In addition to the \$250 incentive payment, Wood also said the farmers completing a notebook received coupons for five free soil samples and a grazing stick.

Continued on page 15

Clean Water News

CWFP Profile ...

Continued from page 5

They installed guttering and the water was rerouted straight to the creek without being contaminated by the livestock waste.

The Schmitz Dairy operation outgrew the original lagoon, which collected milk barn waste. Therefore, they replaced the smaller lagoon with a new, larger lagoon. The new lagoon was constructed next to the old site which was filled in and seeded to grass along with an adjacent buffer strip. The new lagoon will be drained once a year and the waste will be applied to the fields. CWF-RFFP cost share was used to drain and dredge the old lagoon as well as purchase the equipment for dewatering the new lagoon and fencing around it.

CWF-RFFP cost share was also used to plant grass buffer strips; install fence around the lagoon; reshape the heifer and bull lots to divert runoff through buffer strips, and install fencing on those lots.

Amy said the best thing about completing the RFFP and applying for cost-share through the CWF-RFFP was the people that came out and provided help and ideas. Joe said they provided good advice. "The more we talked about it, the more we learned," he said.

The couple's most recent project includes a demonstration project through the Tuttle Creek Watershed and Restoration and Protection Strategy (WRAPS). Joe has been involved in the Tuttle Creek WRAPS since last fall and became aware of the possibility of a demonstration project in February.



The manure pit allows the Schmitz dairy to manage the dairy waste in a more timely manner, and use of the manure on cropland reduces their fertilizer costs.

The project includes stabilizing an eroding streambank near a barn and silo. Amy said the WRAPS demonstration project allowed them an opportunity to fix it with the assistance of experts. Kansas State University Watershed Specialist Mike Christian asked Charles Barden, Extension Forester for KSU, to help solve the erosion problem along the Schmitz's creek.

So Barden, along with three KSU students over their spring break, helped Joe stabilize the bank using a cedar tree revetment. "A red cedar revetment is labor intensive, but can be installed without heavy equipment disturbing the site and being driven down the stream," Barden said. He said the revetment uses special duckbill anchors, driven three feet deep into the bank and attached with steel cable to the cedars.

"The cedars deflect the current from the edge of the bank, and help filter out sediment from high flow or flood waters. The dense branching pattern and foliage of pasture grown cedars make them ideal for this use. Other species can be used but cedars are the best," Barden said. The cedars were readily available for Joe,

as he cut the trees from a neighbor's pasture.

The six Schmitz children participated by assisting with the willow tree cuttings. The willow cuttings were placed into the bank and will develop into new willow trees. "The willow cuttings will sprout roots to hold the soil, and grow multiple stems and branches which will slow down the flood waters and protect the bank as the cedar foliage gradually wears away," Barden said.

"It is a lot of hard work," Joe said. He said he looks forward to seeing the project take shape and see how the dirt will settle in around the cedar trees. Barden said hopefully this will not have to be done again at this site. "Sometimes a little maintenance is needed over the first year or two like when a cedar gets torn out by flood waters or ice. Then a replacement should be installed," he said.

Amy and Joe credit the RFFP for helping them make the appropriate water quality changes on their farm. "Now that we've accomplished most of our goals, we'll need to do (the assessment) again!" Amy said. □

Meet KRC Board Member Paul Ingle

Whiting, Ks. - New Kansas Rural Center board member Paul Ingle likes to get his feet wet—literally. Paul, who is the project coordinator/hydrologist for the Melvern Lake Watershed Water Quality Project, said he prefers to be out walking the land completing a stream assessment than sitting in an office doing administrative work.

A Shawnee County native and resident, Paul earned agriculture mechanization and agronomy degrees from Kansas State University, and later a Master of Science degree in environmental science.

Paul was introduced to KRC while working on a sustainable agriculture project during his master's program at KSU. It was at this same time that Paul said he "had a big awakening". He said he wondered "How is it that there is so much food in the world and so many people are going hungry?" Paul said that he had a change in thinking in regard to agriculture. And he said KRC supports that sustainable way of thinking.

"KRC is a holistic thinking organization, covering issues like rural advocacy and sustainable ag," he said. "It ties the pieces together."

Paul said he was honored to be asked to join the KRC board in February. "Apparently, I'm making an influence on the people around me," he said. As a board member he said he is able to "further convey the message of the Rural Center." Paul said his wide array of experiences, including two years with the Peace Corps as an agriculture extension agent in Honduras, brings another vantage point to the board.

One of Paul's main concerns is the future of land ownership and management. "Who will manage the land in 20 years?" he asked. In Paul's opinion land is viewed as a commodity—something that is bought and sold. "How do we get society to look at it differently--to view it as a partner?" he asked.

