

The Land Stewardship Letter

Keeping the Land and People Together



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MAY/JUNE 2002

Daring to Drop Drugs

Industrial ag says ending the use of antibiotics as livestock growth-promotants would bring about radical changes in farming. Guess what? Industrial ag is right (last in a series).

By Brian DeVore

It's an overcast, unseasonably cool July morning in the northwest corner of Iowa, with stop and go rain showers delaying the small grains harvest yet again on the Wilson farm. Such weather can bring a lot of frustration and stress to the land, as farmers watch the value of their crop diminish with every falling raindrop. But Colin Wilson seems to be unconcerned about the rotten weather as he stands in a roomy shed holding a speckled baby pig. Other piglets, along with their mothers, are sleeping, feeding or playing in the deep-straw bedding that covers the building's floor. The shed is full of contented, muffled sounds. Stress and frustration aren't present in this particular scene, and, Wilson explains to a visitor, that's a major reason these baby pigs will not need antibiotics during their lifetime on the farm. Less stress means less of a need for drugs that can help keep pigs healthy and productive.

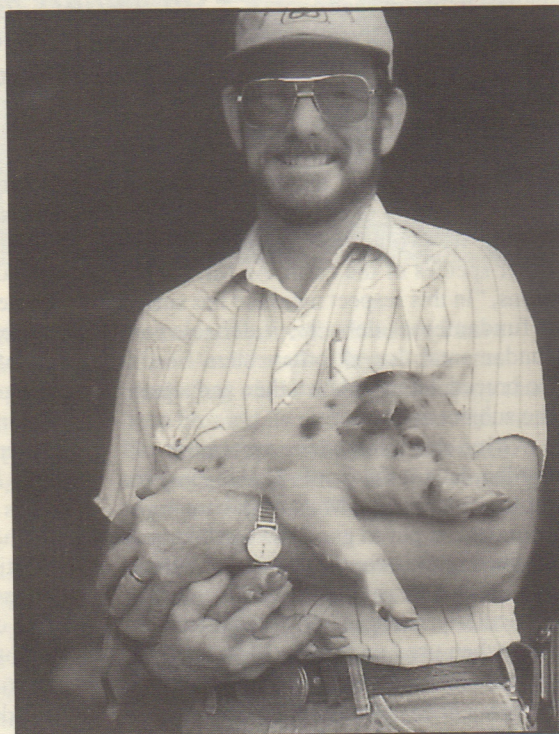
"Our philosophy is that if that sow is real comfortable and content, she'll do a good job of taking care of her pigs, raising

pigs, and that's been proven out," says Wilson as he returns the piglet to its mother.

This scene isn't just fodder for an Americanized James Herriot story. It's proof that through good genetics, revamped housing and management based on solid animal husbandry, hogs can be raised without pharmaceuticals.

The Wilson pigs certainly are not the norm. In fact, during the past 50 years, antibiotics have nothing short of revolutionized meat, poultry and dairy production (see March/April 2002 *Land Stew-*

ardship Letter). In fact, large-scale total confinement livestock production is possible because of the development of pharmaceuticals that can be administered to animals living under less than optimal conditions. This isn't just a case of treating sick animals for specific illnesses. In fact, U.S. livestock are fed more than 24 million pounds of antibiotics annually for purposes other than to treat disease, according to the Union of Concerned Scientists. These "subtherapeutic" dosages are being used to increase feed efficiency and put pounds of meat on faster. Physicians, scientists and,



Colin Wilson is among a growing group of farmers who are dropping antibiotics in their livestock production enterprises. (LSP photo)

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A Modest Proposal

for removing the burden of animal wastes upon the country and making them beneficial to the public

By Ray Kirsch

The *Land Stewardship Letter* is published six times a year by the Land Stewardship Project, a private, nonprofit organization. The mission of the Land Stewardship Project is to foster an ethic of stewardship for farmland, to promote sustainable agriculture and to develop sustainable communities. Members of the Land Stewardship Project receive this newsletter as a benefit. Annual membership dues are \$35.

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It is a sad truth that we are in this modern age up to our elbows with difficulties of excess. One can hardly throw a brick without hitting some young scribe or singer drabbling out the too much of this and the overflow of that. Particularly distressing of late in this river of discontent is the overflowing of animal manures in the kingdom.

The number of livestock farms in the country is reckoned to be very near one million. And in an indication of the depths to which we're being submerged, these farms are home to 95 million "animal units," excreting 2.2 trillion pounds of manure each year. By most any estimate, a goodly amount of excrement.

And here good reader, the author is sorely tempted to pursue a digression on "animal units." In lieu of such a lengthy and involved pursuit, let us resolve with the following. Beyond any modicum of accounting usefulness, these "units" are far more an indication of the gross failure of one species, *homo sapiens*, in its evolutionary contract with the other species of the earth. As Mr. Kundera sums, "In this respect mankind has suffered a fundamental debacle, a debacle so fundamental that all others stem from it." So braced, let us proceed then and return to the subject at hand.

Given this tremendous excrement burden, let not the gentle reader jump too far to a conclusion. Most of this manure poundage is put to good use fertilizing and improving the country's land. Indeed the manure is a treasure of nutrients, most particularly nitrogen and phosphorus. And when used on farms, these nutrients produce a bounty that keeps the urban citizenry at bay, though they whine and complain the dollar day through.

Nonetheless, there is an excess, a leftover slice of this 2.2 trillion pounds

that must be dealt with. A primary reason for this slice is the demise of the farm and the rise of the confined animal feeding operation. The alert reader will note that the latter is not a farm. Not in a literal or figurative sense. It is a feeding operation. And thus (let us proceed together, do not fear) an excrement operation.

These operations and their like are not, as a farm may be, in nutrient balance. Indeed, because of the confining of animals (not to mention our ferocious appetite for animal flesh), the country has an excess of 1.4 billion pounds of nitrogen and 900 million pounds of phosphorus. And here "excess" means

these operations don't own or control enough land to appropriately use these manure nutrients.

To be thorough in our analysis, however, we must go one step further. What about the neighbors?

Couldn't the neighbors use some of these excess nutrients? And the answer is—a qualified yes. Yes, they can use some of the nutrients. But even here there are whole counties that cannot absorb these wastes. Counties submerged in manure. Counties that to date have survived only by hauling these wastes to *terra incognita* within the union. Or over-applying excrement to the lands and streams of *terra locale* complete with aquatic dead zones of all shapes and sizes.

These rivers of excrement, these counties submerged, these hauling endeavors—to be sure—they have not gone unnoticed. The brightest minds and patriots of the kingdom have turned their attentions bootward. Proposed solutions include energy production, industrial use and central facilities for treatment and

"Granted, burgers composed completely of manure may be off-putting for even the hungriest of scribes."

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processing. And indeed, as these are biological nutrients of the first-order, practical, effective solutions are in demand.

Therefore, I shall now humbly propose my own solution which I hope shall meet with little objection.

In light of the valuable nutrients involved and the poor nutrition of the citizenry, particularly those whose poverty of time subjects them to the miseries of fast food, I suggest that these nutrients be consumed as a nutritious, wholesome food under the guise of the popular burger.

Thus, with approximately 290 million citizens in the land and roughly 2.3 billion pounds of excess excrement nutrients, the dividend is eight pounds per person each year. Or in the more familiar language of quarter-pound sandwiches—32 manure burgers.

Granted, burgers composed completely of manure may be off-putting for even the hungriest of scribes. Thus, I propose, that the manure be mixed with real meat and

other constituents in proportions that are practical. If we assume a modest goal of 25 percent manure in our burgers, we have a total of 128 burgers per year, or a little over two burgers per week per person. For all parties concerned, an almost ideal rate of consumption.

And certainly I draw here on the work of others who have proposed central processing solutions of one sort or the other. Already food corporations in the land are mixing lean, foreign meats with fatty, domestic meats to create burgers *à la mode*. It would require little retrofitting to include a nutrient rich third stream of manure in the mix.

Now I am certain there are readers

who are skeptical of the solution I propose. That it may not, among other concerns, be safe or acceptable to the general public. And I must confess that I too had my initial doubts. However, the dark clouds have been cleared away for me by the most fascinating application of nuclear age technology—irradiation.

I must confess that I had not intentionally pursued this breath of fresh air. However, one can hardly avoid of late stumbling over what is certainly an irradiation brouhaha on the streets and in

reader, I pray, do not accept euphemisms. This is the real deal—excrement. As Mr. Schlosser succinctly lassoes the subject, "There's shit in the meat." The *E. coli* is not part of the animal; it's part of the manure.

The good news is that the irradiation is effective at neutralizing the detrimental effects of the manure and loathsome manure-riding bacteria. Granted, current manure levels are very low, mere droplets here and there. Research will be necessary to examine the safety of burgers as



Illustration by Sean Sheerin

the press. And such a stumble I have taken. And though it seems there are competing views of this technology that have brought its particular use with meat-like products to a zero sum standstill, it is my intention to rise above this slinging, to proceed upon that highest of plains—the public good.

And here, as is frequently the case, the public is far ahead of the punditry. It turns out that citizens of this great land are already participating in an unscientific study of consuming irradiated manure burgers. Safety-conscious fast food-eating consumers are gobbling up burgers that are zapped with electron beams to kill lurking *E. coli* bacteria. And here good

the manure level is increased. I propose rigorous studies at 5 percent increments until we reach our goal of 25 percent manure content. Certainly safety will be the focus of these studies. However, I see no reason why food scientists could not also focus on other attributes—e.g. the possible flavorful marinade effects that the manure might impart.

Some consumers are wary—drawing the conclusion that irradiated burgers might be radioactive or in some manner full of unhealthy by-products. However, initial consumer survey results show this

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...Modest Proposal from page 3

to be a small, over-educated faction. Moreover, most customers feel that if the radiation has sufficiently pummeled the manure and associated fiendish life forms into submission, then the burger is most likely sterilized and safe for consumption.

As for the taste or general acceptability of manure burgers, fast food consumers are once again quashing all naysayers. Indeed, the primary concern of fast food operators is that the burger tastes good. Fortunately, the consumer

response to date is just that—the burger does indeed taste good. Here again, more research is needed.

These burgers contain small manure amounts and flavors may change as manure levels are increased. By all means, we want to avoid any undesirable epicurean experiences. Again, food scientists may aid our cause. Certainly there are tinctures and compounds that could elevate an irradiated manure mélange into a mouth-watering sandwich.

I must remark that current efforts focused on fast food consumers are directly on target. It should be noted that whereas the grocer must display these irradiated manure products with a symbol to indicate their sterilization, no such notice is needed at restaurants. Restaurants may sell all manner of manure-laden products with nary a squeak. And at fast food restaurants we combine this freedom with the most advantageous of consumers. For here we find children and parents whose concern for their children's health is ambivalent at best, providing what is almost certain to be a positive response to these manured products and thus a springboard for further societal acceptance, even acclaim.

