The word “permaculture” can evoke different meanings to different people. Combining the words “permanent agriculture,” Australian ecologist Bill Mollison coined the word in 1978 to encompass more than just agriculture. He and co-founder of the “permaculture” movement, David Holmgren, expanded the concept to include an integrated system of design, agriculture, architecture, economics and more—an entire system of sustainability. But, permaculture also could mean that the land is permanently covered with vegetation: trees, perennial plants, or grass.

The Leopold Center has funded projects that contribute to “permanent agriculture” including perennial plants for habitat or biofuel, cover crops and extended rotations, water management systems, and more. The idea is to work with nature instead of against it. Explored here are three types of permaculture research and demonstration in which the Leopold Center is involved.

**Permanant plants help soil health**

Permanent plants established in areas within a field of non-permanent plants offer a way to seek compromise for the soil as well as the agriculture industry. The Leopold Center has funded grants to investigate this concept. One project studies prairie strips in row-crop fields for water and nutrient runoff, erosion control, as well as bird and insect populations at Neal Smith National Wildlife Refuge, Prairie City. The Science-based Trials of Row-crops Integrated with Prairie Strips (STRIPS) concept replaces 10 percent of a row-crop field with perennial plants in strategic areas within that field. The research has shown that prairie strips can reduce nitrogen leaving the field by 85 percent and phosphorus by 90 percent, and sediment loss can be reduced by up to 95 percent. Additionally, the prairie areas create habitat for insects, birds, and other pollinators.

Because the research results have been so positive, the STRIPS team is expanding the implementation to private farmers and landowners. To date, there are 23 farms in Iowa that have, or will have this year, prairie strips added to at least one field.

A grant project awarded this year, “Prairie contour strips: Demonstrating the importance of custom seed mix for biological integrity,” is carried out through the Tallgrass Prairie Center, Cedar Falls. The project, led by Center Director Laura Jackson, is creating a Community of Practice with prairie restoration specialists, technical service providers, land managers, and the STRIPS team. The Prairies on Farms project is developing educational materials and holding field days and workshops to help promote awareness and use of prairie strips. They recently developed the Iowa Prairie Seed Calculator, a free online tool to help build custom prairie seed mixtures, estimate costs and submit bids to seed vendors.

**Permanent plants for biofuels**

The perennial grass *Miscanthus x giganteus* generates biomass that can be used for fuel. It has been found to produce yields two-four times greater than switch grass. The
summaries of three recently completed research projects, funded by the Leopold Center’s long-running competitive grants program, are available for review. The reports summarize how each project was conducted and what was learned. They are archived at Iowa State University’s Parks Library digital repository.

ISU agronomy professor Rick Cruse led the project “Economic Impacts of Soil Erosion in Iowa.” It is connected with a larger effort, The Daily Erosion Project (http://dailyerosion.org/). Cruse and fellow investigators used a combination of measured topsoil depth and crop yield at seven farms across the state with corn-soybean cropping histories to identify the effect of topsoil depth on yield. They found that the cumulative effect of soil loss is significant and can contribute to a large loss of revenue for the farming community.

“Market Development and Logistics for Local Food Distribution in the Cedar Valley” explored whether a Community Supported Agriculture (CSA) food box program would be beneficial in the Cedar Valley region of Iowa. Jodie Huegerich, Local Food program manager at the University of Northern Iowa, worked with the Iowa Food Hub to explore possible expansion into the Cedar Valley. The Iowa Food Hub is a distributor in Northeast Iowa. A CSA food box program was established at UNI in Cedar Falls, through the Iowa Food Hub as a result of the project.

“Protecting Iowa’s Land Legacy: Soil and Water Conservation Policy—Past, Present and Future” looked at policy opportunities to help farms advance water quality and soil health. Neil Hamilton, director of the Agricultural Law Center at Drake University, Des Moines, led the project. He and his staff prepared materials that reviewed Iowa’s soil and water conservation policies. They also held a two-day conference for nearly 200 people who are involved in agriculture and the political arena across the state. Insights from the conference attendees can help to shape future actions regarding Iowa’s soil and water.

All Leopold Center completed grants are searchable by year, grant ID number, or key word in the Parks Library digital repository: http://lib.dr.iastate.edu/leopold/.

Organic practices highlighted the ISU Neely-Kinyon Research Farm field day

Despite a threatening storm, a field day was held on Aug. 23 at the ISU Neely-Kinyon Memorial Farm near Greenfield. ISU agronomy and horticulture professor Kathleen Delate, and Cynthia Cambardella, with USDA-ARS National Lab for Agriculture and the Environment, showcased results from 18 years of study at the Long-Term Agroecological Research (LTAR) experiment.

