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The Harvesters
Pieter Bruegel
the Elder

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Above: Raymond
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bokashi*, 1999



Our Mission Statement

When people, land, and community are as one, all three members prosper; when they relate not as members but as competing interests, all three are exploited. By consulting nature as the source and measure of that membership, The Land Institute seeks to develop an agriculture that will save soil from being lost or poisoned while promoting a community life at once prosperous and enduring.

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“Farming Like the Forest” and “The Fields Need the Forest” – *Complimentary Ideas in the Search for a Sustainable Agriculture*

Raymond Epp

I live and farm in the land F. H. King visited 90 years ago after which he penned the book *Farmers of Forty Centuries*. I'm a newcomer to this place, having been invited to farm by a small group of people in the Mennonite Churches of Sapporo on the north island of Hokkaido, Japan. Our hillside farm – seven acres of forest, two acres of paddy field, and 11 acres of upland fields – sits on the north side of the Maoi Mountain range. The land, terraced 30 years ago for rice growing, resembles a gigantic staircase. We receive on average 35 inches of rainfall a year. Snow covers the ground from December until late March. The last frost comes around May fifth, while the first killing frost comes toward the end of October. We grow 40 different vegetable crops plus rice for 80 families, supplying some local hotels and restaurants and a buying club on the main island with produce. We host over 500 guests a year and people from more than 25 countries have found their way to our farm.

I left The Land with more questions than I had answers for and it will perhaps take the rest of my life, and then some, to make sense of it all. I have chosen to return to my ancestral tradition of being farmers. But personal convictions and lessons learned while at The Land have changed the ways in which I farm. After participating in perennial polyculture research, work that seeks to mimic the prairie to create prairie-like grain-fields, I try to farm by mimicking the forest. Sir Albert Howard wrote about the need to “farm like the forest” since “nature is the supreme farmer.” Using “nature as measure” as a guide to good agriculture has a long history and has been written about best by Wendell Berry. I have learned some good things from this approach, which has made work easier and increased vegetable quality. The wildness of nature, however, is more than just a reservoir of ideas for creating a sustainable agriculture in our domesticated fields. From my contact with traditional Japanese agriculture I have found there is a practical connection – the health of the domesticated fields cannot be maintained without the wildness of nature. The fields need the forest.

I would like to share with you what I have learned in the process of blending traditional farming methods with Sir Albert Howard's idea of “farming like the forest.” More specifically I want to share some things about

Japanese agriculture, traditional fertilizer making, and describe how my experience growing Kabocha squash (a Japanese variety of *Cucurbita maxima*) has changed over my years influenced by traditional farming and Sir Albert Howard. I hope this essay can stir our imaginations and be a contribution to the search for a more excellent way of farming.

At the time F. H. King visited Japan 70 percent of the working age population of Japan were farmers and as late as 1950 more than 52 percent of the population of Japan were farming. Traditional Japanese farmers did not have a carefully worded philosophy of how to live and how to farm. Farming was part of who they were; they felt no need to write it down. The methods were both practical and necessary for maintaining a population density in 1907 of 2,349 people per square mile.¹ Industrialization of the countryside began in earnest after World War II and in the nation's hell-bent efforts to catch up with the West; traditional methods of farming have nearly disappeared. There has been a 45 percent population shift from rural to urban in the past 50 years, perhaps the largest and fastest population shift of any industrialized country. My neighboring farmers, mostly in their 60's and 70's vaguely remember farming methods which I am wanting to learn and keep alive. But they mostly laugh at me and say, *taihen*. Which basically means too much work.

My fieldwork begins not with a trip to the machine shed to get the tractor. Instead I go to the forest bordering my fields. It is here that I collect locally adapted microorganisms, fungi and bacteria that have evolved in place in much the same way as traditional Japanese farmers have done for millennia. It was while on one of these trips to the forest that I realized the vital connection between forest and field. The microorganisms are cultured and mixed with any organic waste to make what the Japanese call *bokashi*, a kind of fertilizer. When spread to the fields the soil life, which abundantly existed before the forest was turned into field, is reinvigorated.

The extra time and labor required to gather the forest's microorganisms are worth the effort in accelerating crop maturity and increasing crop quality. I've noticed the dramatic effect, especially in rice growing. For three years I grew rice using organic fertilizers



*Akiko Aratani and
Raymond Epp
(wearing Land
Institute jacket),
1999*

purchased commercially, ones lacking indigenous fungi and bacteria. My rice was always three to four weeks later in maturing than the surrounding fields, and my rice samples contained a large number of green, immature grains. Yamazaki san, my neighbor, always tells me the reason my rice is so late is because the cold spring winds and the cold water in the paddy field slows the biological activity making my organic fertilizers unavailable when the plants most need fertility, especially nitrogen. He always adds at the end of the conversation that I need to add a little chemical nitrogen fertilizer. I shoot back, "I grow the best green rice in our town, I don't need it!" We both laugh. But this has all changed this past year using bokashi. Maturity was nearly simultaneous with the neighbors and tests conducted at the end of the year showed that my rice had qualities prized by the Japanese. Upon analysis my rice had the lowest amylose content in the neighborhood at 18.6 percent compared with the town and neighborhood average of 19.4 percent. Low amylose gives rice a sticky consistency that Japanese like. F. H. King, in his travels took note of the importance of traditional fertilizer preparation:

They have long realized that much time is required to transform organic matter into forms available for plant food and although they are the heaviest users in the world, the largest

portion of this organic matter is predigested with soil or subsoil before it is applied to their fields, and at an enormous cost of human time and labor, but it practically lengthens their growing season.²

The use of bokashi contributed to the earlier maturity of my rice and its increased quality. It is the only change from previous years. Japanese biotech companies are trying to create low amylose rice varieties to satisfy Japanese consumer tastes. It appears to me that traditional fertility management would achieve similar results.

My Experience of Growing Kabocha Squash

Being a newcomer to this place my presence predisposes the land to abuse. I knew nothing of the winds and rains nor about this soil. Fortunately my neighbors were very friendly and in spite of my poor Japanese they were gracious enough to listen to my poorly worded questions and even more gracious to answer.

Four years ago I began intercropping oats with kabocha by tilling out strips in the field, incorporating purchased organic fertilizer and transplanting kabocha plants through plastic mulch. Spring-planted oats didn't provide much of a windbreak and I found that some of the plants twisted off in the strong spring winds. As the kabocha plants grew I noticed that the weeds in the bare soil next to the plastic mulch grew vigorously. I ended up hoeing these edges but found at harvest time the vast majority of the weeds in the field were to be found along these narrow strips. "Nature abhors a vacuum," the saying goes – so should I get a narrower rototiller so there will be less bare soil? Should I plant more cover crop seeds in the soil along the edge of the mulch?

When the vines were about three feet long I laid them on top of the plastic mulch, cut all the oats with a gas weed trimmer, and then trained the vines so they would cover the ground. I noticed that the tendrils would grab hold of the oat stubble and keep the plants from blowing around in the wind. A farmer I had helped one summer clean tills between his rows of kabocha, sprays herbicide, and then uses string lines in his field to tie down his plants. Too much work. Let them tie themselves down. They're more than willing to do so.