Paul lives north of Topeka with his wife, Regina, and fourteen-year-old son, Ryan. □

Board Members to D.C. Farm Bill Conference

Whiting, Ks. - KRC board members Laura Fortmeyer, Fairview, and Jackie Keller, Topeka, traveled to Washington, D.C. in March to talk with members of Congress and their staff about the 2007 Farm Bill and sustainable agriculture.

Fortmeyer and Keller were part of a delegation of over 150 farmers, ranchers and farm and rural advocates attending the Sustainable Agriculture Coalition's "Roots to Reform" Farm Policy Summit. Fortmeyer, Keller, and KRC staffer Mary Fund, participated in farm bill related workshops, and spent a day meeting with staff from Rep. Boyda and Moran's offices and from Sen. Brownback and Roberts' offices.

"Our talks focused on key programs such as fully funding the Conservation Security Program (CSP) and Value Added Producer Grant Program (VAPG), and providing better support for organic production and the Sustainable Agriculture Research and Education Program," stated Keller who farms organically near Topeka.

A fully funded CSP would provide more support to farmers for conservation based farming while providing public benefits of water quality and soil protection. The VAPG provides assistance to farmers looking for alternative marketing or value-added business options. Farmers interested in organic production benefit from cost-share assistance to help with the transition and from research.

"I want to see a farm bill that focuses on communities rather than commodities, people rather than products, good food rather than cheap food," summarized Fortmeyer. □

Keating Receives Women of Achievement Award

Salina, Ks. - Sue Keating, former KRC board member, recently was recognized at the Women of Achievement Awards sponsored by the Girl Scouts of Central Kansas in Salina. Sue was one of 12 Salina area women who were selected from a pool of 52 nominations for outstanding contributions in a variety of categories.

Sue was recognized in the agriculture category for her work as

co-manager of the Prairieland Market in Salina.

Sue and husband Jim operate a certified organic farm near Minneapolis north of Salina. Sue also was active in the Salina Food Policy Council, and the Land to Hand Farm Alliance, a marketing group that led to the formation of the Prairieland Market, a food cooperative. □

Resources and Events

Grazing Teleconference Call Scheduled

“Low-Stress Animal Handling Practices with Dr. Lynn Locatelli” is the subject of a teleconference call scheduled for Tuesday, June 5, 7:30 p.m. to 9 p.m. Dr. Locatelli was featured at the Kansas Graziers Association Annual Meeting in January in Assaria. The call provides a way to follow up on her recommendations and ideas about animal handling. For more information about how to participate, contact Jerry Jost at 785-766-0428 or jjost@myvine.com. Or go to the KRC website at www.kansasruralcenter.org/publications/LowstressTcall.pdf. □

Marketing the Market Publication Available

A new KRC publication, entitled “Marketing the Market” is now available online. You can view it at www.kansasruralcenter.org/publications/MarketingTheMarket.pdf. The publication was developed through a partnership with USDA’s Risk Management Agency. □

Summer Rangeland Schools Set

The Kansas Grazing Lands Coalition (KGLC) has scheduled two “Principles of Rangeland Management: Grass and Animal Ecology in Kansas” Schools for August 2007. The Eastern school will be held August 14-16 at Flint Oak in Elk County, and the Western school will be August 21-23, Camp Mennoscah, Kingman County. The schools are co-sponsored by USDA NRCS, Kansas State University Research and Extension, and the State Conservation Commission. More information will be available later. Visit the KGLC website at www.kglc.org. Or contact KGLC at 620-241-3636, or 785-922-7061. □

Sensitive Crop Locations Posted on Web

Growers of organic and sensitive crop are encouraged to post their crop locations on a web page hosted by the Kansas Department of Agriculture’s pesticide and fertilizer program, so pesticide applicators will know where to use extra caution to prevent drift. Kansas Ag Connection reports that by making sensitive and organic crop locations available to applicators via

the internet, opportunities for drift will be reduced. Growers who want to list a crop location on the website can access a form at www.ksda.gov/includes/document_center/pesticides_fertilizer/Drift/Request_to_List_Crop.pdf. Applicators can use the same address to access sensitive crop location information. □

Clean Water News

Extension Workshops....

Continued from page 12

Those who completed the notebook are also eligible to apply for up to \$5,000 in cost-share from KRC to make water quality improvements on their farm or ranch.

“The deadline for this spring’s cost-share applications is past” said Howell. “So if you didn’t make that one, we can work with you for the next round or help you pursue other sources.”

The Clean Water Farm-River Friendly Farm Project is a project of the Kansas Rural Center, funded by U.S. EPA 319 Funds, through the Kansas Department of Health and Environment. □



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