Supported by the Leopold Center, the LTAR experiment compares soil quality and economic outcomes in three organic rotations vs. a conventional corn-soybean rotation. The corn-soybean-oat/alfalfa-alfalfa rotation demonstrated two to three times the returns of the conventional system, along with numerous environmental benefits such as better soil quality. In the Organic Transitions vegetable plots, the “Delicata” squash is on track for high yields, with last year’s results showing highest yields in plots receiving compost applied at a 100-lb N/acre rate, with and without cover crops. Cover crop plots led to higher soil carbon storage, lower nitrate leaching and higher microbial respiration.

Kathleen Delate and Cynthia Cambardella present research results of the organic experiment at the Aug. 23 field day. They compared organic vegetables grown with and without cover crops, and tilled vs. no-till.
Erosion

Now that summer vacation season is winding down during a year when many participated in the centennial celebration of our National Park Service, I want to offer a different perspective about erosion. You might ask, “What does erosion have to do with vacations and national parks?” Surprisingly, erosion is the key attraction that draws millions of visitors every year to some national parks. Consider the Grand Canyon, the sandstone formations at Zion National Park, the Badlands of South Dakota, and many other sites. Fundamentally, we visit these sites because of their “scenic” display of erosion. We look upon erosion and express feelings of awe, wonder and beauty. We climb it, we photograph it, and we plan next year’s vacation around it. Just take a look at your own vacation pictures and note how many of them depict erosion and its consequences! Soil erosion of these extremes makes me ponder long-term geological perspectives.

Erosion presents us with a dichotomy. For me, a trip to any of these national parks is a trip that demonstrates our national conundrum. While erosion can be a cause for enjoyment and picture-taking, in terms of agriculture it is a natural force that presents persistent problems. In many places, like the Badlands, the growing conditions are so unsuitable that it is difficult for plants of any kind to become established and maintain a ground cover. These vacation-time observations illustrate, in an extreme fashion, how soil erosion damages the landscape, reduces the fertility of our most important agricultural asset, fills our reservoirs with silt, and dirties surface waters.

Erosion of agricultural soils diminishes the very basis of civilization. This is a dramatic statement that I cannot claim as my own. Years ago, while in college, I came across a book titled *Topsoil and Civilization* by Vernon Carter and Tom Dale. Originally published in 1955, it expanded on the historical work of Walter Lowdermilk, the famed soil conservationist who was a contemporary of Aldo Leopold. The authors concluded that there were many examples of civilizations throughout history which failed politically and fundamentally once they had squandered the natural resources, most notably soil. Since that time there have been numerous books written on the subject where the authors came to the same distressing conclusion.

So, in a time when national security is considered so important and widely debated, why is the degradation of our agricultural soils ignored or ranked very low in any national risk assessment? I believe our reluctance to effectively deal with this problem is a result of several factors.

First, there is the abundance of rich, fertile soils and our tendency to take them for granted. Second is the slow, gradual escalation of the problem and the inability of our economic system to deal with long-term dilemmas. Third, we greatly value our system of private property, even if private ownership means degradation and damaged resources for future generations. Fourth is our assumption that inputs like fertilizer can offset the problem,
even if that leads to other resource issues such as declining water quality, or the belief that we can just cover up the problem with another tillage pass through the field. Finally, I think we view erosion with an attitude of resignation and regard it as one of those fixed costs of farming. Maybe it is due to mixed feelings about erosion that relate back to our vacations where we found erosion to be interesting and enjoyable?

We need to take erosion more seriously at both the local and national levels. We need policies that incentivize protection and preservation of the soil rather than rewarding productivity at all costs. We also need to be aware that there are segments of the agricultural industry, including some academics, that intentionally downplay or ignore soil degradation for the sake of maintaining the status quo and their business model. We need to change our behavior of acceptance and, perhaps, exert a bit of peer pressure to communicate the fact that soil erosion is simply not socially acceptable. And we need to have the courage to accept criticism and seek solutions rather than immediately go into defense mode and strike back at those who point out the problem. The efforts of previous generations have yielded mixed results and the resolve to do something about erosion has waxed and waned over the decades. We should be able to do better.

Mark Rasmussen

River Stories: Watershed stories told through photographs

It is said that a picture tells a thousand words. When the photographs taken by six women were displayed at a public reception on June 12, their stories could have equaled a thick textbook on the environment.

The six volunteer, amateur photographers live in the Raccoon River Watershed and each shared their perspective of the watershed at a public reception in the Town/Craft Center in Perry.

The exhibit photographers are: Patti Edwardson, Churdan; Chris Henning, Jefferson; Jan Kaiser, Madrid; Colleen Radebaugh, Rippey; Courtney Turnis, Coon Rapids; and Danielle Wirth, Madrid. They spent months taking pictures, then narrowing down the image choices to tell a succinct, complete story. Photo themes included timber stand restoration, soil erosion effects, goats as brush removers, prairie controlled burns, pollinator habitat, and more.