As the plants age and lose their vigor they are more susceptible to insect and disease. In August I observed localized aphid infestations. On closer observation I saw that the aphids preferred to feed on the oats, minimizing the damage to the squash and revealing an unforeseen

benefit of intercropping. Removing the plastic mulch at year's end was one of the biggest jobs. Our first year, we just burned the mulch right on the farm, sadly contributing to a growing incineration problem in Japan.

By mid-summer of that first year I sensed that growing cover crops with the kabocha was a good thing but spring-planted cover crops didn't provide the protection the small kabocha plants needed. I tried planting strips of winter wheat, red clover and white clover in the fall to give the cover crops a head start on the kabocha the following year.

• • •

The second year's most significant observation occurred as I cut the winter wheat cover between the rows in late June. I noticed a lark dragging its wing as it ran along the ground. I followed the bird and it took flight. I returned to where I first noticed the bird and soon found a newly constructed nest. I marked the place so I wouldn't endanger it again and could keep an eye on the nest later. In a week's time there were four eggs in the nest. I took my wife, Aki, and my then-one-year-old-son, Kazu, to see the baby birds. The beautiful, tender smile that spread across Aki's face and my son's excitement told me that this kind of farming is good. It was good because it allowed us to take pleasure in the field while at the same time using the field to gain our sustenance. Farming this way is so much more complex and physically demanding that, to be honest, I sometimes wonder if it's worth all the effort for the meager returns we receive. But my calculating mind was put to shame when I realized that what I was witnessing in that moment was of far greater importance than the end-of-the-year balance sheet. I saw that, given a proper scale, the fields and forest, the world of humans and nature could exist together.

• • •

In my rotation the kabocha follow potatoes so it's important to plant the cover crop after harvesting the potatoes. In the fall of the third year, 1997, the potato harvest again ran late. While winter farming I always seem to plan to do more than what is physically possible. We finished the potato harvest around September 23, with just a few days to spare before it would be too late to plant the fall cover crop. I got on the tractor and tilled the fields to make a fine seed bed. The soil behind the tiller came out soft and loose. It was the texture of soil I loved to walk across with my bare feet as a child. I decided to prepare all the fields that needed to be planted with cover crops in spite of the growing evidence of rain. I finished tilling and while preparing the grain drill one of those cats and dogs type rains came down. I ran to the house, took off my wet clothes, and ran upstairs to look out over the fields. The rain was pounding the soft, vulnerable soil, puddling the surface. Soon the soil began sliding in sheets toward the sea. The rain beat a deafening drum cadence on the tin roof. I stood there looking

out, knowing that the loss of soil I was witnessing was the result of my poor judgment. The drumbeat pounded this message home. I was writing a chapter in the book of my relationship to this place. Never again I vowed to myself. In farming with nature, timing is everything. Getting the crop out of the field and getting the cover crop in is now one of my top priorities. If I could achieve this, come spring, a cover would be tall and would protect the young plants from the wind. Rye seemed the cover crop of choice for its height and allelopathic effect but I would have to wait until next year. There would be no cover crop planted this year.

• • •

The dioxin released from the incineration of plastics in Japan is becoming a serious problem. In Saitama Prefecture plastic waste from Tokyo is incinerated and last year the Japanese media reported that elevated dioxin levels were found in tealeaves grown in the area. Consumer fears of dioxin tainted vegetables led to a collapse in the sales of vegetables from the Saitama area. If plastic is a problem why should I make it worse. But how do I kick the habit?

• • •

This past year was the greatest year of discovery for me. Springtime came and the rye emerged from its winter rest in good shape. By the time I was ready to transplant the three-week-old plants in the second week of June the rye was headed out and stood over six feet tall. I cut four-and-a-half-foot wide strips out of the field every ten feet for the transplants. I laid down on the freshly cut straw in the strip to get a feel for what the squash plants' new home would be like. Warmth bathed my face and the spring winds, which cause the field to look like a waving flag from above, were barely noticeable. I closed my eyes and thought, *The purpose of using plastic mulch is to suppress weeds close to the plants and to warm the soil. The rye will suppress the weeds but how am I going to warm the soil?* I lay there for a time, thinking and resting. I became aware of the sun's warmth on my eyelids. That's it! I opened my eyes, got up, and went back to work. I had found my answer. The tall rye between the strips, besides protecting the plants from the wind and suppressing weeds, would create a warmer microclimate for the new kabocha transplants. Two weeks after transplanting the kabocha plants, strong spring winds blew and heavy rain fell. The rye bent over the top of the young plants much like a hen covers its chicks with its wings. I walked out to the field at night in the wind and the rain to see the rye protecting the young plants. I went back to the house and slept well, knowing the plants would be OK until morning. My conversation with the land thus far yielded answers to questions about wind protection, weed suppression, and soil warming. But there were still other questions needing answers.

One question presented itself as my friends and I raked the cut rye off to one side of the strip: *How will I*



incorporate fertilizer into the soil? My agronomy training at the University of Nebraska taught me that fertilizer placement is very important – especially for phosphorous. Six inches to the side and six inches below the seed is the rule. Conventional agriculture tells me I would have to till in the fertilizer (causing weed problems), or else knife it in with a fertilizer machine (which I don't own because it's too costly). The wisdom and practice of traditional agriculturists in Japan and Korea provided me a way around this dilemma. Their advice on applying traditional fertilizers turned the wisdom of conventional agriculture on its head.

Apply the compost with indigenous micro-organisms (bokashi) to fields, not plowing it in the fields but put on the surface because soil fertility moves downward.³

These fertilizers act like the fertility of the forest, where composting and the resulting fertility is found on the soil surface.

We spread bokashi at the rate of 1.2 tons/acre in a two-foot wide band on the surface of the strip and followed this with a top coating of composted cow manure at the rate of 1 ton per 300 feet of row. I wanted to get out the tiller. I had a hard time shaking the influence of my university training and I couldn't quite trust this traditional wisdom despite its 4,000-year pedigree. But I knew that incorporating all that fertility into the soil would produce a flush of weeds that would feed on the fertilizer leaving less for the kabocha crop. I would then have to use plastic mulch to hold back the weeds. I wondered, *What should I do?*

I decided we would try planting one row without incorporating the fertilizer. We would just dig holes for the plants, place them right into the rye stubble and then spread the cut rye straw around the plants. Ben Watkins, a WWOOFER (Willing Worker On Organic Farms) from Australia, began digging the holes in that first row. My curiosity got the best of me when I saw the soil Ben brought up with the post hole digger. Usually the soil is loose but this time it was different. The soil came out in blocks the same size as the digger's jaws. Squatting down on the rye stubble, I picked up the block and raised it up in front of my face. The block wasn't hard; it was soft and loose, interlaced with a net of roots and superfine root hairs holding the soil together in a porous, breathable mass. I dropped my lower hand so that I now held the block from the top with only one hand. I shook the block and it wiggled but didn't fall apart; it reminded me of Jell-O. "*There is no way that I can improve on this soil structure by tilling it,*" I said as I showed my discovery to the others who'd gathered to help that day. *We'll just have to trust that those guys (traditional farmers) knew what they were talking about and that the fertility will move down as they said.* As a hedge I did, however, place a handful of phosphate fertilizer in the holes before placing the plants in their new homes.