Thus, I believe the proposal here put forth has great promise and many advantages.

First, it will unburden our lands of animal excrement—especially those counties currently hauling furiously to remain above the brown.

Secondly, the bounty of nutrients in

these manures shall be put to good use nourishing the citizens of the kingdom. And here we might also include our heartfelt concern for the poor and hungry in developing counties to whom we may be able to export those products deemed inedible in our own land.

Thirdly, this proposal draws upon technologies already in use—namely irradiation and the central processing of meat and related products. Indeed, we should not be limited to manure in our thinking about burger constituents. As I

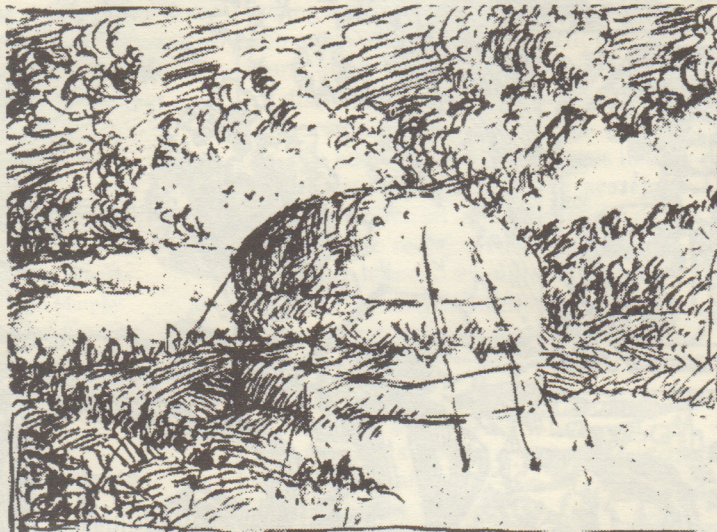


Illustration by Sean Sheerin

have previously noted, this is an age of excess. Certainly there exist other looming crises that might be averted by piggybacking on this proposal. Examples that quickly (and most unfortunately) come to mind include heavy metals, sewage sludge and radioactive waste. The last is a particularly interesting case as one can imagine a specific matching of radioactive waste content to manure content such that the process of irradiation may be unnecessary. The logistics and economics of such a scheme are worthy of investigation.

Fourthly, by appealing to fast food operators and consumers we sidestep bothersome labeling requirements and those factions charged by such indicators and instead engage time-challenged consumers—consumers who need not know beyond taste and price. Thus, we greatly increase our chances for solving a truly vexing problem in the kingdom.

Finally, I am not so wedded to my own solution as to reject others proposed by wise patriots of the union that are equally

innovative, cheap and effective. But before such authors advance their own schemes, I ask them to consider thoroughly the merits of this proposal and the dire situation in the countryside calling for direct and early action.

I must profess that I offer this proposal with no other motive than the public good of my country—to see our land and people freed of this excrement excess and provided for with safe and nutritious foods. I myself have no conflicts of interest, no financial stake in any processor, meat packer, irradiator, or fast food operation, and no stocks of animal manure seeking shelter.

Thus, I ask the reader to look kindly upon this proposal and recommend it as they see fit. □

Ray Kirsch is the Farm Coordinator for the Midwest Food Alliance and a member of LSP's staff. Kirsch is chock-full of modest proposals, and received inspiration for this particular one from writer Jonathan Swift, who satirized in 1729 that the Irish could deal with poverty by eating their children.

For more on Swift and other references made in this essay, check out:

• Jonathan Swift's Modest Proposal of 1729. www.art-bin.com/art/omodest.html

• The Unbearable Lightness of Being. Milan Kundera. 1984. Harper & Row, New York, NY.

• Fast Food Nation. Eric Schlosser. 2001. Houghton Mifflin, New York, NY.

• Confined Animal Production and Manure Nutrients. USDA-ERS Agriculture Information Bulletin 771. 2001. www.ers.usda.gov

• "Dairy Queen expands use of irradiated ground beef," Ann Merrill, Star Tribune, 7/10/02, page D-1. Minneapolis, Minn. www.startribune.com/business

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to print letters, commentaries, essays and poems on issues we cover.

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Farm Beginnings to start new classes in October & November

Classes for the 2002-2003 Farm Beginnings program begin Oct. 26 in southeast Minnesota and Nov. 2 in the western part of the state. The deadline for applying is Oct. 1 in western Minnesota and Oct. 9 in the southeast. The classes usually fill by early fall, so those interested should apply soon.

This is the sixth year the Land Stewardship Project has offered Farm Beginnings classes in southeast Minnesota, and the third year for the western Minnesota program. Farm Beginnings provides participants an opportunity to learn firsthand about low-cost sustainable methods of farming.

Of the more than 90 people who have graduated from the program, more than 60 percent are involved in farming, according

to Karen Stettler, who coordinates the southeast Minnesota program. The program offers training through a series of sessions during the fall and winter. Topics covered include Goal Setting, Decision Making, Establishing a Business Plan, Money Management, Biological Monitoring, and Innovative Marketing.

But the foundation of the program is a mentorship component that links established farmers with course participants through on-farm educational tours (see below). This farmer-to-farmer networking has proven immensely

successful, and Farm Beginnings participants have drawn on the expertise and experience of farmers who are doing everything from management intensive rotational grazing to commercial vegetable production.

Farm Beginnings is again this year offering a zero-interest livestock loan program, made possible by a generous \$250,000 grant from Heifer Project International. Through this program, LSP offers livestock to beginning farmers who have successfully completed the Farm Beginnings program, demonstrated financial need, and are prepared to care for the livestock □

Want to participate?

To apply for the southeast Minnesota Farm Beginnings program, call Karen Stettler at 507-523-3366, or e-mail her at stettler@landstewardshipproject.org.

For the western Minnesota program, contact Amy Bacigalupo in LSP's Montevideo office by calling 320-269-2105 or e-mailing amyb@landstewardshipproject.org.

Farm Beginnings is also looking for established farmers to serve as mentors to beginning farmers. Call Karen or Amy for more information.

Farm Beginnings takes to the field

On-farm educational tours are key to the Farm Beginnings experience. These farm visits provide an opportunity for beginning farmers to ask questions and receive input on practical issues facing them on the land.

Below: In late June, Farm Beginnings participant Eric Carlson (second from left) of Milan, Minn., hosted other course participants, as well as his mentor, Don Struxness (in cowboy hat), a grass-based livestock producer. During the visit, Carlson discussed his cow-calf grazing enterprise, which utilizes U.S. Fish and Wildlife Service land through a special arrangement.

Right: Farm Beginnings participants Mark and Wendy Langes also hosted an educational tour near Milan in June. The Langes are producing organic crops and launching a meat goat enterprise. (LSP photos)





Hog farmers hail beef checkoff ruling

Hog farmers are applauding a June 21 ruling by a South Dakota Federal judge that the mandatory beef checkoff program is unconstitutional and should be terminated. They say the decision will help their fight to end the mandatory pork checkoff, which is being challenged in Federal court on similar grounds by the Campaign for Family Farms (CFF). The Land Stewardship Project is a founding member of CFF.

In the ruling, U.S. District Court Judge Charles Kornmann said the beef checkoff violates cattle producers' basic rights under the First Amendment. Kornmann's ruling said, "cattlemen should not be required to pay for commercials—a form of speech—that they oppose...and that cattle producers are being forced to pay for ads that benefit others that sell beef such as restaurants and other retail outlets." Judge Kornmann also ordered a halt to collections of the beef checkoff, into which cattle producers pay approximately \$80 million annually. In July, the U.S. Court of Appeals in Minneapolis granted the USDA a stay on Kornmann's order, pending appeals. That means, for now, beef producers are still required to pay the checkoff.

"It's unconscionable that the Bush administration's USDA continues to require farmers to pay the pork and beef checkoff after nationwide democratic votes and court decisions have made it clear it's time to stop forcing farmers to pay," says Mark Schultz, LSP's Policy Program Director.

The CFF has a First Amendment lawsuit pending in Federal District Court in western Michigan against the mandatory pork checkoff program. The group says the pork checkoff violates the U.S. Constitution and infringes on hog producers' right to free speech by forcing them to pay into a program that supports factory-style hog production and corporate control of the industry, and is detrimental to their interests.

"We don't support the mandatory pork checkoff program. Our checkoff dollars help packers and retailers, not hog farmers," says Renville County, Minn.,

hog farmer Monica Kahout, a member of LSP's Board of Directors. "That's why our share of the pork dollar has declined, while packers' profits are up. Even after a majority of American hog farmers voted to end the pork checkoff, we're still being forced to pay it. It's just plain wrong. We shouldn't be forced to pay for a program that works against us."

The pork checkoff program was started in 1986 after Congress passed a law mandating that hog farmers pay into the fund. It generates about \$45-\$50 million annually. Money collected under the program goes to the National Pork Board. In recent years, most of that money ended up in the coffers of the National Pork Producers Council.

In 1998, the Campaign for Family Farms initiated a national petition drive calling for a hog farmer referendum to decide if the program should be ended. After 19,000 hog farmers signed the petition, the USDA conducted a vote in August-September 2000. Fifty-three percent of the over 30,000 U.S. hog producers who voted chose to terminate the mandatory pork checkoff. Following the announcement of the results in January 2001, then-U.S. Secretary of Agriculture Dan Glickman ordered the termination of the program.

However, in a move that shocked hog farmers, the industry and various members of Congress, newly appointed Agriculture Secretary Ann Veneman cut a backroom deal with the National Pork Producers Council in February 2001 to throw out the results of the democratic vote and force hog farmers to keep

paying the checkoff. This action led to the Campaign's lawsuit against USDA, which includes a specific claim that the mandatory pork checkoff violates hog producers' constitutional rights by infringing on the First Amendment. □

LSP staff changes

Katie Person has left the Land Stewardship Project to pursue a career in human resources. For the past two years, Person has been LSP's Development Associate. She was instrumental in launching LSP's major donor program.

Melissa Fischbach has joined LSP's western Minnesota office as an intern research assistant. Fischbach is pursuing a master's degree in agriculture and horticulture at the University of Minnesota. She holds a bachelor's degree in biology from Carleton College and attended the School for International Training in Madagascar. She has also worked as an agricultural assistant in Sweden



Melissa Fischbach

and as a U.S. Forest Service technician. During her internship, which is being sponsored by the University of Minnesota's Community Assistantship Program, Fischbach will help with the mentoring component of the Farm Beginnings program. □



The Land Stewardship Project's southeast Minnesota office has a new front window design, thanks to the talents of Leslea Hodgson. Hodgson, who has a sign and illustration business in Fountain, Minn., is a Farm Beginnings graduate. (photo by Karen Stettler)

LSP members expose failure of top state environmental review agency

Land Stewardship Project members took on Minnesota's top environmental review agency at a June 20 hearing in St. Paul. LSP members from Steele County, supported by Waseca County LSP members, presented to the Environmental Quality Board (EQB) reasons why two factory hog farms proposed for their community require environmental review. It is believed this is the first time the EQB itself has weighed in on a petition for environmental review of a feedlot.