The event was the culmination of a special project funded through the Policy Initiative at the Leopold Center. Leading the project were ISU sociology professor Betty Wells and Angie Carter, a former graduate research associate at ISU and now an assistant professor at Augustana College, Rock Island, Ill. The Raccoon River Watershed Association and Women, Food and Agriculture Network (WFAN) also partnered with the project.

The photo collection is the outcome of several WFAN Learning Circles, where women landowners gathered to discuss their experiences on the land within their watersheds. The goals of the exhibit included building social networks, creating ownership, and being inclusive, all within the watershed.

The photos can be used as a tool for dialogue, education and action at many places and events. Carter hopes that the photo collection can become a traveling exhibit to fairs and conferences to increase awareness of our connection to the watershed in which we live.
Energy transformation: A key component of sustainability’s future

Because oil has been so plentiful and cheap for the past century, we have globalized the production of most goods we depend upon... Thus the energy transition constitutes an important challenge not just for scientists and engineers but for economists and policy makers as well.

— Richard Heinberg and David Fridley, pp. 82 and 129

While many of us are committed to the concept of “sustainable agriculture,” we don’t often anticipate some of the significant related changes we are likely to face in our not-too-distant future. Consequently, as John Ehrenfeld puts it, “most of our efforts to address sustainability are focused on reducing unsustainability, which is not the same as creating sustainability.” (p. 4)

Once we focus on creating sustainability, one of the difficult challenges we need to grapple with is how we transition from the industrial economy, which has been carried by fossil fuels for the past century, to “the next economy” which will have to be designed to function on renewable energy. That is the challenge Richard Heinberg and David Fridley invite us to consider in their new book, Our Renewable Future: Laying the Path for One Hundred Percent Clean Energy.

Heinberg and Fridley make clear that this transition from a fossil fuel economy to a renewable energy economy will not be easy. While science and technology will play a role, we also must design an alternative economy and social system. In that new future, we will have to accept that we cannot continue to operate on the assumption that unlimited economic growth will persist. As they put it: “whereas the cheap, abundant energy of fossil fuels enabled the development of a consumption-oriented growth economy, renewable energy will likely be unable to sustain such an economy.” Therefore, “rather than planning for continued, unending expansion, policymakers must begin to imagine what a functional post-growth economy could look like.” (p. 196)

While such a paradigm shift may seem impossible in our current industrial economy, John Thackara—based on his experiences traveling around the world—points out that an alternative economy is, in fact, already evolving. This new economy, explained by both science and philosophy, is one in which “the Earth no longer looks like a repository of inert resources to be exploited to sustain economic growth…”

“On the contrary: healthy soils, living systems and the ways we can help them regenerate, supply the ‘why’ of economic activity that’s missing from the mainstream story. The kind of growth that makes sense, in this new story, is the regeneration of life on Earth.” (p. 9) In this new economy, the global, industrial, mass production system is replaced by an economy grounded in “bioregionalism.” In these new bioregional economies, people collaborate in their own ecological communities to “sustain” themselves using the resources of their own regions, and do so in a way that the resources are regenerated. While such transformations are apparently taking place largely in today’s developing world, they also are beginning to appear on a limited basis in the industrial world.

We already have an example of how science and technology can help us to make such admittedly difficult transitions. Creative ecologist Janine Benyus outlined the possibilities in her revolutionary 1997 book, Biomimicry: Innovation Inspired by Nature. In Biomimicry, Benyus refocuses our attention from the industrial economy, which was grounded in technologies to control nature, to an economy that mimics nature. Benyus, who has written six books on biomimicry, continues to explore practical ways to make that transition.

Accordingly, important questions that all of us engaged in farming might ask ourselves—how can I “sustain” my farm when crude oil is $350 a barrel? And, how can I begin that necessary transition now?

References:
Also see: http://biomimicry.net/
weed risk is low as *M. x giganteus* is sterile and does not pose an invasive threat. The perennial plant also aids in reducing soil erosion.

A Leopold Center three-year grant project “Long-term assessment of miscanthus productivity and sustainability (LAMPS),” is jointly conducted with the University of Iowa’s Biomass Partnership Project and Iowa State University. The UI goal is to use 40 percent renewable energy by 2020, and burning miscanthus at their power plant may help reach this goal. The LAMPS grant, led by ISU professor Emily Heaton, looks at establishing best management practices for farmers interested in growing this plant for income.

Currently, there are three sites near Iowa City growing miscanthus for the University, one of which is the Eastern Iowa Airport, rural Cedar Rapids. The airport is an advocate for the environment and is currently participating with the UI Biomass Partnership Project as well as the STRIPS project.

A field day was held on Sept. 8 at the Eastern Iowa Airport to showcase these Leopold Center-funded projects. Attendees visited the prairie strips and the miscanthus sites and heard from Cedar Rapids Mayor Ron Corbett, Eastern Iowa Airport Director Marty Lenss, UI Biomass Partnership representatives Ingrid Gronstal-Anderson and Ben Anderson as well as ISU faculty Emily Heaton and Lisa Schulte-Moore.