We didn't till any of the strips in the entire field. This was my first time with not tilling the soil before planting a crop. As the vines grew I continued to cut back the rye until all the strips of rye were down. The tendrils held onto the rye stubble keeping the plants stable and stationary in the wind. The end result was a bountiful crop yielding as well as previous years.

Harvesting the crop is made much easier in wet years due to the existence of the rye mulch.

My conversation with the field yielded answers to the problems and questions I faced, but the answers didn't come all at once. The dialogue began and progressed, yet I was never sure where it would take me nor what the field would look like in the end. Looking back, I feel my questions of nature were honored and listened to, and I came from the fields satisfied. Satisfied because I, too, listened to and sought to honor my limited knowledge of how nature works. And on top of all of this, and in spite of the hard work, it was fun.

My satisfaction lays also in the fact that this kind of conversation with the fields yielded answers that were both liberating and economical. Contrary to expert opinion, there is more than one way to grow a crop. I learned that nature and traditional farming methods can be trusted to provide clues and insights into innovative ways of farming that can free farmers from the tyranny of modern agriculture. In introducing modern agriculture to traditional culture the first step is to destroy or discount traditional methods by saying it's not rational or based on scientifically replicated methods (funded by governments and agribusiness companies, of course). In traditional agriculture the *process* of farming is based upon what is locally available, whereas on the modern farm the suppliers of inputs control the process. Modern farmers are locked into a system of farming in which both the process and the end product are controlled by forces outside the farm.

Conversing attentively with the land is economical. I no longer need to purchase expensive, ready-made fertilizers. I make my own during the winter months when the work schedule is slack and when I most need exercise. I also needn't buy plastic mulch and contribute

to Japan's serious disposal problem. Pre-transplant tillage is eliminated, saving time and fuel costs. My conversation with nature helped me reduce the use of non-renewable fossil fuel energy required by the tractor for tillage and for manufacturing plastic mulch, both of which represent a source of pollution that threatens life.

Conclusion

In this article I have introduced myself and my farm, shared some things about traditional Japanese agriculture and shared my conversations with my fields as I've attempted, and continue to attempt, to find ways of farming like the forest. In addition to conversing with the fields I am also indebted to the generations of farmers who have over the millennia maintained the practice and belief that the fields need the forest. Their methods and insights are opening up new ways for me to think about farming, ways that protect the soil and preserve the belief that forest and field are indeed one.

In sustainable agriculture circles today it's widely accepted that "Farming cannot take place except in nature."⁴ Less obvious is that traditional agriculturists may have something to offer us: experience demonstrating the domesticated field's need for the wildness of nature. What is needed is a Green Revolution in reverse, a revolution where we take the time to learn about the virtues of methods and practices of traditional farmers so that scientific inquiry can enhance rather than destroy traditional knowledge. F. H. King demonstrates the kind of humility required:

We had long desired to stand face to face with Chinese and Japanese farmers; to walk through their fields and to learn by seeing some of their

*Akiko Aratani
planting three-
week-old plants
into the field,
1999*



methods, appliances and practices which centuries of stress and experience have led these oldest farmers in the world to adopt. We desired to learn how it is possible, after twenty and perhaps thirty or even forty centuries, for their soils to be made to produce sufficiently for the maintenance of such dense populations as are living now in these three countries. We have now had this opportunity and almost every day we were *instructed*, *surprised* and *amazed* at the conditions and practices which confronted us whichever way we turned; instructed in the ways and extent to which these nations for centuries have been and are conserving and utilizing their natural resources [and] surprised at the magnitude of the returns they are getting from their fields.⁵ (emphases mine)

Dr. King, university professor and former USDA employee, walked the fields of Asian peasant farmers, a powerless and exploited class, and listened to their experience gained over millennia. Dr. King heralded these people as “leaders in the maintenance of their nations.”

I, too, am continually “instructed, surprised and amazed” by the genius and frugality of traditional agriculture in Japan, by practices that demonstrate how the field needs the forest. I am becoming increasingly aware that such genius and frugality can only be practiced on a particular scale of farming beyond which these qualities are lost. Mechanization has made large-scale farming possible, freeing up laborers for the industrial economy. But this shift towards larger-scale farming extracts farmers from nature’s economy and places them on the rack of the money economy. Cash flow is needed to satisfy the executioner. Many of the farmers around here have been convinced that farming is about making money – economic logic is primary. This has led them to forsake traditional fertilizers because their manufacture is too time-consuming and “unproductive.” Thus these natural materials go unused and purchased fertilizers take their place. Time-wise, it is more efficient. This is perhaps the sharpest critique modern agriculture, be it American or Japanese, has for traditional Japanese agriculture: it is inefficient in its output per unit of human labor. But the knife cuts both ways, for this is also the sharpest critique of modern farming. Modern agriculture exists because it believes it can still afford to waste – there’s still some fat left. Where will the traditional wisdom be found, where will its practitioners remain, and how will we find the way to an enduring agriculture when the fat is gone?

F. H. King did not complete his book *Farmers of Forty Centuries*. He died before writing the closing chapter, “Message of China and Japan to the World.” I wonder what Dr. King would have written? He was struck by the frugality of the people, and the willingness to do whatever work was necessary to transform organic matter

into plant fertilizer. Such caring for soil he had not witnessed before. Can such caring come again?

The rebirth of an agriculture watchful of the connection between field and forest will need the commitment of dedicated farmers who understand the workings of the forest. It also requires the support of a human community, sharing a common frugality and a healing love, as well as a desire to work hard alongside farmers to see that crucial connections are maintained: the link from forest to field to table – and back. We must begin conversations in our towns, villages and neighborhoods, and also in our fields, with nature – for in these conversations we may learn to transform agriculture and our lives in ways as yet unimagined. May the day come when one day a visitor comes to the farms of America to record America’s forty centuries of agriculture.

Endnotes:

¹Sir Albert Howard, *An Agricultural Testament*, New York: Oxford University Press, 1940, p. 10.

²F. H. King, *Farmers of Forty Centuries or Permanent Agriculture in China Korea and Japan*, Emmaus, PA: Rodale Press Inc., 1911, p. 11.

³Han Kyu Cho and Atsushi Koyama, *Korean Natural Farming: Indigenous Microorganisms and Vital Power of Crop/Livestock*, Chungchungbook-do, South Korea: Korean Natural Farming Association Publisher, 1997, p. 85.

⁴Wendell Berry, *What Are People For?*, San Francisco: North Point Press, 1990, p. 207.

⁵King, p.2.