The EQB manages the environmental review process and sets guidelines for other agencies to follow when doing environmental reviews. The EQB Chair is Minnesota Commissioner of Agriculture Gene Hugoson. The Minnesota Department of Agriculture (MDA), under Hugoson's direction, has been an active opponent of environmental reviews of large feedlots, seeing such reviews as obstacles to expanding industrial-scale livestock facilities in Minnesota. MDA staff routinely testify on behalf of the proposers of large livestock factory farms despite environmental concerns voiced by citizens and experts.

During more than two and a half hours of testimony, LSP farmer-members and other residents of Steele County's Havana Township presented evidence of the potential environmental threat posed by two proposed hog operations. Each of the operations would house 2,400 hogs. Together they will produce over 1.5 million gallons of liquid manure annually. The citizens asked the EQB to require a minimal review, called an Environmental Assessment Worksheet (EAW).

LSP members told the EQB that finishing the operations would pollute a

local creek during land applications of manure, cause cumulative air and odor problems, increase road traffic, deplete water resources and promote the development of antibiotic-resistant bacteria. They also pointed out that air pollution from the facilities could threaten the future of a church that stands between the two sites. Close to 30 residents are within a mile radius of the two facilities. The citizens provided the EQB scientific research showing the negative impacts similar large-scale livestock operations have had

Call Gov. Ventura

Contact Minnesota Gov. Jesse Ventura's at 800-657-3717 and tell him to remove Agriculture Commissioner Gene Hugoson as chair of the Environmental Quality Board.

on human health and the environment.

However, ignoring concerns of local citizens, the EQB voted 9-0 not to require minimal environmental reviews of the proposed hog operations.

This isn't the first time the EQB has opposed a minimal environmental review of these facilities. Citizens' petitions for EAWs were rejected by the EQB shortly after they were submitted on March 27. But in that case the EQB incorrectly ruled that the two feedlots had received all appropriate permits despite petitioners pointing out that the projects still required a Minnesota Department of Natural Resources water appropriations permit. The Natural Resources Department reaffirmed that the facility failed to obtain a water appropriations permit in a May 28 letter to the EQB. The EQB was then

forced to officially consider the petitions for environmental review. Normally EAW petitions for feedlots are handled by the counties or the Minnesota Pollution Control Agency.

For an EAW to be triggered, petitioners only need to show that the proposed project may have the potential for environmental impact. However, the EQB ruled that the citizens had not shown ample evidence that even a low-level environmental review was necessary.

"The EQB showed it is not standing up for the interests of Minnesota's citizens and its environment by refusing to conduct even a minimal environmental assessment on this project," says Jeff Heil, an LSP member and a neighbor to the proposed facilities. "This is another example of state officials putting the interests of industrial agriculture ahead of the public good."

"The EQB's policies are misdirected and it starts at the top," says Heil. "Hugoson has been running the show too long. It's time he was replaced as the board's chair and for Minnesota's EQB to reevaluate and change its policies toward large-scale livestock." □

Court to rule on turkey operation

A request to overturn a county board of commissioners' decision and order an Environmental Assessment Worksheet (EAW) on a controversial turkey confinement was heard July 1 in First District Court in Red Wing, Minn.

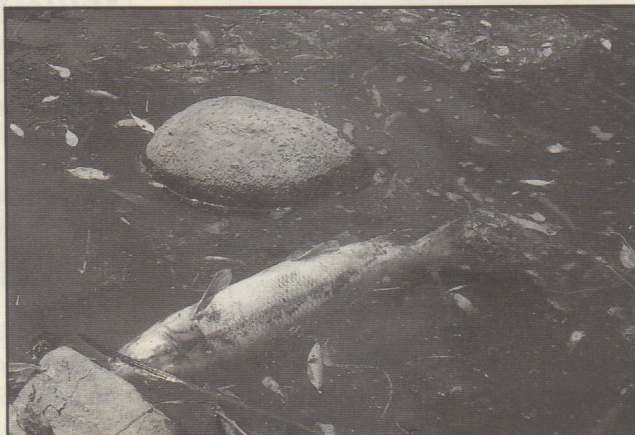
The proposed turkey facility would be a contract operation for the Jennie-O Turkey Store Company, which is a subsidiary of Hormel Foods Corporation, and would house 35,000 turkeys. Thirty-eight neighboring farmers and rural residents, including several Land Stewardship Project members, submitted a petition asking Goodhue County to order an EAW. On May 7, the Goodhue County Board of Commissioners denied the petition by a 4 to 1 vote.

Chief among the concerns listed in the citizen petition is that the proposed site is prone to flooding. The neighbors submitted pictures of the area showing it under water from a July 1990 rain.

The First District Court has 90 days to issue a ruling.

Meanwhile, LSP members and other Goodhue County residents who filed the petition are pursuing a meeting with Jerry Jerome, chairman and chief executive officer of Jennie-O Turkey Store. □

Manure leaking from a large-scale hog operation in June 1997 killed 690,000 fish on Renville County's Beaver Creek. Despite a rash of environmental problems associated with factory farms, Minnesota Agriculture Commissioner Gene Hugoson favors weakening current regulations, and calls the state environmental review process a "trumped up roadblock." (LSP photo)



Dialogue taps wisdom of 5 generations

Sixty-six people gathered in a western Minnesota church basement on a Saturday in late June to discuss the vitality of rural communities and the future of agriculture. The meeting, held in the small community of Milan, was a special "intergenerational dialogue" developed by filmmaker Jim Gambone and staff members of the Land Stewardship Project. The dialogue was held in conjunction with the 20th anniversary celebration of the making of *Foreclosure*, a film about the hardships faced by family farmers.

The film, made by Gambone over a

three-month period and involving 275 people from the Milan area, compared a farm auction from the 1980s to the penny sales of the 1930s, when bidders would buy goods and return them to their owners. The film's anniversary was used as an opportunity to launch the intergenerational dialogue, an approach to community building based on two simple but very powerful concepts: 1) each of the five living generations' perspectives is unique and valuable and 2) people from all generations need to be involved in solving community problems or creating opportunities. Indeed, LSP staff member Amy Bacigalupo established five panels, representing people who were born in each of five generations (people ranging in age from 3 to 87 were represented). They were asked questions such as "Why would you choose to live on a farm?" and "Would you do it again?"

During the dialogue, entitled, "The Future of the Family Farm is in Our Hands: A Community Conversation for All Ages," participants brainstormed ideas for creating sustainable rural communities. They discussed how to

develop creative options for farming and farm marketing, as well as ways to get lawmakers on the local and state level to see that current policies aren't working. In the end, it became clear that whatever positive change is sought, it begins in communities like Milan.

"The answers to the future of rural communities lay in the hands of rural citizens," says Bacigalupo. "Clearly the time for people to come together and create new ways for farmers and community members to work together is here. This dialogue was a critical first step in this process."

For more information, contact Bacigalupo at 320-269-2105 or amyb@landstewardshipproject.org. □

Foreclosure available

Copies of the movie *Foreclosure* are available. A VHS is available for \$15 plus \$2.95 shipping, and the DVD version is \$25 plus \$2.95 shipping. Call Bev Struxness at Lac qui Parle Community Education (877-889-4153) for more information.

Food & Farm → → → → Connection

Stewardship Food Network

The *Stewardship Food Network* is a list of Land Stewardship Project members who produce meat, dairy products, eggs, vegetables, fruit, flowers, grain and other goods in a sustainable manner. The Network also lists LSP member-businesses selling or processing food produced by other LSP members.

Some of the production methods used by the Network farmers include certified organic, antibiotic and hormone-free, free of genetically modified organisms, pasture-based, integrated pest management to reduce pesticide use, deep-bedded straw livestock housing and conservation tillage.

The listing provides contact information for the farmers so consumers can call or e-mail them personally to learn more about production methods, availability of products and prices. For a complete listing, contact our Twin Cities office at 651-653-0618 or go to our Web site

(www.landstewardshipproject.org) and click on *Food & Farm Connection*.

LSP will periodically update and make corrections to our Food Network list. If you are an LSP member who would like to be listed, please contact us at our Twin Cities office. Here are the latest additions:

Northwest MN

□ Native Harvest

A Project of the White Earth Land Recovery Project
32033 East Round Lake Road
Ponsford, MN 56575
Phone: 888-779-3577
Fax: 218-573-3448

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Beat the (Farm Bill) devil

By Caroline van Schaik

The devil may be in the details of the new Farm Bill, but that devil will have to contend with Land Stewardship Project staff who are working at the state level to help shape rules for Minnesota that are friendly to family farms and the environment.

Federal rule makers will send national rules to each state for conservation programs that are part of the 2002 Farm Bill signed by President Bush in mid-May. However, there is room to implement the programs according to individual state priorities, which are set by those on the State Technical Committee (STC) and its numerous subcommittees.

In Minnesota, the STC is directed by Bill Hunt, state conservationist and head of the state's National Resources Conservation Service (NRCS). This year, there are 15 subcommittees to address a host of specific conservation-oriented aspects of the farm bill. LSP will participate on at least three of them—Conservation Security Program (CSP), Environmental Quality Incentives Program (EQIP) and Grazing Lands Conservation Initiative (GLCI)—as well as on the STC itself. Staff members have already attended a STC meeting and an EQIP subcommittee meeting.

During the last round of STC recommendations for the 1996 Farm Bill, LSP and its allies on the EQIP subcommittee won a significant battle to prevent large-scale confinement livestock operators (with 1,000 animal units or more) from receiving Federal cost-share dollars for manure management and storage.

In the wake of the new farm bill, the subcommittee met this June and one of the few positive outcomes of this initial meeting is that EQIP dollars will not fund new and expanding confinement livestock operations of more than 1,000 animal units. Nothing was clarified about the availability of EQIP funds to existing large-scale livestock operations.

Hunt made it clear at a recent STC meeting that he wants to hear from farmers and more specifically, that family-sized farmers have an equal voice in all conversations. The committees represent a range of organizations and

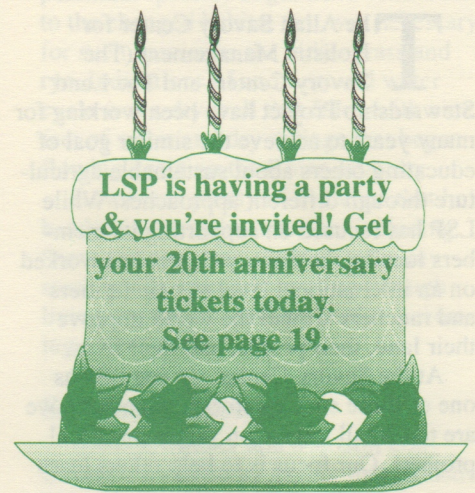
agencies that feel they have a vested interest in the direction of NRCS work as it pertains to Federal farm program dollars and making the Farm Bill work on the ground.