**Permanent plants for pollinator habitat**

Plants that pollinators favor are returning to the Iowa landscape by means of prairie strips as well as roadside plantings and CRP acres. The “Pollinator Habitat Initiative,” managed by the NRCS CRP program, adds forbs and wildflower seeds with grasses to increase habitat for pollinators, birds and other species.

A new Leopold Center grant “Impacts of landscape and on-farm diversity on the abundance and health of bee pollinators” explores how agricultural landscape diversity and management affects the health of bees and pollinators. Amy Toth, an assistant professor in the ISU Ecology, Evolution and Organismal Biology department, is leading the project. Her team will collect bees within row-crop fields and in adjacent non-crop habitat. They will log data on the diversity, abundance and the health of the bees to understand the impacts on the health of their habitat. The project builds on work begun two years ago in Iowa.

The Iowa Monarch Conservation Consortium, based at ISU, has numerous members working to ensure that there are milkweed plants statewide for the monarchs to use. Among the collaborators are the Iowa Soybean Association and Blank Park Zoo’s Plant Grow Fly initiative, of which the Leopold Center is a partner.

Leopold Center Advisory Board member Doug Gronau is adding milkweeds to areas in his yard and CRP acres with the help of ISU and the Iowa Soybean Association. The terraces on his western Iowa farm fields were planted with grasses, but this year he is seeing an explosion of milkweed varieties that haven’t been there before.

“The milkweeds just came up, which we were surprised to see after years of only grass there,” said Gronau. “But it’s good to have diverse plants on the terraces, so I haven’t done anything to get rid of them.”

In the grand scheme, it really doesn’t matter whether these permanent plants are in place because of the STRIPS project, the Plant Grow Fly initiative, or through the NRCS. The butterflies and other pollinators don’t care how the plants got there, they are just happy to have the habitat.
Coon Valley: An Adventure in Cooperative Conservation

BY ALDO LEOPOLD, AMERICAN FORESTS [1935]

T

here are two ways to apply conservation to land. One is to superimpose some particular practice upon the pre-existing system of land-use, without regard to how it fits or what it does to or for other interests involved.

The other is to reorganize and gear up the farming, forestry, game cropping, erosion control, scenery, or whatever values may be involved so that they collectively comprise a harmonious balanced system of land-use.

Each of our conservation factions has heretofore been so glad to get any action at all on its own special interest that it has been anything but solicitous about what happened to the others. This kind of progress is probably better than none, but it sours too much of the planless exploitation it is intended to supersede.

Lack of mutual cooperation among conservation groups is reflected in laws and appropriations. Whoever gets there first writes the legislative ticket to his own particular destination. We have somehow forgotten that all this unorganized avalanche of laws and dollars must be put in order before it can permanently benefit the land, and that this onerous job, which is evidently too difficult for legislators and propagandists, is being wished upon the farmer and upon the administrator of public properties. The farmer is still trying to make out what it is that the many-voiced public wants him to do.

The administrator, who is seldom trained in more than one of the dozen special fields of skill comprising conservation, is growing grey trying to shoulder his new and incredibly varied burdens. The stage, in short, is all set for somebody to show that each of the various public interests in land is better off when all cooperate than when all compete with each other. This principle of integration of land uses has been already carried out to some extent on public properties like the National Forests. But only a fraction of the land, and the poorest fraction at that, is or can ever become public property. The crux of the land problem is to show that integrated use is possible on private farms, and that such integration is mutually advantageous to both the owner and the public.

Such was the intellectual scenery when, in 1933, there appeared upon the stage of public affairs a new federal bureau, the United States Soil Erosion Service. Erosion-control is one of those new professions whose personnel has been recruited by the fortuitous interplay of events. Previous to 1933 its work had been to define and propagate an idea, rather than to execute a task. Public responsibility had never laid its crushing weight on their collective shoulders. Hence the sudden creation of a bureau, with large sums of easy money at its disposal, presented the probability that some one group would prescribe its particular control technique as the panacea for all the ills of the soil. There was, for example, a group that would save land by building concrete check-dams in gullies, another by terracing fields, another by planting alfalfa or clover, another by planting slopes in alternating strips following the contour, another by curbing cows and sheep, another by planting trees.

It is to the lasting credit of the new bureau that it was the comprehensive system of land-use, in which not only soil conservation and agriculture, but also forestry, game, fish, fur, flood-control, scenery, songbirds, or any other pertinent interest were to be duly integrated. It will probably take another decade before the public appreciates either the novelty of such an attitude by a bureau or the courage needed to undertake so complex and difficult a task.

The first demonstration area to get under way was the Coon Valley watershed, near LaCrosse, in west-central Wisconsin. This paper attempts a thumbnail sketch of what is being done on the Coon Valley Erosion Project. Coon Valley is one of the innumerable little units of the Mississippi Valley which collectively fill the national dinner pail. Its particular contribution is butterfat, tobacco, and scenery.