Ourselves

John Daniel

**When the throaty calls of sand hill cranes
echo across the valley,
When the rimrock flares incandescent red
and the junipers are flames of green
on the short grass hills.
In that moment of last clear light
when the world seems ready to speak its name,
meet me in the field alongside the pond,
without careers for once,
without dreams or anger or
the rattle of fears,
We'll ask how it can be that we
walk this ground and know that we walk,
alive in a world that didn't have to be beautiful,
alive in a world that doesn't have to be.**

**With no answers,
just ourselves in silence
we'll listen for the song that waits to be learned,
the song that moves through the
passing light.**

Soil Cultivating Citizens: An Agrarian Contribution to Civic Life

Norman Wirzba

Over 150 years ago, Alexis de Tocqueville observed that Americans are especially good at taking their destiny into their own hands. Through a mix of individualism, self-interest, ingenuity, and tenacity, seekers in the “new land” achieved a level of prosperity that was the envy of people from around the world. The costs of this prosperity, however, did not go unnoticed by Tocqueville, who, in *Democracy in America*, wrote that Americans “never stop thinking of the good things they have not got.” Their minds, he said, are “more anxious and on edge” because they “clutch everything and hold nothing fast.”

Our own time does not mark an improvement on this general malaise. Given the massive amount of money spent by millions of Americans on Tylenol, Tums, Prozac, Xanax, and Viagra, one would have to conclude that, though we may be prosperous, we are not well. For many, the pursuit of the American Dream leaves them either depressed, anxious, tired, stressed or bored. Moreover, we are encountering great difficulty establishing and agreeing upon the conditions that would allow us to judge a life as complete or fulfilled. Having assumed that our destiny is a matter of our own preference, we have at the same time cut ourselves off from the common destiny we share with each other and with the earth. We have, as Wendell Berry once noted, taken flight into the hypothetical air of our own ambition and greed, and in the process forgotten or despised our “native ground,” the soil, water, and air that sustain, complete, and unite us.

The cultural and political debates that have attempted to address these concerns have been deficient insofar as they have neglected to engage seriously the perspectives of agrarian thought and life. By agrarianism I mean the traditions of thought rooted in the concrete practices of taking care of the earth, practices that are attentive to and responsible for the long-term health and vitality of the biological sources that make life possible. Since we are biological beings – we must eat, drink, and breathe – it is clear that our individual and social well-being requires that we be mindful of the ecological parameters, the possibilities but also the constraints, within which our lives must move. In other words, we will not have an adequate account of what it means to live a fully human

life if we do not at the same time assume responsibility for the cultural and biological contexts we depend upon.

In this century especially, with the mass migration of an estimated 90 million farmers from the land, we have witnessed the erosion of the conditions that would enable us to learn the precise character of our dependencies on each other and the earth. The reason is that urban life differs from agrarian life in ways that are crucial for the development of personal and civic health. Put simply, city life fosters, even if it does not make inevitable, the anonymous and autonomous existence of its members, whereas life that is attuned to the land encourages the development of a cooperative and accountable spirit. The fact that people in many urban centers are now promoting “neighborhood associations” is an indication of a common anonymous condition that needs to be overcome.

The difference between urban and agrarian life can more specifically be seen in the contrasting conceptions of freedom and responsibility that are operative in both. In the city, people often have a diverse array of opportunities from which they can choose their friends, their work, and their extra-curricular activities. If the initial choices made do not work out or are no longer perceived as desirable, the possibility for a different choice always exists. In other words, a person’s choices are less binding. The paradox in this, however, is that the person who so “freely” moves from association to association is at the same time enslaved to a host of foreign influences: creditors, bosses, a consumer media, technical experts, etc. The many responsibilities of urban life are thus often perceived as onerous, as negative obligations rather than positive commitments. Furthermore, as urbanites have become specialists in one segment of a huge and often fragmented workforce, they have found it more difficult to see how what they do matters, affects, or contributes to the well-being of larger groups.

Agrarian life, on the other hand, is founded on the acknowledgement of a variety of responsibilities and commitments that curtail the spontaneous freedoms characteristic of urban life. Farmers, if they are to be successful in the long-term, must be attentive to and respectful of the land and animals they work with. They must also live with certain forms of helplessness in the

face of natural forces like weather, disease or pest infestation, birth, growth, and death. The responsibilities of agrarian life, however, cannot be properly understood as onerous since they contribute directly to the maintenance and flourishing of life, human and non-human. Whereas urban happiness is often taken to consist of a flight from responsibility – the get-away long weekend or the vacation far from home – agrarian happiness would find its realization or expression in the acceptance of tasks viewed as essential and praise-worthy.

In contrasting agrarian life with urban life, I aim to suggest that agrarianism, because of its concrete practices, promotes the proper ethos for recovering civic and communal responsibility, and thus personal and social well-being. In making this claim I obviously nod toward Cato and Jefferson in their adulation of the farmer. But it is not my argument that we should all become farmers, since this would be impractical and unnecessary. What would be desirable, however, is if people could learn and live within an agrarian ethos: people appreciating and understanding as practically as they can the connections and dependencies between people and land, the connections that urban life severs by insulating us from nature's forces. It is as possible for non-farmers to operate from the perspective of an agrarian culture as it is for non-industrialists to live within the assumptions of an industrial culture.

Agrarian practice can make three specific contributions to civic and communal life: Agrarianism teaches interconnectedness and interdependence; Agrarianism teaches responsibility; and Agrarianism teaches realistic and healthy goals for human life.

Agrarianism teaches interconnectedness and interdependence.

Agrarians have long understood what ecology repeatedly demonstrates: we do not simply live *among* soil, water and air; we live *from* and *within* nature's elements. These interdependencies are necessary, practical, and concrete, but they have been dissimulated or forgotten, particularly since the modern period, as we came to believe we were autonomous, self-legislating beings able to choose a life for ourselves. From an agrarian standpoint, this idea is ridiculous and dangerous. Ridiculous because, without soil, water and air of a certain quality we would cease to exist, or continue to exist badly. On a scientific level, there simply is no clear separation between ourselves and the air we breathe, the food we eat, the water we drink. At the most fundamental level – at the level of respiration and nutrient absorption – we are permeable beings, non-specific sites for the exchange of elements and energy. But our myth of human independence is also dangerous because this ignorance then becomes the basis for a colossal arrogance that makes today's unprecedented environmental damage all but inevitable. That we have become a nation that willfully erodes and poisons billions of tons of topsoil per year, depletes and contaminates its water supplies, and pollutes its atmosphere, indicates our ignorance of the practical, incarnate knowledge of our interdependence with the earth.

Agrarian practice may represent our best hope for recovering this essential knowledge. It does so because it demands intimacy with the land and promotes



Solomon D. Butcher,
*Sod house of Isadore
Haumont*. Nebraska
State Historical
Society.

responsibility for our occupation of places. To take care of land one first must know the limits and possibilities of specific places, and this requires repeated and vigilant attention and care. Obviously this cannot be accomplished by the sorts of agribusiness we might see if we ride down an interstate highway. Agribusiness has severed a responsible attachment to the land for the sake of quick, short-term profits. The land is made to fit our wants, instead of us remaking ourselves to fit within its possibilities. Authentic agrarian practice, in contrast, recognizes that in taking care of the land we simultaneously take care of ourselves, whereas in taking care of ourselves first – especially if this comes at the cost of the land’s degradation – we eventually harm both. Moreover, it is less and less the case that agribusiness farmers actually live on what they produce; it gets shipped off to markets far from home, while farmers buy what they need from a supermarket like everyone else. Agribusiness practices contribute to the sense that we do not live intimately with nature’s elements. These elements always come to us from somewhere else, packaged and prepared. Agrarian practice, on the other hand, keeps the distance between production and consumption short. This not only serves the interests of greater health, but also keeps our minds attentive to how we actually subsist in being, how our health is inextricably tied to the health of the lives we depend upon.