Although the new Farm Bill allocates a record 10 percent of funding to environmental or conservation efforts, early signs indicate a need to pay close attention to how the programs will actually work. For example, proponents of factory farms would like to subsidize farm expansions with EQIP dollars. According to hog producer and LSP organizer Paul Sobocinski, who is an active participant on the subcommittee, the Federal program is still paying lip service to promoting environmental quality but the overall trend appears to be away from conservation as a priority in action.

In another example, the precedent-setting Conservation Security Program will need diligent attention to safeguard the spirit of stewardship incentives paid on a national scale.

The subcommittees allow us to work collaboratively in advancing social and environmental priorities in agriculture along with sound production practices. □

Caroline van Schaik is an organizer in LSP's Twin Cities office and is a member of the Minnesota technical subcommittee of the Conservation Security Program. She can be reached at 651-653-0618 or caroline@landstewardshipproject.org. LSP Executive Director George Boody and LSP Policy Program organizer Paul Sobocinski are also active on Farm Bill state subcommittees.



Myth Buster Box

An ongoing series on ag myths & ways of deflating them

- ◆ **Myth:** Insecticide sprays eliminate pest problems in farm fields.
- ◆ **Fact:** In some cases, insecticides can actually make the problem worse. These chemicals can do this by either creating resistant superbugs, or by wiping out competitors.

For example, during the 1980s, farmers raising high-yielding rice in Asia found that populations of the brown plant hopper pest actually ballooned after spraying. It turned out the insecticides were more efficient at killing the hopper's natural predators than the pest itself. Indonesian rice farmers tried waiting to spray until the hopper's densities rose above a critical threshold. Below that threshold, the hopper's predators—which were now thriving in an insecticide-free environment—pulled pest control duty. During the past dozen years, insecticide use in Indonesia has fallen 80 percent and rice yields have risen 25 percent, according to the May 18, 2002 issue of *New Scientist* magazine (www.newscientist.com).

This is just one example of farmers using a technique called integrated pest management (IPM). IPM is gaining popularity with farmers who are trying to cut back on chemical use while maintaining a sustainable system of pest control. The first lesson of successfully implementing IPM is close monitoring of farm fields, pests and beneficial predators.

To download a pdf version of the paper "Promoting Sustainable Insect Management Strategies: Learning From Organic Farmers," log onto http://agecon.lib.umn.edu/cgi-bin/pdf_view.pl?paperid=4768&ftype=.pdf.

Holistic Management & LSP—multiple benefits

EDITOR'S NOTE: For more than a dozen years, the Land Stewardship Project has been involved with bringing the principles of Holistic Management to Midwestern farmers. Throughout that time, LSP has worked closely with The Savory Center in New Mexico. Here, Ann Adams of the Center describes some of the benefits that can be derived from Holistic Management.

By Ann Adams

The Allan Savory Center for Holistic Management (The Savory Center) and The Land Stewardship Project have been working for many years to achieve the similar goal of educating others about sustainable agriculture through different approaches. While LSP has focused on supporting its members locally, the Savory Center has worked on an international level to help farmers and ranchers around the world improve their land, their profits, and their lives.

At the Savory Center, we see LSP as one of those success stories. As a staff, we are too small to take on very many local projects. Our focus is to help others learn

about Holistic Management. Organizations like LSP can then help people in their own communities by sharing their knowledge of Holistic Management. In turn, we contribute to those communities through the development of educational materials used by groups like LSP, and the training of Holistic Management Certified Educators.

While there is a certain amount of competition between nonprofits for the philanthropic dollar, many nonprofits also have seen the value of collaboration. To that end, the Savory Center and LSP have agreed to share with our memberships what our connection is and why we want each other to succeed. Without LSP, the knowledge and practice of Holistic Management would not be what it is today in Minnesota. Without the Savory Center, there would be no Holistic Management to help producers achieve the outcome they want from their land, whether in Minnesota or in Mali.

Many of you may already know what a difference Holistic Management has made in people's lives. But I thought a summary of a paper (see below) reporting the multiple benefits farmers and ranchers have created through practicing Holistic Management would be enlightening.

Please take the time to read what follows and share this news with those you know who are concerned about our food, our land, and our rural communities.

I also ask you to become a Savory Center member, if you aren't one already. As the only organization that specifically focuses on the development of Holistic Management products and services, the Savory Center needs your support to bring this knowledge to other organizations like LSP.

Call The Savory Center at 505-842-5252 or visit our Web site at www.holisticmanagement.org. Mention that you are an LSP member and you can purchase a Savory Center membership at the discounted annual price of \$25. As a member you will receive *Holistic Management IN PRACTICE*, our bi-monthly publication. Most importantly, you will be supporting an organization that has profoundly influenced sustainable agriculture by providing key insights about how nature functions, teaching others how to manage holistically, and reporting the extraordinary results of Holistic Management practitioners. □

Ann Adams is the editor of *IN PRACTICE*.

Biodiversity, agriculture & Holistic Management

The following is a summary of "Biodiversity as an organizing principle in agroecosystem management: Case studies of holistic resource management practitioners in the USA," by Deborah Stinner and Benjamin Stinner (Department of Entomology, Ohio Agriculture Research and Development Center, The Ohio State University, and Edward Martsolf (A Whole New Approach), in Agriculture, Ecosystems and Environment, 62, pages 199-213 (1997).

For this paper the authors interviewed 25 farmers and ranchers practicing Holistic Management across the U.S., and made some interesting discoveries:

→ While only 9 percent of the interviewees reported having considered the issue of biodiversity in their operations before having learned about Holistic Management, after integrating Holistic Management into their operations, 95 percent of the interviewees considered biodiversity to be important and had

noted improvement in this area.

→ These agricultural producers also reported positive changes in other ecosystem processes on their land: an increase in the amount of sunlight energy trapped by plants and converted to feed; enhanced nutrient cycling; and a more effective water cycle.

→ Moreover, these producers also increased their profits by 80 percent and noted improvement in their quality of life due to better time management.

The scale of the operations researched ranged from 18 acres to 222,300 acres. The agricultural producers had been practicing Holistic Management for 1.5 to 17 years with an average of 5.6 years.

While Stinner et al. provide detailed information in their paper on the results these farmers and ranchers produced, they highlight these results at the beginning as evidence of improved ecosystem processes, quality of life, and profit:

→ A farmer/rancher in North Dakota who had practiced Holistic Management for 10 years had increased his soil permeability and infiltration from 2

inches to 20 inches.

→ All ranchers west of the Mississippi River reported a greater frequency of perennials and the return of many native tall and short prairie grasses.

→ 52 percent of the producers (especially the ranchers) noted that their labor requirements decreased by 40-60 percent despite the extra time necessary for planning and monitoring.

→ One producer said, "Not only do I have time to go out to eat with my family one night a week now, but I can pick which night."

→ These ranchers believe that their investments of time and money to improve their land have resulted in increased profits because the land has a higher carrying capacity with lower costs. In some cases the increased profit reported was as much as 1,400 percent, with many averaging 300 percent.

Holistic see page 11...

Case Study:

Windy Slope Farm

The Fichtner family moved to the 79-acre Windy Slope Farm in Leon, W. Va., in 1981. At that time the farm was overrun with multiflora rose, and the soils were severely eroded. At one time this land had been fire-maintained savanna, and more recently it had been plowed for corn and then put into sod that supported a few horses and cattle.

In 1990 the Fichtners began Holistic Management-planned grazing using a diversity of livestock (dairy goats, sheep, cattle, donkeys, hogs, chickens, geese, ducks and turkeys) to improve farm management. The hogs were used to break up and compost manure in the barn. The ducks controlled flies. The Scottish Highlander cattle were rugged browsers and cleared brush efficiently. The donkeys kept coyotes at bay. The cattle broke the parasitic cycle by grazing after the sheep.

In 1990 they had eight pasture plant species and needed five acres to carry one animal unit. Their net profit per acre was negative \$16. By 1995, they had 32 pasture plant species (including more perennials, a higher successional plant) and needed only one acre to carry one animal unit. Because they had more plant species, they had a longer growing season with a variety of warmer and cooler weather grasses.

In the past their growing season had been mid-April to late October. With increased biodiversity they increased their growing season from early March to December (an increase of over 10 weeks). Consequently, their net profit per acre rose to \$81. This resulted in a five-fold increase over the course of five years. Because of the increased profit, Mrs. Fichtner was able to quit her off-farm job, enhancing the Fichtners' quality of life.

Case Study:

The Coffey Ranch

The D. Joyce Coffey Resource Management and Demonstration Ranch was a privately owned 2,600-acre ranch in Marietta, Okla., until 1981 when it was willed to the Noble Foundation. Historically, it was a typical southern Oklahoma ranch with cropping in open land and continuous grazing in rough and wooded areas.

In 1987 a management team of crop,

forage, soil, livestock and wildlife specialists, headed by Charles Griffiths, began practicing Holistic Management on the ranch. At that time the stocking rate had decreased from 300 to 67 animal units per year. The degraded rangeland had a mixture of 60 percent low successional species (usually weedy annuals with low forage quality), 12 percent mid-successional species, and 5 percent high successional species (highly desirable forage quality for wildlife and livestock).

From 1987 to 1991 there was no increase in the high successional species but there was a decrease in low successional species from 60 percent to 32 percent and an increase in mid-successional species from 12 percent to 43 percent. The stocking rate increased by 30 percent from 110 animal units to 140 at the same time that the biodiversity increased. Exposed soils with various degrees of erosion were covered with healthy plants, and white tailed deer populations increased by 100 percent.

By 1994, high successional species had risen to 25 percent and low successional species were down to 25 percent. The stocking rate had now increased 100 percent from 1987, rising from the original 110 to 200 animal units.

Because of improved ground cover, there was less soil erosion. Ponds, which once had major siltation problems, now had low turbidity, and two springs, which had dried up, now began running again.

Moreover, the nutrient cycle had improved so that manure now decomposed in five days where it had taken two to three years before Holistic Management. Griffiths felt that if the management team's knowledge about Holistic Management had been greater when they started practicing, they could have made these types of improvements sooner.

Case Study:

The Rafter F Ranch

The 11,808-acre Rafter F Ranch, located in San Jon, N. Mex., usually receives 16 inches of rain a year, 70 percent of it in the summer. Sandy loam soils with much soil erosion and mesquite tree encroachment was characteristic of this land. Roger Bowe first learned about Holistic Management in 1983 and began using some of the principles to halt the ranch's falling productivity. In 1986 the Bowes took a second Holistic Management training, and by 1991 biological monitoring showed marked improvement on the land. Bowe noted that from 1984 to 1991 perennial grass species tripled on his land and ground cover increased.