When the cows which make the butter were first turned out upon the hills which comprise the scenery, everything was all right because there were more hills than cows and because the soil still retained the humus which the wilderness vegetation through the centuries had built up. The trout streams ran clear, deep, narrow, and full. They seldom overflowed. This is proven by the fact that the first settlers stacked their hay on the creek banks, a procedure now quite unthinkable. The deep loam of even the steepest fields and pastures showed never a gully, being able to take on any rain as it came and turn it either upward into crops or downward into perennial springs. It was a land to please everyone, be he an empire-builder or a poet.

But pastoral poems had no place in the competitive industrialization of pre-war America, least of all in Coon Valley with its thrifty and ambitious Norse farmers. More cows, more silos to feed them, then machines to milk them, and then more pasture to graze them—this is the epic cycle which tells in one sentence the history of the modern Wisconsin dairy farm. More pasture was obtainable only on the steep upper slopes, which were timber to begin with, and should have remained so. But pasture they now are, and gone is the humus of the old prairie which until recently enabled the upland ridges to take on the rains as they came.

Result: Every rain pours off the ridges as from a roof. The ravines of the grazed slopes are the gutters. In their pastured condition they cannot resist the abrasion of the silt-laden torrents. Great gashing gullies are torn out of the hillside. Each gully dumps its load of hillside rocks upon the fields of the creek bottom and its muddy waters into the already swollen streams. Coon Valley, in short, is one of the thousand farm communities which, through the abuse of its originally rich soil, has not only filled the national dinner pail, but has created the Mississippi flood problem, the navigation problem, the overproduction problem, and the problem of its own future continuity.

The Coon Valley Erosion Project is an attempt to combat these national evils at their source. The “nine-foot channel” and endless building of dykes, levees, dams and harbors on the lower river, are attempts to put a halter on the same bull after he has gone wild.

The Soil Erosion Service says to each individual farmer in Coon Valley: “The government wants to prove that your farm can be brought back. We will furnish you free labor, wire, seed, lime, and planting stock, if you will help us reorganize your cropping system.

COON VALLEY CONTINUED ON PAGE 8
COON VALLEY (continued from page 7)

You are to give the new system a 5-year trial.” A total of 315 farmers, or nearly half of all the farms in the watershed, have already formally accepted the offer. Hence, we now see foregathered at Coon Valley a staff of technicians to figure out what should be done: a C.C.C. camp to perform labor, a nursery, a seed warehouse, a lime quarry, and other needed equipment, and a series of contracts with farmers, which, collectively, comprise a “regional plan” for the stabilization of the watershed and of the agricultural community which it supports.

The plan, in a nutshell, proposes to remove all cows and crops from steep slopes and to use these slopes for timber and wildlife only. More intensive cultivation of the flat lands is to make up for the retirement of the eroding hillsides. Gently sloping fields are to be terraced or strip-cropped. These changes, plus contour farming, good crop rotations, and the repair of eroding gullies and stream banks, constitute the technique of soil restoration.

The steep slopes, now to be used for timber and game, have heretofore been largely in pasture. The first visible evidence of the new order on a Coon Valley farm is a C.C.C. crew stringing a new fence along the contour which marks the beginning of forty per cent gradients. This new fence commonly cuts off the upper half of the pasture. Part of this upper half still bears timber, the rest is open sod. The timbered part has been grazed dear of undergrowth, but with protection this will come back to brush and young timber and make range for ruffed grouse. The open part is being planted, largely to conifers-white pine, Norway pine, and Norway spruce for north slopes, Scotch pine for south slopes. The dry south slopes present a special problem. In pre-settlement days they carried hazel, sumac, and bluestem rather than timber, the grass furnishing the medium for quick hot fires. Will these hot dry soils, even under protection, allow the planted Scotch pine to thrive? I doubt it. Only the north slopes and coves will develop commercial timber, but all the fenced land can at least be counted upon to produce game and soil cover and cordwood.

Creek banks and gullies, as well as steep slopes, are being fenced and planted. Despite their much smaller aggregate area, these bank plantings will probably add more to the game carrying capacity of the average farm than will the larger solid blocks of plantings on slopes. This prediction is based on their superior dispersion, their higher proportion of deciduous species, and their richer soils.

The bank plantings have shown up a curious hiatus in our silvicultural knowledge. We have learned so much about the growth of the noble conifers that we employ higher mathematics to express the profundity of our information, but at Coon Valley there have arisen, unanswered, such sobering elementary questions as this: What species of willow grow from cuttings? When and how are cuttings made, stored, and planted? Under what conditions will sprouts from willow logs take root? What shrubs combine thorns, shade tolerance, grazing resistance, capacity to grow from cuttings, and the production of fruits edible by wild life? What are the comparative soil-binding properties of various shrub and tree roots? What shrubs and trees allow an understory of grass to grow, thus affording both shallow and deep rooting? How do native shrubs or grasses compare with cultivated grasses for rootbinding terrace outlets? What silvicultural treatment favors an ironwood understory to furnish buds for grouse? Can white birch for budding be planted on south slopes? Under what conditions do oak sprouts retain leaves for winter game cover?