Agrarianism teaches responsibility.

Our present economic order provides the conditions for massive irresponsibility. The problem is simple: given the relative isolation and anonymity of urban life, and given our separation from the land, we rarely have to live with the effects of what we do. When I buy food in a grocery store, I have no idea how the food was produced. I don’t know if the chicken I buy was raised in a factory that de-beaks birds, feeds them steroids and antibiotics, and pumps their waste into the ground and the above-ground water supply. I don’t know if my vegetables grew on land that is dependent on exhausting our water supplies or is heavily laced with pesticides and fertilizers, or if they were harvested under near slave labor conditions. Obviously the list goes on and on, from acts like turning the thermostat dial to putting our garbage at the curb. We no longer see the effects of our actions, much less live with them. Nor do we appreciate, and thus put ourselves in the position to knowledgeably condemn or promote, the practices that contributed to the production of the elements we consume.

Agrarian practice makes it much more difficult for us to live this way since its attention is primarily local. Agrarians know what they eat and how it came to be because they were intimately involved in its growth and harvest. They will not lace their food with poisons and

preservatives because they want food that’s fresh and healthy. Nor will they mistreat their livestock, since daily contact breeds affection. (By contrast, consider the rapid turnover in the industrial farm labor force, as workers leave in disgust over the tasks they must perform and the conditions in which they must perform them.) Moreover, agrarians will make the long-term effort to preserve good soil and clean water since these are the indispensable conditions for healthy life.

Agrarian life also contributes directly to civic life because it fosters the mutual accountability that is essential to a vibrant citizenry. What an individual does has implications and repercussions for the many others who depend upon that individual. Moreover, these implications are seen and felt, since the local character of agrarian life makes it more difficult to hide ourselves from the damaging effects of what we do. Farming is by nature a cooperative enterprise – it requires working with, rather than against, land, animals, and other people. It makes concrete the knowledge of ourselves as interdependent beings, and thus shows the deception of an autonomous view of humanity. To exist properly is to exist with others in relations of care and responsibility. Agrarian practice builds upon and gives concrete expression to the knowledge that we need each other, and that this need is a good, if not always pleasant, thing.

There is, of course, a danger in romanticizing an agrarian life, when the reality is that farm work is difficult and continuous. It’s difficulty, however, does not eclipse its joys and its ability to provide its practitioners with the sense that what they do – cultivate and nurture the conditions for life – matters and is valuable. Agrarian responsibilities are ones it makes sense to commit to since they are clearly attached to goals that are known to be indispensable and life-promoting.

Agrarianism teaches realistic and healthy goals for human life.

People have always chafed under restraints on their actions. This is especially the case today. For many “can” simply signifies “ought.” The roots of this extravagant way of thinking go well beyond the myth of ourselves as autonomous beings (consider Socrates’ battle with Protagoras, or Augustine’s ruminations on our sinful nature). We see a form of the problem in the contemporary political debate between liberals and communitarians. Liberals, as is well known, stand for the advancement of personal rights, the idea that individuals are in control of their goals in life; whereas communitarians stand for the enhancement of good, the idea that an individual’s conception of the good in life is socially rather than individually determined. While this description vastly simplifies things, liberals adamantly protect a person’s independent “inner core” and that person’s right



to be free of externally derived constraints. As Will Kymlicka in *Liberalism, Community and Culture* puts it, “Nothing is ‘set for us,’ nothing is authoritative before our judgment of its value.” This sentiment stems from the liberal belief that the self is prior to its ends, that we live lives that are “led from the inside.” But is not such a view steeped in hubris since it clearly denies that we are natural, biological beings necessarily tied to nature’s ends? What happens to a self when it thinks, judges, and acts from an “inner core” that has dissimulated its connectedness with the world around it?

One strong possibility is the growth of wildly unrealistic goals and expectations. For example, Americans who routinely believe that they should live comfortable lives, secure and free from any pain or discomfort, fail to realize that the ancient mind would have seen such a life as the life of a god. How did we come to this expectation? One element of the change was the erosion of an agrarian ethos and culture. As we became industrialized, technologized and urbanized we also insulated ourselves from the “real” world, i.e., the world attuned to the fragile laws of life and death. So insulated, we have also grown naïve and arrogant to the point that some of us think we can overcome death and other biological limitations through medical wizardry. If we believe we can forestall death and illness, it is but a short step to believing that we can also have everything our imaginations desire. The problem with setting these unrealistic goals is that they often come at the expense of the world and others that make them possible – i.e., human “success” and ease is based on the destruction of natural habitats and human communities. The point is not that we should give up on establishing a

better life for ourselves. It is rather that we learn to conceive “better” with full attention to the interdependencies that make human life possible.

The temptation to expect more for ourselves than we ought can be combated with an agrarian ethos. Agrarianism serves the important role of keeping us humble. It reminds us that we are but one piece of a much larger whole, that our human economies are part of a much greater ecological economy. The responsible thing for us to do is scale our wants to the limits and possibilities of the land. No doubt this will be difficult since so many of us have been trained to see the life of leisure and comfort as a divine right. We may be helped, however, if we can recognize that the source of true value does not reside in our fabricated economies. Any value that we do find there is borrowed from the larger natural economy. Our environmental crises should teach us at least this much: we need to learn and appreciate how vast and intricate, how fundamentally mysterious, this ecological economy is. We ought to reconsider our favorite ideas of progress and growth, and perhaps proceed on the basis of ignorance rather than knowledge, of possible guilt rather than naïve innocence, since it is clear that we have not known all the ecological effects of what we do. The massive environmental destruction all

Above: Solomon D. Butcher. *Miss Alice Butcher*. Nebraska State Historical Society.

around us ought to confirm that in fact we have been guilty of ignorance and hubris. If we are successful at redirecting our planning in terms of agrarianism, the ramifications for a great many of our cultural institutions will be immense, ranging from our educational systems to our political economies.

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It is tempting, given our present socio-economic order, to view agrarians as relics of the past, and the possibility for developing agrarian practices today as an impossibility. I think this is a false temptation. There is no reason why small farmers, who wish to take on lives that are attuned to living within the limits and possibilities of nature, cannot increase their numbers. And for the rest of us, there is no reason why we urbanites cannot learn, practically as well as theoretically, the lessons of agrarian life, either through direct or indirect experience. Directly, we might begin with something as simple as growing a garden or being responsible for and accountable to the life of another. Indirectly, we can become knowledgeable about food production practices and then act upon that knowledge. Or we can befriend local farmers and develop economic relationships with them, as when we buy their food direct and give them our compost.

But our efforts must not stop here. It is essential that we bring agrarian concerns and insights to the attention of our political, religious and business leaders. At present the discussions in each of these areas are deficient since they assume that we are not biological beings, or that our biological nature serves only the concerns of rabid consumption. Though they may speak of the need to recover civic and social responsibility, their proposals will remain inadequate or seem arbitrary if they are not tied to the agrarian insight that individual and social well-being depends on the well-being of the many elements that sustain life.