Moreover, the stocking rate tripled and he cut the cost of production in half.

Bowe had also been troubled by an infestation of snakeweed, which covered up to 11 percent of one grazing area in 1986. By 1990, he had reduced the snakeweed in that area to 1 percent by using his cattle as a land reclamation tool. Bowe also noted that two new plant species, indiangrass and Canadian wild rye, appeared on his land, although they usually only occur at higher elevations. He also saw increased evidence of earthworms and wildlife.

Bowe suggested that the improved water cycle (due to more plant cover and perennial species) might have contributed to the changed habitat that was necessary for such species as the indiangrass and rye. Indications of an improved water cycle was a dry well that filled with nine feet of water and dry springs that began flowing again on the Bowe property.

Bowe sees plenty of evidence that he's headed in the right direction, including "new grass species, clear water in my stock ponds, minerals cycling through living organisms, and my banker becoming a stranger."

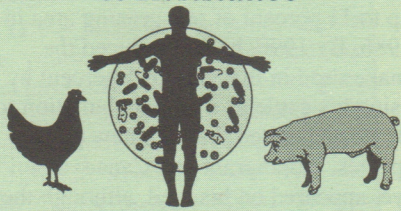
Summary analysis

Stinner, Stinner and Martsolf concluded this article by saying that Holistic Management "can help to empower individual farmers and communities," especially in the face of farm foreclosures and urban development. However, the most limiting factor in more people practicing Holistic Management is the paradigm shift required. Holistic Management is about consciously working with ecological processes to rebuild biodiversity and ecological integrity, which is "radically different from the paradigm that dominates conventional agriculture."

What this article demonstrates is that people who at one point were conventional agricultural producers can learn to not only appreciate the need for improved biodiversity and ecological processes, but can actually create those results while increasing their profits and quality of life by using Holistic Management. This research and others like it point the way to a truly sustainable agriculture and concurrently the answer to many other pressing environmental problems that also balance on the healthy functioning of ecosystem processes. □



Antibiotics, Agriculture & Resistance



...Drug Dare from page 1

increasingly, consumers are raising serious concerns that the massive amounts of low-level subtherapeutic antibiotics used in livestock farming are creating a reservoir of resistant bacteria which threaten human health.

Large livestock producers, along with the feedstuffs and pharmaceutical industries, respond that even minimal antibiotic restrictions would lead to the demise of animal farming, as we know it.

But a growing number of farmers across the country are now producing pork, beef, poultry and milk without putting subtherapeutic dosages of antibiotics in the feed to promote growth. In the case of Colin Wilson, many of his pigs are raised with no antibiotics—therapeutic or subtherapeutic.

How do these farmers do without a tool that some think is as integral to livestock production as tractors are to grain farming?

It all goes back to that quiet scene in the Wilson farrowing shed and everything the farmer has done to relieve the animals' stress levels (the ventilation fans are even placed in such a way to reduce mechanical noise, leaving more acoustic room for "pig noises"). It sounds simple. But when one examines what has to be done to reduce that stress, it becomes apparent that, indeed, the livestock industry at large may be right: animal farming cannot be done without the use of antibiotics. Animal farming that requires total confinement on a large scale, that is. Smaller-scale, management-intensive operations able to respond more to the needs of the animals have an edge when it comes to drug-free production. Nowhere is that being seen more clearly than in the hog industry, which is second only to poultry in the amount of antibiotics it uses.

Reversing the wash cycle

Colin Wilson, along with his brother Dan, use between 300 and 350 sows to

produce about 3,000 market pigs a year, and more than 80 percent of them never receive drugs during their lifetime. They've been raising pigs using antibiotic-free methods for more than five years. All of those drug-free pigs are marketed for a premium through Niman Ranch Pork Company, a California-based drug-free meat company that services white tablecloth restaurants and natural food stores across the country. When it first started marketing natural pork, Niman allowed producers to use antibiotics for therapeutic purposes. However, partly because of the confusion consumers have when it comes to the difference between therapeutic and subtherapeutic drug dosages, the company now disallows all antibiotic use.

Paul Willis, an Iowa hog farmer who also serves as a field coordinator for Niman, says the biggest challenge for farmers considering drug-free production is overcoming "the brainwashing they've had over the years." Any problem, any shortcoming in management, can be fixed with a pharmaceutical, goes this old way of thinking. But Willis is careful not to make dropping drugs sound too easy.

"We hardly ever find a farmer who meets all of our criteria right away," says Willis. "There almost always is a transition period."

Niman only buys animals that are raised in a low-stress, humane, environment. That means they have to be raised on pasture or in deep-straw systems and given plenty of room to move around and do all the things pigs love to do. The company also requires that the pigs be raised on small and medium sized family farms. The company's producers range in size from five to 500 sows.

Even top-notch hog farmers who have long toyed with alternative production methods find it's difficult to go antibiotic-free right away. Indeed, for the Wilsons there was a significant period of transition, even though the family had never used a whole lot of antibiotics in their swine enterprise. To go totally drug-free, the brothers had to make significant adjustments to their genetics. Hogs bred for confinement lack many of the traits needed to do well in a more natural environment.

"For example, it takes a sow that's very sensitive to the pigs around her," says Wilson, adding that it took about three years for them to get their genetics right. What they found was that sows bred for confinement relied on narrow farrowing crates to keep from crushing their pigs. The Wilsons needed sows that

knew how to keep their pigs alive in the more open environment found in a straw-bedded building or pasture hut. "You can't just go out and buy new genetics, you have to develop it."

That calm atmosphere in the farrowing shed on the rainy July day is a sign that one aspect of their transition into drug-free production has succeeded. These sows fairly ooze with maternal instinct, even as they get along well with the other sows in the communal housing.

But the Wilsons also had to relearn what they knew about such basics as housing and pig movement. Dan Wilson went to Sweden six years ago to check out the deep straw system farmers use to raise pigs during the winter. He learned how the Swedes grouped litters so that so much labor and time wasn't spent moving pigs. To supplement their pasturing farrowing enterprise, the Wilsons established deep straw systems in a pole shed and built a "hoop house"—a Quonset hut-shaped structure constructed of metal arches and fabric. On a per pig basis, the Wilsons' deep straw system cost them about a third of what it would to build a total confinement operation.

Today, the Wilsons are consistently producing pigs throughout the year without the use of antibiotics. Still, it's not without its hitches. Last summer they ended up treating a whole hoop house full of pigs with antibiotics after the animals came down with a couple of different intestinal and respiratory bugs. The sickness came at a time when the family did not have the time or labor available to treat individual pigs as they have in the past (treated pigs are tagged, separated out and marketed through conventional channels when it comes time to ship a batch off to Niman). That means the whole batch was ineligible to receive the Niman price premium.

"So that was a case where a broad spectrum antibiotic pretty much took care of it," says Colin. "But you're going to have situations like that. And you're going to have to make a judgment call as to which direction you're going to go."

The real cost of a ban

Still, in general the Wilsons are experiencing consistent success at drug-free production, and they're doing it on a farm that, with a few exceptions, resembles scores of other family operations across the country. Companies like Niman can't keep up with the demand for

Drug Dare see page 13...

antibiotic-free pork, but have a hard time finding producers who can meet their criteria. Why aren't more farmers dropping drugs in their systems?

Part of the reason is that so many producers feel their only choice is to stop using antibiotics within the framework of current production systems. Faced with that choice, drug-free production doesn't look so attractive.

Banning over-the-counter antibiotics for swine farming would increase production costs per pig by \$6.05 initially, and by \$5.25 at the end of 10 years, according to a 1999 Iowa State University analysis. That's a major hit, particularly with pork prices at record lows.

However, the analysis, which was funded by the National Pork Producers Council, assumed antibiotic-free hogs would still be raised in total confinement. For total confinement to pay, it must make the most use of every square inch. That's because it is so expensive to build such facilities and to manage the liquid waste they produce. The Iowa State researchers concluded that the way to produce hogs without subtherapeutic antibiotics in total confinement was to provide more space. Just adding 10 percent more floor space would cost \$115 per head in a nursery and \$165 per head for a finishing facility, according to the analysis.

But there's one thing wrong with this scenario: it does not consider the Dan and Colin Wilsons of the world. What would happen if hogs were raised in an alternative system that utilized deep-bedded straw and pasture farrowing, for example? The Wilsons do not use confinement crates, so their sows are running in an area of 30 to 35 square feet, about double the space found in a confinement operation. Because of their low infrastructure costs, the brothers can get away with not treating space as such a dear commodity.

More research

One reason the livestock industry panics at the thought of even cutting antibiotic use by a little is the lack of alternatives available. However, more research into sustainable systems is being done at land grant universities, albeit it is still dwarfed by work on how to maintain and perpetuate total confinement factory farming. Iowa State University is doing cutting edge research on hoop houses. At the University of Minnesota-

Morris, a special alternative swine research facility is now in operation (see March/April 2002 *LSL*, page 7).

University of Illinois researchers recently found that feeding five different antibiotic-free rations produced rates of gain equal to what can be gotten with medicated rations. A scientist in the United Kingdom has reported that adding a sugar found in pig's milk to feed promotes the growth of beneficial flora in a pig's gut. As a result, the pigs do just as well as if they were fed antibiotics, but no resistant bacteria develop.

Wilson is excited that more private companies, seeing the market potential farmers like him offer, are developing probiotics and other products that promote naturally healthy animals, thus reducing the need for medication.

"Because of programs like Niman I can now buy commercial pig starter that has no animal by-products in it. So some of the smaller feed companies are starting to gear up because they've found a market. If we're going to be sustainable that's what we've gotta have. All the way down the chain you've got to have people working together."

Not just another niche

But will antibiotic-free production save the independent family livestock farm? Not by itself. Let's face it: if regulatory pressure becomes great, and/or shoppers show a willingness to pay extra, large-scale livestock companies will figure out how to cut enough drugs to

quell the concerns of consumers and the health care community. After all, when organics evolved from funky niche to profitable retail trend, agribusiness began producing chemical-free fruits and vegetables in an industrialized system. If antibiotic-free production somehow becomes industrialized, the livestock sector will be back to square one: fewer drugs but all the other problems associated with factory farming: environmental contamination, empty Main Streets and a food supply controlled by a few powerful interests.

"I guess I hope we don't get to the point where it's antibiotic free and that's it. That's the only distinction. Everything else is the same," says Wilson.