Forestry and fencing are not the alpha and omega of Coon Valley technique. In odd spots of good land near each of the new game coverts, the observer will see a newly enclosed spot of a half-acre each. Each of these little enclosures is thickly planted to sorghum, kaffir, millet, proso, sunflower. These are the food patches to forestall winter starvation in wild life. The seed and fence were furnished by the government, the cultivation and care by the farmer. There were 337 such patches grown in 1934—the largest food-patch system in the United States, save only that found on the Georgia Quail Preserves. There is already friendly rivalry among many farmers as to who has the best food patch, or the most birds using it. This feeding system is, I think, accountable for the fact that the population of quail in 1934-35 was double that of 1933-34, and the pheasant population was quadrupled. Such a feeding system, extended over all the farms of Wisconsin, would, I think, double the crop of farm game in a single year.

This whole effort to rebuild and stabilize a countryside is not without its disappointments and mistakes. A December blizzard flattened out most of the food-patches and forced recourse to hopper feeders. The willow cuttings planted on stream banks proved to be the wrong species and refused to grow. Some farmers, by wrong plowing, mutilated the new terraces just built in their fields. The 1934 drought killed a large part of the plantings of forest and game cover.

What matter, though, these temporary growing pains when one can cast his eyes upon the hills and see hard-boiled farmers who have spent their lives destroying land now carrying water by hand to their new plantations? American lumbermen may have become so steeped in economic determinism as actually to lack the personal desire to grow trees, but not Coon Valley farmers! Their solicitude for the little evergreens is sometimes almost touching. It is interesting to note, however, that no such pride or tenderness is evoked by their new plantings of native hardwoods. What explains this difference in attitude? Does it arise from a latent sentiment for the conifers of the Scandinavian homeland? Or does it merely reflect that universal urge to capture and domesticate the exotic which found its first American expression in the romance of Pocahontas, and its last in the Americanization of the ringnecked pheasant?

Most large undertakings display, even on casual inspection, certain policies or practices which are diagnostic of the mental attitude behind the whole venture. From these one can often draw deeper inferences than from whole volumes of statistics. A diagnostic policy of the Coon Valley staff is its steadfast refusal to straighten streams. To those who know the speech of hills and rivers, straightening a stream is like shipping vagrants—a very successful method of passing trouble from one place to the next. It solves nothing in any collective sense.

Not all the sights of Coon Valley are to be seen by day. No less distinctive is the nightly “bull session” of the technical staff. One may hear a forester expounding to an engineer the basic theory of how organic matter in the soil decreases the per cent of run-off; an economist holds forth on tax rebates as a means to get farmers to install their own erosion control. Underneath the facetious conversation one detects a vein of thought—an attitude toward the common enterprise—which is strangely reminiscent of the early days of the Forest Service. Then, too, a staff of technicians, all under thirty, was faced by a common task so large and so long as to stir the imagination of all but dullards. I suspect that the Soil Erosion Service, perhaps unwittingly, has recreated a spiritual entity which many older conservationists have thought long since dead.
Grant project pre-proposals are submitted

The Leopold Center pre-proposals for 2017 are in! There were 55 pre-proposals submitted this year, which is on track in comparison to previous years. The number of pre-proposals received in each initiative are: Ecology, 18; Marketing and Food Systems, 15; Policy, 4; Cross-cutting, 18.

The pre-proposals are now in the hands of the Advisory Board reviewers and Center staff. The reviewers assess which ideas fit best with the criteria in the Request for Pre-proposals (RFP) and the Leopold Center’s mission. Those pre-proposals are recommended to the Advisory Board for full proposal submission. The Advisory Board met on Sept. 13 to review the pre-proposals and recommendations. The researchers of the chosen pre-proposals will be invited to submit full proposals to the Center by Oct. 30. Funding awards will be announced in early January 2017.

Kirschenmann keynote speaker at Food Tank Summit

Leopold Center Distinguished Fellow Fred Kirschenmann will be the morning keynote speaker at the Food Tank Summit, to be held on Nov. 16 at the Gleacher Center, University of Chicago Booth School of Business, downtown Chicago.

The Summit will feature more than 40 speakers in the food and agriculture field from all across the country, and includes for attendees: interactive panels moderated by top food journalists, networking, and delicious food, hands-on activities and opportunities.

This is the fourth in a series of four Summits in 2016 which bring together some of the world’s most well-known food system leaders. For information on the Food Tank Summit, visit the website: foodtank.com/events/2016/11/16/2016-food-tank-summit-chicago-il.