The Grower of Tomatoes

Mary Mackey

he's out
in the garden
straw hat
freckles of
shade on
his lips

the man who
loves
everything
even the
weeds

especially the
weeds
the slugs
the diaphanous
moths

tomatoes
so juicy
they change
shape in
his hands

simple earth
with nothing
mixed in
but the spray
from the hose
and an eye
for the sparrows

and joy
of course
always

joy.

The following article reappeared in the Spring 2000 issue of *The Draft Horse Journal*. The author, Howard Johnstone, was a friend of Maury Telleen, founder and recently-retired publisher of that journal.

Howard was a real horseman. During World War II he was captured by the Germans, who allowed him to send home one post card. Howard wrote, "Captured by the Germans, breed my two grey mares to a Jack. Howard." He eventually escaped with a superior ranking officer who, not knowing much in the way of survival skills in the country, turned himself over to Howard to get them safely through the lines. They traveled at night and hid in barns during the day. Howard would go below at night and milk the cows, being careful to take near equal amounts from each quarter so as to not raise suspicion. It is a great treat to listen to an exchange of stories about Howard between Wendell Berry and Maury Telleen.

Howard, who was also a friend of mine, farmed near Dover, Kansas, and died two or three years ago. His remarks are resurrected here because they raise questions our culture seems to lack the ability to answer.

Did the Horse Fail?

Howard Johnstone

Come with me down the country roads of the farm belt on a day 50 years ago. The fields on either side are growing an assortment of crops, with quite a lot in pasture. The substantial farm homes with big barns, good outbuildings and adequate fences (making salvaging of crop residues by livestock relatively easy), dot the 80's and the 160's. Big, drafty horses and mules are working in the fields, sometimes in big hitches and many just in teams. Mares with colts at their sides attest to the fact that an adequate supply of farm power is in the making. Depending on the time of year, we'll see a six horse hitch of Percherons, some grey and some black, plowing with a gang plow; a pair of Belgian mares on a spreader with colts running alongside; a nice team of Clydes mowing hay; a team of bay geldings hooked on a stationary hay baler pulling it to a new location in the field, four head on a binder, all going about the business of planting, cultivating, and harvesting a crop. Or rather, a variety of crops.

Now let's take this same trip today. The fields are still there, but most of them much bigger. Most of the fences have been torn out in some areas, many of the barns and outbuildings have been torn down and others are falling down, homes that echoed to the laughter of children and the wisdom of age stand silent and empty, instead of a variety of crops with a healthy mixture of grasses and legumes the earth seems to be black for miles, all under the plow, and of course, there are no horses. And there is also a distinct shortage of people, as reflected in the run down appearance of many small towns that no longer (the experts say) have a right to live. The wheat and corn don't grow any faster, and the hay doesn't cure any faster. The machine that replaced the horse didn't raise the price of farm products. The machine that replaced the horse didn't increase the fertility of the soil. The machine that replaced the horse does not reproduce itself. But, the machine that replaced the horse has replaced millions of Americans on the land, crowding them into our urban centers. The power of the farm vote and the farmer's voice has been diminished; the cheap food is regarded as a birthright. Not cheap automobiles, or cheap tractors, or cheap boats, just cheap food. The farmer has had to be subsidized by the rest of the populace to continue to operate so that he can produce foodstuffs at an acceptable level, that is lower and lower. Farming tenancy leading to land ownership, has become a social relic, and has instead become a hereditary privilege for fewer and fewer young men and is now called agri-business.

Is this a success story? Did the draft horse fail as an efficient source of farm power?

Epilogue

Ellen Bromfield Geld

In his will my father left his estate in trust, to be administered by the law firm of Patterson, Belknap and Webb. In doing this, I know that his main concern was our sister Anne who, brilliant and vulnerable, would never be able to live fully on her own. In his heart he must have known that – even without inheritance taxes, mortgage, and an economic situation that was ruining many a farmer – Malabar with its Big House at the center of everything was no guarantee for Annie's needs. Time has proven as well that nothing could have turned out better for everyone concerned than what happened to Malabar Farm as a result.

Today the farm belongs to the state of Ohio. And I am sure no one would be happier than my father that it has become a park with a twist that has made it unique in all the world. For in no other park is there combined an atmosphere in which people may wander amid a wilderness of forests and streams and marshes to come out upon a farm operation, going on in all its integrity. One which, as my father would have had it, considers the orderly farm and the wilderness as parts of an inseparable whole. Nowadays this commonsensical way of looking at things is known as sustainable agriculture and, as when Louis Bromfield was alive, people come by the thousands to ride to the top of Mount Jeez and see what it is all about.

Out of curiosity they come as well to walk through the Big House. To enter, one is obliged to go through a gift shop where once there was a garage, and I will admit that at first this was not an easy thing for me to do. But now I must say I quite enjoy it as I walk through the dining room door to follow enthusiastic guides on what is for me a kind of mystery tour of what was once my home. The more times I go on that tour the more sense it makes to me that everything has been left as it was.

For the French furniture in the living room with its mirrored walls flamboyantly decorated with a golden eagle and stars; the grand piano in the hall where we had held Farmer's Cooperative meetings and danced ballet; the bust of Voltaire in the bay window of my father's bedroom have a particular meaning there that

they could never have elsewhere. And as people walk through the house with their dedicated guide reciting Bromfield myths and legends along the way, I'm sure they get a feeling that all the beautiful things within it, gathered from around the world, were a part of everyday living. That, rather than collected as an investment, each item once acquired had been placed in a spot someone had in mind for it to occupy, if possible, forever. They belong in an extraordinary house, which is part of a farm where, during Louis Bromfield's life, everything produced was made use of – from the fruits and vegetables that filled our larder to the profits that were turned back into the land to make it more fertile than it had been when first he found it.

So it is that, thanks to those who run it, now as ever a great deal goes on at Malabar that appeals to every kind of person, from those who are simply curious to those who seek to learn about the practicalities of sustainable farming. And though I would like to see more happen in this latter direction, my greatest gratitude is that, rather than being sacrificed to urban spread, the place has been kept intact, a beautiful piece of Ohio scenery and history that everyone can richly enjoy.

Still, as the house to me has been absented of its soul, when I return to Malabar it is more than anything to look out over that country from Mount Jeez. And almost invariably when I do, someone asks, "But wouldn't you sometimes like to return to stay? Don't you feel a nostalgia for the old days?" To be truthful, I can only answer, "No." Therefore in the shocked silence that generally follows, I hope that my inquirers listen as I go on to say, "because I think one of the greatest opportunities we can be given is to be able to do our own thing in our own way."

So it is that my sister Hope and her husband Bob have lived for years in Montana, their ranch a wildlife preserve where, among other things in a very busy life, Hope gives haven to critters who have been stolen from their habitat and maltreated by man. It is as beautiful and peaceful a place as anyone can imagine. And from it, through the administration of a fund called the Fanwood Foundation, she dedicates herself to helping conservation organizations establish themselves and work in various corners of the world, including Brazil. She loves this work and, by it, follows the premise also laid before her as a child, that the fullest way to live is by doing what you like to the best of your ability.