His swine production enterprise isn't a benefit to society simply because of the lack of drugs. It is part of an integrated system that focuses on minimizing other environmental impacts as much as possible. For example, the straw bedding is made from small grains straw. Small grains such as barley and oats reduce soil erosion while naturally breaking up pest cycles in crop rotations. Between batches of pigs, the Wilsons push the straw bedding, which is now mixed with manure, out of the buildings for further composting. That compost is later used to fertilize the crops the family raises on 800 acres of farmland. Studies show composted manure improves soil quality while cutting erosion rates. And all of this is part of a diverse farming operation that supports two families.

That's why Niman Ranch has as part of its criteria that the hogs are raised by independent family farmers using humane methods. The Midwest Food Alliance, a sustainable seal of approval developed by the Land Stewardship Project and Cooperative Development Services, has similar stipulations.

Niman's Willis says that consumers respond to the idea that their meat is being raised by family farmers who are treating the animals well. However, there's something even more practical behind the criteria: Food writers for such respected publications as the *New York Times* have raved about the outstanding taste of Niman pork. And it's quality based on well-rounded sustainable production that will keep consumers coming back even when the factory farm producers figure out how to cut drugs.

"Our criteria are good welfare, antibiotic-free and family farmer raised," says Willis. "In combination these things happen to produce a good tasting product. I think it's more than a coincidence." □

Chlortetracycline 4 Type B Medicated Crumbles

Chlortetracycline Active Drug Ingredient

Crude Protein, not less than 4 grams/lb

Crude Fat, not less than 2.0%

Crude Fiber, not more than 15.0%

INGREDIENTS

Calcium Carbonate, Roughage Products, and Mineral Oil.

SWINE

For growing stock: For an increased rate of weight gain and improved feed efficiency.

For finishers: Reducing the incidence of cervical lymphadenitis (not abscess) caused by group E streptococci susceptible to Chlortetracycline.

For breeding sows: Control of leptospirosis (reducing the incidence of abortion and shedding of *Leptospira* spp.) caused by *Leptospira pomona* susceptible from 14 days.

For finishers: Treatment of bacterial enteritis caused by *Escherichia coli* and *Salmonella choleraesuis* and localized necrotic enteritis caused by *Pasteurella multocida* susceptible to Chlortetracycline.

For weaners: For the control of *Leptospira pomona* susceptible from 14 days. Feed continuously for not more than 10 mg/lb body weight/day.

Warning: Zero-day withdrawal period.

CALVES, BEEF CATTLE, AND NONLACTATING DAIRY CATTLE

Use in calves to be processed for veal.

For Calves (up to 250 lbs.): For an increased weight gain and improved feed efficiency.

For Calves (250-400 lbs.): For an increased weight gain and improved feed efficiency.

For Growing Cattle (over 400 lbs.): For an increased weight gain, improved feed efficiency and reduction of liver condemnation due to liver abscesses.

FEEDING DIRECTIONS

Use of levels	lbs. of 4 gm/lb
10-50 g/lb	2.5-12.5 lb/ton
50-100 g/lb	12.5-25 lb/ton
400 g/lb	100 lb/ton
10 mg/lb body weight/day	
0.1 mg/lb body weight/day	
25-70 mg/head/day	
70 mg/head/day	

More sustainable, less resistance?

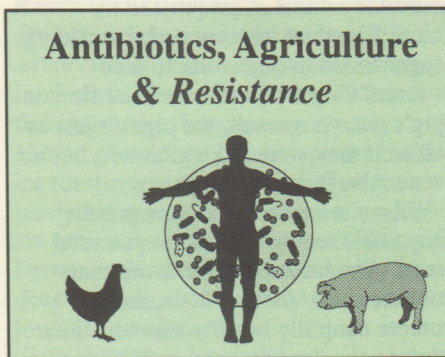
Do farms that use little or no antibiotics produce fewer antibiotic-resistant bacteria? The industry argues that cutting the use of subtherapeutic drug dosages will only make the animals sicker, meaning farmers will have to turn to stronger therapeutic dosages of drugs just to keep them alive.

"You can go a few cycles minimizing antibiotic use and then things creep up on you," says Dan Jacobson, a spokesman for Gold'n Plump, the largest chicken producer in the Upper Midwest. "The bottom line is, is it a safer food product" without subtherapeutic antibiotics?

Whether it is a safer food product may be open for debate. However, there is evidence that antibiotic-free production can make the environment in general safer by reducing resistance. In Denmark, where growth-promoting antibiotics have not been given to hogs, chickens or cattle for more than three years, the presence of drug-resistant bacteria has dropped, and the health of the animals has not been affected, according to the Danish Veterinary Institute in Copenhagen. For example, one type of superbug, which was carried by 80 percent of chickens, is now present in just 10 percent, according to a report in the *Washington Post*. Because Danish farmers are saving

money they would normally spend on drugs, retail meat prices have not been affected, says the Veterinary Institute.

In this country, a University of



Tennessee study of swine herds found that hogs not exposed to drugs produced fewer *Escherichia coli* (*E. coli*) pathogens that resisted antibiotics like ampicillin and oxytetracycline. Bo Norby, a research associate at Michigan State University's College of Veterinary Medicine, says "in the field" research is lacking that compares resistance levels on farms that don't use antibiotics with more conventional operations. Part of the reason is that antibiotic use has so thoroughly permeated the livestock industry that it's been difficult for

researchers to find antibiotic-free herds in the field. However, with organic and natural foods consumers demanding more antibiotic-free meat, an increasing number of alternative operations have popped up in recent years. In fact, Iowa State University recently estimated that one million hogs a year are raised in that state using deep-straw systems in hoop houses. That's only 4 percent of Iowa's annual swine production, but that growth has happened in just five years. Norby has taken advantage of this recent mini-boom in alternative swine production and is comparing resistance levels on Midwestern farms that don't use antibiotics with their more conventional counterparts. The study, which involves 70 farms, is using fecal samples to isolate three main pathogens—*E. coli*, *Salmonella* and *Campylobacter*. The researchers are then exposing the bacterium to 15 to 20 antibiotics to see how much they resist being killed. Norby won't have reportable results until next year, and he cautions that even a real-world study like this has its limitations, given all the other factors that contribute to the evolution of superbugs.

"Just because you go in and find resistance doesn't necessarily prove it's the antibiotics that did it. It's a strong indicator, but not necessarily proof." □

When the giants respond to a public pinprick

In February, two of the biggest names in poultry—Perdue and Tyson—announced that they were no longer using a key antibiotic in their production systems. The antibiotic, fluoroquinolone, is one of a family of drugs that have become medicine's first line of defense as penicillin loses its effectiveness. Studies showing bacterial resistance related to fluoroquinolone are starting to cast long shadows over the poultry industry, which has been using the drug since 1995. The last straw came when it was widely reported in late 2001 that fluoroquinolone is very similar to Cipro, a drug that is used to treat human anthrax.

The "we've dropped fluoroquinolone" announcement was a public relations coup for Perdue and Tyson, as well as the fast food chains they supply, like McDonald's and Kentucky Fried Chicken.

"From the standpoint of us in the field, this is a significant admission from the poultry companies that they can do

without" certain antibiotics, says Stuart Levy, Director of the Center for Adaptation Genetics and Drug Resistance at the Tufts University School of Medicine.

The announcements prove that public pressure can prompt industrial agriculture to tweak its production methods. However, they also raise the question of whether any real changes are being made to produce animals, or whether companies are simply playing musical chairs with different antibiotics.

And not everyone is thrilled with the poultry giants' announcement. Representatives of the hog industry, for one, are concerned this will put more pressure on them to drop antibiotics that are important to human medicine. As the total confinement of hogs has become increasingly prevalent, the pork industry has become more reliant on human drugs like tetracycline and penicillin to keep the pigs productive and healthy.

Tom Burkgren, Executive Director of the American Association of Swine Veterinarians, says the swine industry

does not have one key fluoroquinolone-like drug that it absolutely cannot do without, but still, "any loss of drugs can really affect the mortality of pigs."

Smaller poultry companies are also concerned about the repercussions of having two of the biggies drop fluoroquinolone. Dan Jacobson, a public relations specialist with Minnesota-based Gold'n Plump, says his company uses the drug "very sparingly," but that it is an important tool for keeping chickens healthy. (Fluoroquinolone is used to treat respiratory problems in poultry, which are common in the large confinement barns used by the industry.)

"It's highly effective and that's one of the reasons we like to use it."

Jacobson says his company feels there is no direct scientific evidence linking the antibiotic to resistant bacteria in humans, and that his company is not considering dropping it at this time. One concern within the industry is that if a powerful

Giants see page 15...

drug like fluoroquinolone is completely dropped, it will be replaced by a handful of less effective drugs, in effect actually increasing antibiotic use in poultry. Antibiotic use in poultry is particularly problematic because if a few birds get sick, the whole flock must be treated. It's impossible to separate out sick birds and treat them individually.

Jacobson concedes that even if his company does not believe there is enough scientific evidence to warrant dropping a drug, ultimately consumers will decide what production systems are used. Tyson and Perdue felt particularly pressured to drop the drug because they supply the public-relations sensitive fast food industry. A company like Gold'n Plump

markets more to retailers and institutions. So far, there has been no call from those customers for a reduction in antibiotic use, says Jacobson.

"Right now it's a PR war. But it's more important to be scientific than to do it for good PR," he says, adding that if his company ever does drop a drug like fluoroquinolone, it won't try to make public relations hay out of such a change. "We'd probably make that decision quietly. We don't see the need to be boisterous about it."

For Iowa farmer Bill Welsh, who has been raising chickens without antibiotics for more than a dozen years, the dropping of one drug by a few food giants only highlights the difference between his operation and the industrial sector of the poultry industry. Welsh houses his birds

at half the rate of the conventional operations, and provides them access to the outdoors (he and his son Gary raise 40,000 birds annually). He also makes sure they receive organic feed and close attention, particularly early in their life. They market their chickens through the Organic Valley label, as well as right off the farm. Bill and Gary encourage customers to visit the farm, and they've shipped frozen birds to every state but Hawaii. It's impossible to say if there's a direct connection, but the publicity created by Perdue and Tyson's February announcement certainly didn't hurt business for the Welsh family.

"In the month of March we had 15 new customers," says Bill. "What the consumer wants is a connection with the producer." □

Getting strung-out on confusing drug-free labels

As the use of antibiotics in livestock production attracts increasingly negative publicity, food companies are trying to figure out how to capitalize on consumer concerns. Be prepared for an acceleration of the old name game where harried consumers are peppered with engaging, but sometimes misleading, advertising slogans like "all natural," "no sulfa residues," "hormone-free" and "extended withdrawal times."

"I think we are going to see people making claims that are going to be confusing to the consumer," says Margaret Mellon, Food and Environment Program Director for the Union of Concerned Scientists.

For example, Premium Standard Farms makes the claim that it "does not use sulfa antibiotics" to produce its pork. That may sound impressive, but that's just one tiny portion of a drug-laced diet, says David Wallinga, Director of the Institute for Agriculture and Trade Policy's Antibiotic Resistance Project.