Leopold Center aids intern

Elise Miller, a student at Stanford University, Palo Alto, Calif., interned this summer with Lisa Schulte Moore in the Natural Resources Ecology and Management department at ISU. Miller is a junior, studying earth systems with an emphasis in sustainable agriculture. She also is pursuing a Notation in science communication. Miller has had a variety of experiences while at ISU including counting bird nests in the prairie strips at Neal Smith National Wildlife Refuge, helping to facilitate the STRIPS cooperators meeting, and working with Moore’s latest project, People in Ecosystems/Watershed Integration (PEWI), an interactive game that lets users decide how they want to manage a virtual watershed, and demonstrates how those decisions will affect water quality, soil health and habitat. The Leopold Center underwrote the internship to enable Miller to work with the NREM program, STRIPS project and the Leopold Center.

Water Rocks! recognized

The youth program Water Rocks! received an Iowa Environmental Excellence Award at a ceremony on Aug. 2 in the Capitol Rotunda, Des Moines. Governor Branstad recognized 22 Iowa organizations, businesses, and communities at the ceremony. The awards are the premier environmental honors in Iowa. The Leopold Center is a partner of Water Rocks! along with the Iowa Department of Natural Resources, Iowa State University Extension and Outreach, Iowa Water Center and Iowa Learning Farms. To see all of the honorees for the Environmental Excellence Awards, go to: www.iowadnr.gov/ecawards.

To learn more about Water Rocks! visit their website: www.waterrocks.org.
Prison garden collaboration provides therapy and work skills

Last year, Local Foods Program assistant Alice Topaloff came across a video of “Garden for Good,” a program in Kansas that trains prison inmates as Master Gardeners. Co-worker Courtney Long, design fellow at the ISU Community Design Lab, suggested she talk to Julie Stevens, an ISU landscape architecture professor. Stevens has been working with the Iowa Correctional Institution for Women (ICIW) in Mitchellville since 2011, when the prison’s warden asked ISU for help with landscaping during a rebuild project.

Since 2011, Stevens, her students and various inmates, have created three multi-purpose outdoor classrooms, a decompression area for staff, and a healing garden for the women with special needs. In 2015, the crew piloted a one-acre vegetable garden, and all the produce was used by the institution’s food services. The garden was a huge success, and now is expanding into a training program where inmates and students could learn planning, gardening and job skills.

“That’s where I started to get involved,” Topaloff said. “I researched garden training programs in prison settings in the U.S. and looked for funding to start such a program.”

In the fall of 2015, the project received a $75,000 Wellmark Foundation matching grant to launch the training program. Between December 2015 and April 2016, Topaloff accompanied Stevens and a couple of her students to Mitchellville every week to meet with ICIW inmates and staff— including security officers, maintenance and food service staff, and administration— to plan the gardens and design a training curriculum.

The team took advantage of the resources at ISU Extension and Outreach to provide some of the content for the curriculum. Lina Rodriguez Salamanca, “the plant doctor” at the Plant Diagnostic and Insect Clinic, came to present on plant diseases and control. Diana Cochran, assistant professor of horticulture, taught the garden crew about harvest and post-harvest handling. Topaloff also brought books and Extension publications on topics such as composting, planting calendars, soil health and record keeping, and worked with the garden crew to design materials adapted to the prison setting.

About 10 women make up the garden crew at any one time. Every week, a new “Garden Manager,” “Record Keeper” and “Tool Queen” are appointed. In 2015, the women raised more than a ton of produce, and this year their harvest will be higher. So far this season, they have harvested zucchini, yellow squash, radishes, onions, green beans, carrots and peppers. But not all of the produce grown is going to food services; the women thought it was important for them to donate some of the produce to local food pantries. Recently, Topaloff dropped off totes full of eggplants, beets, and Swiss chard at the Des Moines Area Religious Council food pantry, with the help of Aubrey Martinez, coordinator of Eat Greater Des Moines.

Topaloff says, “This has been one of the best experiences of my life. I love working with the garden crew and have learned so much from them. They are some of the most resilient, determined, and best problem-solvers I know.”
Graduate research assistant Carrie Chennault supporting donation garden project

One in eight Iowans is food insecure, meaning they don’t have regular access to adequate food for a healthy diet (Hunger in America national survey, 2014). Many depend on food pantries as a regular source of groceries, and according to a survey, the number one thing they are missing on pantry shelves is fresh fruits and vegetables.

Iowa State University’s Supplemental Nutrition Assistance Program (SNAP) Education program and the Master Gardener program have teamed up to address this challenge through a project called “Growing Together: Healthy Food Access Project.” They are working with the ISU Research and Demonstration Farms to create a model for community-based “donation gardens,” which will raise fresh produce specifically for food pantries.

Through SNAP-Ed, the USDA partners with land grant universities to provide low-income families education on shopping, cooking, nutrition, and active lifestyles. The Iowa State SNAP-Ed team and Master Gardeners planted model donation gardens last spring at all seven ISU research farms to show examples of donation garden design and model principles of food safety for growing, harvesting and transporting food to pantries. Research farm staff and local Master Gardeners share garden care responsibilities.