For my part, if I've no real nostalgia for Ohio now, I'm sure it is because when we came to Brazil, we came to stay. And as immigrants do, we brought what

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mattered most with us in our minds to root in a new land. Since then I have often laughed, remembering myself as a romantic young woman of nineteen, jobless but confident, sitting at the kitchen table in Ohio drawing the design of the house we would one day build in a country we knew of only by hearsay. Its most important feature, around which everything else would fall into place, would be a U-shaped patio large enough to accommodate an enormous tree. And incredibly enough, that's the house we built, which we have lived in for nearly forty years and hope to occupy for the rest of our lives.

The enormous tree is a Pau Brasil, the exploitation of which provided the Portuguese emperors with a means of luxurious living five hundred years ago. It is a splendid tree whose tannery bark children peel and use as boats in the bath tub. From within the labyrinth of its feathery leaves and yellow, orchid-like flowers we can hear the snap and flutter of hummingbirds and watch the housekeeping of finches who glue their porched nests with spittle and spider webs to the utmost ends of its twigs. Beneath its ever-spreading shade our house

stands, rambling and many-windowed. With no architect to guide its building, it is full of mistakes that cannot be repaired. But these defects have been softened by greenery and the treadings of time so that the house has become a part of everything around it until it no longer matters which is the front door and which is the back.

What matters is that when people step from the sunlit patio into the coolness of its living room full of unmatched furniture, books, paintings, and treasured bits and pieces collected over the years, they say, "What a pleasant house!" And I think, yes, in fact it is. One whose rooms are worn, its fireplace black with use, its doors always open for the comings and goings of dogs and children and absent-minded grownups on half forgotten missions. One in which the moment my father entered, he would have felt relievedly at home.

*Above: Louis
Bromfield and
daughter Ellen
inspect corn at
Malabar Farm,
ca. 1942*

Our favorite meal here is Sunday breakfast. For then there is time for everyone to sit at a table heaped with fruits in season – mangos, bananas, acerolas, guavas, and passion fruit side by side with such “exotics” as grapes and plums and pears. On the sideboard fresh orange juice, pots of hot coffee, and milk stand beside platters of very yellow scrambled eggs found amid overgrown fence rows in the nests of incorrigible, country-bred hens who refuse to sit in a coop. To confront this bounty comes a stream of family and friends who heap their plates and push up their chairs wherever they can. Slow to arrive, they are reluctant to leave for fear of not having the last word. While they remain they participate in a contest that is generally more inclined toward noisy wit than any form of serious discussion.

At one such breakfast, I remember the subject was inheritance, which so often brings out the worst in human nature, causing brothers to become enemies embroiled in lawsuits that, someone had duly decided, “Left the lawyers rich and the brothers with nothing to be heirs to but air.” At length, beginning to feel wearied by the thought of dispersal, I decided to relieve myself of its weight by saying, “That’s why the only thing we can safely inherit is ideas.” For Maurice Vaneaux, a fine actor given to falling into a part at the slightest suggestion, it was the perfect cue. Rising ceremoniously, blue eyes twinkling beneath bristling brows, with broad gestures, he proceeded to distribute ideas among the family heirs. “Ten ideas for Louis Fergus, twelve for Andreas. Umm, I’m afraid I have only nine ideas for you, Amanda. For Caio, six; Camila, two.” Rashly generous at first, by the thirteenth grandchild Lisah, there was nothing for our friend to do but work his features into a look of paupered impotency and declare that he had run out of ideas to dispense. In response to which, small but far from easily dismissed, Lisah let out a scream that sent dogs flying out from under the table and salamanders scurrying up the walls.

How I wished at the time and often have before and afterward that, by some supernatural feat, Louis Bromfield could be with us. Instead, just as we had reached the moment when at last we could talk as adults and friends, our conversations had been brought abruptly to an end. What a good time my father would have had at that breakfast table that reflected so many memories of his own.

Breakfast over, boxer dogs in tow, we would then have walked together out over the fazenda – perhaps to the top pasture to catch sight of a Santa Gertrudis “babá” cow keeping watch over a gang of naughty calves while their mother cows spread out to graze. Or we’d have made our way down to the fields where we plant numerous varieties of bermuda grasses for hay as well as root stock to be used in the forming of pastures

everywhere in Brazil. With what pleasure my father would have noted that, in these crop lands once creased by gullies, there was no such thing as erosion. And that as the grass roots formed their protective tangle, they also rotted to create a balance in soils which, scourged by a punishing sun and torrential rains, are always in need of new organic matter. All this we would have discussed in the shade of pecan trees from which whatever nuts are left by marauding parrots and hawks provide a second harvest in what nowadays is known as “layered agriculture.”

Talking along the way about legumes and rhizomes and stolons, we’d have walked on to the vegetable garden where at one end a fence is entirely lost in a hedge of blackberry brambles; at the other a tangle of passion fruit vine. Mango and papaya trees shade beds where in their different seasons everything grows, from lima beans, eggplant, cucumbers, and peppers to snap peas, lettuces, tomatoes, and cauliflower. What a good time my father and Carson would have had, turning the compost heap to see how it was rotting, and digging into the newly made seedbeds to count the many earthworms in one small turn of a spade.

No doubt if he could have stayed here long enough – in a guest room very much like The White Room at Malabar do Brasil – Louis Bromfield would have met a lot of people who shared the same interests as he. For what with all the business of cattle and grass, Pau D’Alho has in many ways become a converging point for people who love and work with the land. He would have delighted in the yearly futurity we hold for the sale of bulls and heifers for breeding, in which ranchers everywhere take part, from Belem in the Amazon to Santana do Livramento on the Argentine frontier. It is just Louis Bromfield’s kind of fiesta in which sometimes the entertainment is a string quartet, sometimes a ballet; and every sort – from the vaqueiros who care for the cattle to Coroneis who own vast stretches of wilderness – mingle to eat, drink, and dance to drums and guitars and violas on the stone-floored patio beneath the Pau Brasil. But even without a fiesta he would discover that this convergence often happens because, just as it did at Malabar in Ohio, the talk in the fields becomes so intense that people end up being invited to supper and to spend the night.

Then, as seated on the veranda we watch the sunset and go on talking, it also often comes to light that, as a young person, our guest had read the books of Louis Bromfield – an experience which had in some way changed his life.

One such person of course was Carlito Aranha, whose creation years ago was Malabar do Brasil. Another, Paulo de Sa, a young agronomist who has a missionary sense about saving and planting the enormous variety of tropical fruit trees which exist in Brazil

“Farming looks mighty easy

*when your plow is a pencil and you’re a
thousand miles from the corn field.”*

—Dwight D. Eisenhower

before they disappear for want of recognition. And who, having read my father’s books and my articles, came to know us and to work with Carson and our sons – farmers all – in the technical details of cultivating grass and trees.