"That means they don't use one of 17 classes of growth promoters," he says. "It's deceptive to consumers."

What about claims by Farmland that its "All Natural" pork is produced under conditions where antibiotics are removed from the hog "three times earlier than the USDA requires"?

That may help eliminate residues in the meat when the consumer eats it, but does not eliminate the bigger problem of using subtherapeutic doses early in a pig's life.

"Direct consumption of antibiotics in the meat is a problem, but the much larger

problem is the generation of resistant bacteria by the antibiotics in the first place," says Mellon. "We want it out of the pigs, out of the environment, out of the manure, out of the water."

Some of the roiled waters created by labels related to antibiotic use mirrors the confusion over "growth hormones" in meat. Pick up just about any chicken or pork product from the freezer case at the store and you will find the phrase "no added hormones" on the label. That's certainly the 100 percent truth, since hormones have not been legally used in pork and poultry production for several years. A hormone-free claim on pork and poultry is legal as long as it's followed by this statement: "Federal regulations prohibit the use of hormones." On the product itself, that rule is followed. However, in other venues, such as on company Web sites, copy writers sometimes forget to include the government's caveat about the ban on hormones.

"It amazes me that a company can get away with basing an advertising campaign on saying they are hormone free. It's outrageous when in fact all chicken or pork is hormone free," says Pam Saunders, who coordinates the meat pool for Organic Valley, a Wisconsin-based organic foods cooperative owned by family farms.

And don't be fooled by the old "all natural" standby. It has nothing to do with the use or nonuse of antibiotics. According to the USDA's Food Safety and Inspection Service, that wording just means the product does not "contain any

artificial flavor or flavoring, coloring ingredient, chemical preservative or any other artificial or synthetic ingredient; and the product and its ingredients are not more than minimally processed (ground, for example)." Under these guidelines, Premium Standard Farms can legally claim its pork chops are "all natural," but that tells the consumer nothing about the company's use of antibiotics, or its reputation as one of the largest polluters in the Midwest for that matter.

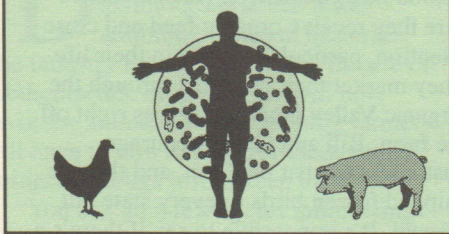
Mellon says at the least consumers should be looking for labeling that in some way tells them the meat producer is not using antibiotics that are important to human medicine.

According to the USDA, meat produced without the use of any antibiotics cannot use the term "antibiotic-free" on the label. Instead, terms like "no antibiotics used in raising" are allowed. But how does the consumer really know an animal has been raised without antibiotics? Matthew Baun, a staff member with the USDA's Food Safety and Inspection Service, says when making such claims, meat companies have to provide affidavits and protocols. However, when questioned as to how the USDA insures that companies are adhering to their paper claims, he says, "The issue is confusing in that there is multi-jurisdiction."

That's further proof that the labeling system for meat and poultry in this

Labels see page 16...

Antibiotics, Agriculture & Resistance



...Labels from page 15

country is a mess, says Mellon, Wallinga, and other critics of subtherapeutic use of antibiotics.

"Eventually the long term thing people need to do is demand better labeling," says Wallinga. "In the meantime, it's kind of buyer beware."

On the positive side, aware buyers today can buy meat and poultry direct from farmers they know personally and whom they can query about production methods. In addition, organically certified meat and poultry cannot be raised with antibiotics. Companies like Niman Ranch

have based their reputation on producing pork that's raised without antibiotics by environmentally sound family farmers. In addition, sustainable food labeling

initiatives like the Midwest Food Alliance have strict, third-party enforced guidelines related to antibiotic use. □

Want livestock products raised without antibiotics?

• **Midwest Food Alliance**—This is a third party certified sustainable food label that currently has products in select Minnesota grocery stores. It is a joint initiative of the Land Stewardship Project and Cooperative Development Services. Call 651-265-3682 or log onto www.landstewardshipproject.org.

• **Stewardship Food Network**—This is a listing of LSP members who direct market food produced using sustainable methods such as limited or zero use of antibiotics. Call 651-653-0618 or log onto www.landstewardshipproject.org.

• **Eat Well, Eat Antibiotic-Free**—This is an on-line guide developed by the Institute for Agriculture and Trade Policy that helps consumers identify and understand the different labels used for meat raised without antibiotics. The guide includes information on local, regional and national meat producers who sell their products directly to the public. It also lists by state those retailers, coops or Community Supported Agriculture networks that sell meat raised without antibiotics. Log onto http://www.iatp.org/foodsec/library/admin/uploadedfiles/Eat_Well_Eat_Antibiotic-Free_2.htm, or call 612-870-0453.

Opportunities

Resources

Hog alternatives

Profitable Pork: Alternative Strategies for Hog Producers is a new 16-page bulletin from the USDA's Sustainable Agriculture Network.

For a free copy, log onto www.sare.org/bulletin/hogs. You can also get a copy by calling 301-504-6422, or e-mailing aadeyemi@nal.usda.gov. □

Natural pork feeding

Designing Feeding Programs for Natural and Organic Pork Production is an 18-page bulletin on standards of organic pork production, management of organically raised pigs, energy and protein sources, alternative feeds and use of forage and pasture. It has tables with diet formulations for early and late grower and early and late finisher swine growth stages, as well as sow gestation and lactation.

This publication is available for a nominal cost at University of Minnesota Extension Service county offices. It can also be ordered by calling 800-876-8636 or 612-624-4900. When ordering, ask for item 07736-BU. □

Fighting factory farms

The GRACE Factory Farm Project Guide to Confronting a CAFO is a new step-by-step how-to manual for citizens who find large-scale livestock factories moving into their communities.

It includes tips on the type of information citizens should gather, where to find it and what to do once all the relevant information has been obtained. The handbook also contains tips on organizing and working with the media, as well as an appendix with handouts developed by groups such as the Land Stewardship Project.

For a free copy, log onto www.factoryfarm.org/guide. Free CD-ROM and paper copies of the guide can be obtained by calling 212-726-9161 or e-mailing factoryfarm@gracelinks.org. □

Factory farming's costs

Going to Market: The Cost of Industrialized Agriculture is a new report from the Izaak Walton League of America. It describes how the industrialization and concentration of American livestock farming

has become a major obstacle to bringing about positive environmental change in rural areas. It includes chapters on the evolution of the food system and its impacts on the livestock industry, costs of livestock pollution, inadequacies in regulatory enforcement, voluntary incentive programs, corporate responsibility and forging new relationships.

A pdf version of the 28-page report can be downloaded free from www.iwla.org. For more information, contact the Midwest Office of the Izaak Walton League at 651-649-1446 or ag@iwla.org. □





The Next Green Revolution Essential Steps to a Healthy, Sustainable Agriculture

By James E. Horne
& Maura McDermott

Foreword by John Ikerd

2001; 312 pages

\$34.95 paperback

Food Products Press

(an imprint of Haworth Press, Inc.)

10 Alice Street

Binghamton, NY 13904

www.haworthpressinc.com

Reviewed by Dana Jackson

The *Next Green Revolution* is a thorough introduction to sustainable agriculture, written for students and farmers just starting to learn about sustainable practices, but to be appreciated by people from all walks of life who are fresh to the topic.

If you've been involved in sustainable agriculture and are familiar with the concepts, you won't gather a whole lot that's new. However, what is new is the refreshing candor of a reformed agricultural economist, Jim Horne, who tells how he slowly came to grips "with the failure of the conventional system of industrial agriculture and began searching for a better way."

Although co-authored with Maura McDermott, it is Jim's voice the reader hears. When he graduated with a master's degree in agricultural economics in 1972, he went to work for the agricultural division of the Kerr Foundation in Poteau, Okla., dispensing advice to farmers about farm management and financial strategies. Horne admits that he did not question the maximum production goal that made farmers dependent upon chemical fertilizers and pesticides or the "bigger is better" paradigm that drove farmers to expand and crash when land values fell. As a true believer he advised farmers down those paths.

It is fitting that John Ikerd wrote the foreword to the book. A retired University of Missouri agricultural economist, Ikerd is also an outspoken critic of industrial agriculture because it cannot sustain farmers economically (see March/April

Land Stewardship Letter, page 4).

And Jim Horne takes the baton from Ikerd, imagining himself nailing a three-part indictment on the "door of every office in the USDA, land-grant university agriculture department and corporate agribusiness." Horne would accuse industrial agriculture of

1.) endangering the essential natural resources of soil, water and life, thereby jeopardizing the future productivity of agriculture and the inheritance of our children;

2.) hooking farmers on fossil fuels and the fertilizer and pesticides made from them, while downplaying the consequences of overusing such products;

3.) desolating rural America by bankrupting farmers and ignoring the well-being of rural communities, thus leaving them open to exploitation.

In fact, a critique of industrial agriculture flows throughout the book as the writers explain how alternative farming practices would avoid or correct the abuses of conventional agriculture.

The authors argue that nothing less than a new green revolution is called for to lead society on a better path to an agriculture that can be sustained. They sketch some of the history of sustainable agriculture and its philosophical origins and definitions—essential background for the intended reading audience: students in agriculture programs and courses and individuals who are starting from scratch to learn about sustainable agriculture. The book prescribes eight steps to the next green revolution, and is packed with basic information about such topics as soil, nutrient cycles, water cycles, cover crops, pest management, etc. There are several "Checklists for Farmers" included, such as the one that lists 14 points on how to conserve water and protect its quality.

The book is tied together with personal anecdotes about Jim Horne's growing up on an Oklahoma cotton farm and examples from his experience raising cattle in the Poteau area.

Horne did not come to sustainable agriculture out of a concern for the environment, but through concern for the small farm. In spite of the hard work and poverty, he has fond memories of growing up on a small Oklahoma farm, and the sadness he felt when small farms began fast disappearing. It was some time before he realized that threats to the earth and all its creatures were as great as threats to the economic future of small farms. When he testified in favor of the USDA's Low Input Sustainable Agricul-

ture (LISA) program, it was because he saw the need for research that would lead to lower cost farming methods for small farmers. Concerns about such things as the effect of chemical pesticides on biological diversity came later.

In 1985, the Kerr Foundation was reorganized into four foundations, and the agricultural division was re-oriented towards sustainable agriculture under a new board of trustees headed by Kay Kerr Adair. The employees had to learn what sustainable agriculture was and learn it fast. Suddenly they found themselves aligned with people they had considered "radicals," (like Wendell Berry!) and the transition was not easy. I can attest to this, for I attended one board of trustees meeting where it was clear the new board members were speaking a foreign language to the staff. The range of topics covered in the book reflects how much Jim Horne and the Kerr staff have learned. Since 1995 they have pursued several different lines of research and investigated various cropping and livestock systems that would work for the small farm clients in their region. The Kerr Center's sometimes difficult transition in some ways reflects the changes agriculture in general must make in order to become more sustainable.