ISU SNAP-Ed also awarded seed grants of $1,000 to Master Gardener groups in 25 communities around the state this year. Volunteers in these communities are growing food for local food pantries to increase food security for their low-income neighbors. Many Master Gardener groups were already growing food for their pantries, so it was a natural fit, according to Susan DeBliek, program assistant for the ISU Extension and Outreach Master Gardener program.

Carrie Chennault, an ISU graduate research assistant and Local Foods Program team member, is assisting with this project and conducting research for her doctoral degree at the same time. This summer, she visited 15 of the garden sites and talked with many local partners including gardeners, farm managers, other community members, pantry personnel, and pantry clients. Her primary area of research is social justice as it relates to food security in local communities.

“I am looking at the role of donation gardening in the community and how it addresses food insecurity,” Chennault said.

As her research continues, Chennault will connect more with Iowans experiencing food insecurity, whose voices are often missing from local food systems development and practice. She hopes that this community-engaged research project can counter common narratives of food insecurity, while developing civic engagement opportunities for socially disadvantaged and marginalized community members. She plans for the lessons learned through the project to contribute to strategies and practices for the Local Food Program’s Ag Urbanism Toolkit.

Second annual ISU Local Food Festival promotes local products, healthy eating

Buying and eating more locally grown food products is good for our health, our economy and our environment. The Local Foods Program staff at ISU Extension and Outreach provided an opportunity to learn about the importance of locally grown food at the Local Food Festival: An Adventure in Eating event held Tuesday, Sept. 13, on the ISU campus.

The event featured educational displays, local food samples made with recipes developed by ISU Dining chefs, and sales of locally grown and produced products by ISU clubs as well as Story County and central Iowa businesses. ISU Recreation Services offered free bike tune-ups during the festival.

“The opportunity to showcase how easy it is to eat healthy is something our chefs really enjoy,” explains Karen Rodekamp, food service manager for ISU Dining Services. She added that the food samples offered by the campus chefs included freshly picked produce from the ISU Horticulture Research Station near Ames.

According to the USDA’s definition (2008), a product can be marketed as locally or regionally produced if its end-point purchase is within 400 miles from its origin or within state boundaries. However, most retailers, restaurants, and food services often define local to be on a smaller scale, or within 100–150 miles.

“Creating a festival atmosphere really helped raise awareness and interest around food and sustainability,” said Merry Rankin, director of the ISU Office of Sustainability.

The festival featured displays on growing, raising, and incorporating local foods into diets, as well as empowering healthy lifestyles and sustainably-minded activities to engage students, faculty and staff, helping them make a connection with Ames and nearby communities.

Through the Farm-to-ISU program, ISU Dining Services has already increased purchases of local, organic and alternatively produced agricultural products from farmers and businesses within a 250-mile radius of Ames.

Sponsors of the festival include ISU Extension and Outreach, Leopold Center for Sustainable Agriculture, ISU Office of Sustainability – Live Green, Department of Food Science and Human Nutrition, ISU SNAP-Ed, Blue Bunny, Farm Bureau and ISU Dining Services.
Histyle Events

More events on the website: www.leopold.iastate.edu/events/list

Learn how to get funding support for events: www.leopold.iastate.edu/grants/education

**Oct. 6**
**Iowa Environmental Council annual conference**
**DMACC, Ankeny**

The conference, “ECOnomics: Dollars, sense and sustainability,” will be held at the FFA Enrichment Center on the DMACC campus, Ankeny, from 8 a.m. - 5 p.m. For registration information and conference agenda, go to: www.iaenvironment.org/get-involved/council-events/annual-conference/

**Oct. 13**
**Dr. Robert Wallace at Ames Public Library**

The ISU Graduate Program in Sustainable Agriculture presents Dr. Robert Wallace for a book reading and Q&A at the Ames Public Library, at 6:30 p.m. Wallace, an evolutionary biologist and public health phylogeographer at the University of Minnesota, is promoting his new book, “Big Farms Make Big Flu,” which examines the relationships between the socioeconomic and biological factors that have created diseases in poultry and swine.

**Nov. 4-5**
**Women, Food and Agriculture Network Conference, Nebraska City, NE**

Register now for the annual conference to be held at Lied Lodge. This year’s theme is Women and Permaculture: Making a Living in Harmony with the Land. You can find the agenda and registration information here: www.wfan.org/2016-wfan-annual-conference/

**Nov. 10-11**
**Northeast Iowa Dairy Tour**

The Northeast Iowa Community-Based Dairy Foundation along with ISU Extension and Outreach are hosting a tour of six dairy farms in the region. To register for the tour, contact Jennifer Bentley at the Allamakee Extension office, (563) 568-6345. The Leopold Center is sponsoring the Dairy Tour through its CESP grant program.