Finally, the book binds agriculture to ecology, which in my thinking is the most important concept that readers should take away. In looking at fields as agroecosystems, farmers are forced to observe and be guided by the interactions of crops, weeds, insects (both pests and beneficials), and soil microbes. Recognizing that all farming systems will disrupt natural ecosystems, the authors remind readers that replacing industrial agriculture with sustainable systems will drastically decrease the disruptions and better protect natural resources. The authors recommend careful selection of farming enterprises that fit the climate, soils and plant history of each region. This principle is aptly illustrated by Horne's anecdote, "Battling the Hill," in which he describes brush-hogging trees on a hillside to "improve" it for pasture, until one day he realized how ridiculous it was. Trees belonged on that hill.

Maybe one day our society as a whole will wake up and realize that rooting out a natural relationship between agriculture and ecology is a shortsighted mistake. □

LSP Associate Director Dana Jackson recently co-edited The Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems (see page 18).

LSP announces the publication of a groundbreaking new book:

The Farm as Natural Habitat

The *Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems*, a new book by the Land Stewardship Project, has been published by Island Press. Contributors to this groundbreaking collection of writings promote the idea that restoration of a relationship between farming and the natural world enhances the sustainability of both.

Dana Jackson, LSP's Associate Director, co-edited the book with her daughter, Laura Jackson, who is a University of Northern Iowa biology professor and LSP member. In addition, chapters were written by LSP Executive Director George Boody, *Land Stewardship Letter* editor Brian DeVore, LSP Board Member Cheryl Miller, and LSP members Tex Hawkins, Nick Jordan, Judith Soule and Beth Waterhouse, as well as several other contributors. Nina Leopold Bradley, a board member of the Aldo Leopold Foundation, wrote the foreword.

Praise for *The Farm as Natural Habitat*

"[The Farm as Natural Habitat] makes a grim and thorough case against industrial agriculture. Then it breaks new ground: It shows how productive, diversified, small-scale farms can and do nurture wildlife. Sacrificing ecology is not an inevitable part of food production."

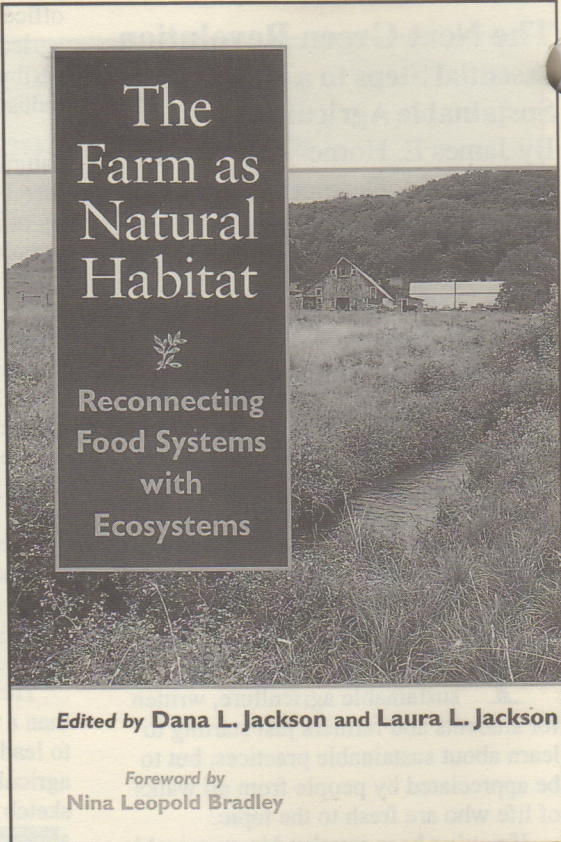
— Susan Maas, *Des Moines Sunday Register*

"This collection of highly readable, down-to-earth narratives of farmers and farms pays attention to real science and speaks knowledgeably to policy... This is a book to inspire innovation and serious commitment to change on farms, in landscapes, and among citizens."

— Joan Iverson Nassauer, Professor of Landscape Architecture, University of Michigan's School of Natural Resources & Environment, and author of *Placing Nature: Culture and Landscape Ecology*.

LSP Members Receive 20% Discount!

Island Press is generously offering Land Stewardship Project members a special 20 percent discount on each book ordered. To receive the discount, clip the form below or log onto the Island Press Web site at www.islandpress.org and click on the **Spring 2002 Catalog**. To receive the discount when ordering over the Internet, LSP members need to enter the phrase **2LSP** on the **Promo/Dept.** line of the Island Press order form/final invoice. The discount will not show up when the initial order is placed, but confirmation of the discount will be sent later. You can also order from the publisher by calling toll free **1-800-828-1302**.



Land Stewardship Project Member Order Form—2LSP

Mail this form to: ISLAND PRESS, Dept. 3AU, P.O. Box 7, Covelo, CA 95428

Yes, I would like to order *The Farm as Natural Habitat* by Jackson/Jackson:

_____ hardcover copies @ \$50.00 each; LSP discount @ \$40.00

_____ paperback copies @ \$25.00 each; LSP discount @ \$20.00

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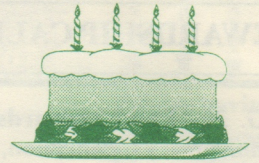
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Land Stewardship Project Celebrates 20 Years

of Keeping the Land & People Together



RESERVE YOUR TICKETS NOW FOR LSP's 20TH ANNIVERSARY

Don't Delay, Only 300 Tickets Will Be Sold

Saturday, August 24th, 2002, 3 p.m. - 9 p.m.

**Good Counsel Hill in
Mankato, Minn.**

Come to enjoy:

- Sumptuous local foods
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- LSP storytelling
- Family-friendly activities
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- Stewardship Shop
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There will be a drawing for a Mississippi River houseboat excursion that includes a gourmet dinner of locally grown food prepared by the famous *Blue Heron Cafe*.

Tickets are \$25.00 for adults, \$10.00 for children 13-17 (12 and under are free). Get your tickets now! Only 300 tickets will be sold for this event.

To purchase tickets, use the form below. For more information, call your local LSP office:

- Southeast Minnesota, 507-523-3366
- Twin Cities Area, 651-653-0618
- Western Minnesota, 320-269-2105

For more details, check www.landstewardshipproject.org

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_____ 12 & under (Free)

_____ 13-17 years (\$10.00 each) \$ _____

Sponsor the celebration with an additional \$25, \$50, \$100 or more. Your name will be listed in the program. \$ _____

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Signature: _____

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Clip and place this form in the envelope enclosed in this newsletter. Call 651-653-0618 for more information.



STEWARDSHIP CALENDAR

→ **AUG. 24—Land Stewardship Project 20th Anniversary Celebration**, Good Counsel Hill, Mankato, Minn.; **don't forget to get your tickets!** (see page 19)

→ **SEPT. 14—In the Heart of the Beast Puppet & Mask Theatre presents "Seed: Awesome Vessel of Power,"** Fairmont (Minn.) Opera House; Contact: 612-721-2535; www.hobt.org

→ **SEPT. 17—Field day on grass-based seasonal dairying**, Rosebud Ranch, Sauk City, Wis.; Contact: 608-544-3702 or the Midwest Organic & Sustainable Education Services Web site, www.mosesorganic.org

→ **SEPT. 17-20—Third Annual USDA National Small Farm Conference**, Albuquerque, N. Mex.; Contact: Denis Ebodaghe, 202-205-0467; debodaghe@reeusda.gov

→ **SEPT. 27-29—Seed: Awesome Vessel of Power,"** In the Heart of the Beast Puppet & Mask Theatre, Minneapolis, Minn.; Contact: 612-721-2535; www.hobt.org

→ **OCT. 1—Deadline to enroll in 2002-2003 western Minnesota Farm Beginnings course;** Contact: Amy Bacigalupo, LSP, 320-269-2105 or amyb@landstewardshipproject.org

→ **OCT. 5—"Seed: Awesome Vessel of Power,"** William Kelley High School, Silver Bay, Minn; Contact: 612-721-2535; www.hobt.org

→ **OCT. 8-10—Changing Faces of Conservation & Agriculture—The Future of Working Lands**, Moline, Ill.; Contact: Rich Stewart, Rich.Stewart@il.usda.gov

→ **OCT. 9—Deadline to enroll in 2002-2003 southeast Minnesota Farm Beginnings course;** Contact: Karen Stettler, LSP, 507-

523-3366 or stettler@landstewardshipproject.org

→ **OCT. 26—Southeast Minnesota Farm Beginnings classes begin** (see Oct. 9 item)

→ **OCT. 26-27—Draft Animal Logging**, DreamAcres, Wykoff, Minn.; Contact: 800-498-2700; www.wmich.edu/tillers/

→ **OCT. 31-NOV. 2—10th National Small Farm Trade Show & Conference**, Columbia, Mo.; Contact: 800-633-2535

→ **NOV. 2—Western Minnesota Farm Beginnings classes begin** (see Oct. 1)

→ **NOV. 8-9— National Catholic Rural Life Conference, "Sustainable Communities in an era of Globalization,"** Dearborn, Mich.; Contact: 515-270-2634 or www.ncrlc.com

→ **NOV. 16— Food & Nutrition Conference featuring Sally Fallon**, author of *Nourishing Traditions: The Cookbook*

that Challenges Politically Correct Nutrition and the Diet Dictocrats, St. Cloud (Minn.) Civic Center; Contact: Doug, 320-235-5487

Food demo volunteers

The Midwest Food Alliance (MWFA) is looking for volunteers to help with in-store demonstrations of local, sustainably-produced foods. In past years, volunteers have been very effective at reaching out to consumers who are seeking information about local foods, good stewardship, and the MWFA seal of approval. MWFA will provide training for volunteers. Volunteers are needed from July through November in the Twin Cities, St. Cloud and Rochester. If you're interested, call MWFA at 651-265-3678 and ask for Vicky. □

Seeking volunteers for LSP's big birthday bash!

The Land Stewardship Project is 20 years old. We're having a party and you're invited (see page 19). And like all parties there are sure to be many ways to join in the fun:

- lead a game
- serve food
- sell items in our Stewardship Shop tent
- set up or clean up
- and more



Seeking donations for a silent auction

At our 20th anniversary celebration, we would like to offer a silent auction. This is a great opportunity to promote your farm or business by donating a gift certificate or a food item. Other possible gifts could include hand-crafted items, services you could provide, recreation or entertainment options, and more.

If you want to volunteer or have an item to donate, contact Cathy in our White Bear Lake Office by calling 651-653-0618 or e-mailing cathy@landstewardshipproject.org.



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