Still another is our friend Nonó Perreira, a grower of soya beans, wheat, and corn who, gathering courage from such books as *Pleasant Valley* and *Malabar Farm*, restored the rundown, eroded lands he had inherited in the state of Paraná. There, combining no-till and rotations of his major crops with legumes and rye, he has devised a system he calls “planting in the straw,” which has not only increased his production but reduced his expenses in everything from fertilizers to machinery. Unlike the flamboyant Louis Bromfield, this Brazilian farmer is extremely quiet and unassuming. But having taken up the ideas and tried them, talking in his quiet, convincing way, Nonó Perreira has helped countless farmers not only in Brazil but elsewhere in South America, Africa, and even Europe adapt “planting in the straw” to their own conditions.

Ideas, yes. Despite our laughter at the breakfast table, I do believe nothing better can be passed on to future generations than the worthwhile concepts of those who came before us, to be adapted to the world in which we live. In farming the concepts have to do with conserving our precious soil to deliver it in a better state than we found it, for this above all is the source of our survival. Yet for any of us, such practicalities can only make sense if put into a far greater context.

So it is that every morning when Carson and I walk out over the fazenda, we are reminded – perhaps by the poor color of a field, or a fungus growing on the leeward side of a tree – of the infinite details upon which scientists are constantly at work to help farmers make a living from what is perhaps the most complex profession in existence. But if it is also our good fortune to enjoy just admiring the fungus’s bright orange beauty, I think our luck has most of all to do with the manner in which we were raised: I, in that unusual background that was part of but not exactly Ohio; Carson in a close-knit but extremely open-minded Jewish family in Brooklyn, New York.

Louis and Mary Bromfield and the widowed Jenny Geld lived worlds apart and yet they had much in

common. The Big House at Malabar and the tiny apartment in Brooklyn were both filled with music and books and were alive with comings and goings. All three loved to sharpen their wits with card games and talk and laughter long into the night. So it is not surprising that when they met, they got on like a house afire. But if their friendship and respect went far beyond an evening’s enjoyment, I realize now that this was because, though not particularly disciplined, they lived by a similar set of rules and values they could not have escaped even if they’d tried. And these have come to have an ever deeper and more sensible meaning for me as the years have gone by.

As I go over their list I also see that, far from exclusively ours, the values belong to humanity. And if searched for, they can be found in the Bible and in related precepts that have contributed to enlightenment and the continuity of civilization through all the mess that we greedy, self-deceptive humans daily throw in its way.

“Be curious and listen and give value to everything and everyone around you,” Solomon said in countless ways, as also did our parents. Certainly, as their disciples, our habit of curiosity helped us here in the beginning to work in a strange atmosphere with tools we had never used; and to listen, most of all, to the people with whom we worked in the fields, whose everyday comprehension of the things around them gave their observations an extraordinary worth.

“Never take yourself too seriously,” for as our forebears saw it, “lack of humor is synonymous with that particular lack of balance which leads to tyranny and tragedy.” And surely one has only to look at the battles and dictatorships, crusades and “martyrdoms” described in history to see how right they were.

“There is no quality more valuable than beauty.” This lesson, a part of daily life, also seems more clear as life continues on. Nothing more beautiful than a tree whose upper branches provide shelter for myriad life, and whose long-cast shadows in slanting sunlight offer peace to every soul. Unless it be a wildwood on the edge of a well-tilled field. For all these are linked to one another, just as the practical is linked with the aesthetic and spiritual to maintain the whole which surely creation meant there to be.

And if such is true, then it must follow that every profession is a worthy one – from those of house and field, to law and trade and teaching, to that of artists without whose depictions our lives would be dull as those of ants. So lucky is he who can choose a profession for which he has a talent, and use it to contribute to this entire scheme. Whose greatest challenge in our era, it strikes me, might well be that of repair.

As a child I often heard Louis Bromfield say that good farming usually begins only when there is no more frontier land left to exploit. Now, living close to one of the earth's last great frontiers, we can sadly see those words are true as ever, though obviously not only where farming is concerned. Everywhere in the world, looking at the decay of inner cities, the squalor of shanty towns; viewing the countryside as it stretches along highways in monotonous neon-lighted strips of parking lots and malls enjoining us to "buy, buy, buy!" it often seems that some single-minded effort is at work, bent on turning our earth into one vast junk heap, crisscrossed by open sewers under a starless sky.

There are those who insist – especially those who live isolated from reality within the modern fortresses of condominiums – that such plundering and waste is necessary to productivity and progress. "To get things started," they say. But one has only to look at the dreariness and ugliness, the filth and misery this causes – oft reflected in the bored, glazed eyes of youth – to see that this cannot be so. Desecrating land, air, and water, and consequently the lives of people, cannot honestly be called productivity, any more than productivity can be meant to create the debt and waste of a throw-away society. It should provide more people with comfort, health, and ease to make them free to enjoy all life has to offer. But rather than this – out of short-sightedness, greed, and indifference – a growing imbalance has been created which indeed, if CIVILIZATION is to survive, will have to be set right, put on an even keel.

Repair being, as it is, always more difficult to achieve than destruction and suffering, it cannot be an easy job. Yet nowadays how much more we know; how many more tools we have to put to use than did our forebears. This being so, as I sit here before my fine tool of a computer, I cannot help but think of the enormous opportunities which exist, to link all our accumulated knowledge with the wisdom passed down to us by others over centuries, to make of this earth a new frontier. One where the most important goal is not a stuffy, nebulous something called "the bottom line," but to enjoy living fully and usefully. And as we do so, seek that balance which can assure the children whom we have put here a world as it was meant to be – in all its bounty, variety and beauty – worthy of the life they have been given.

The Need of Being Versed in Country Things

Robert Frost

**The house had gone to bring again
To the midnight sky a sunset glow.
Now the chimney was all of the house that stood,
Like a pistil after the petals go.**

**The barn opposed across the way,
That would have joined the house in flame
Had it been the will of the wind, was left
To bear forsaken the place's name.**

**No more it opened with all one end
For teams that came by the stony road
To drum on the floor with scurrying hoofs
And brush the mow with the summer load.**

**The birds that came to it through the air
At broken windows flew out and in,
Their murmur more like the sigh we sigh
From too much dwelling on what has been.**

**Yet for them the lilac renewed its leaf,
And the aged elm, though touched with fire;
And the dry pump flung up an awkward arm:
And the fence post carried a strand of wire.**

**For them there was really nothing sad.
But though they rejoiced in the nest they kept,
One had to be versed in country things
Not to believe the phoebes wept.**

A Medieval Art and Photo Essay

Wes Jackson

Pieter Bruegel the Elder's *The Harvesters* (1565, 46½" x 63¼", Metropolitan Museum of Art, New York) probably represents the months of July and August.

In this scene of medieval Flemish life (see cover), in the middle background on the left, a team of horses or mules draws a wagonload of wheat or rye, presumably to be threshed. Some straw may become roofing material, but likely most will serve as bedding in the barns to absorb urine and manure. Hauled from the barn during winter or early spring, this long-stem straw serves as a sponge for returning to the fields the nitrogen of the urine and other nutrients.

Is the crop tall or are the people short? The standing shocks to the right reveal a relatively small head length compared to the long stem. (A plant breeder of today might say that this crop has a small harvest index, which is a measure of the grain to the straw.) The stem is cut

close to the ground, perhaps because these people of the 1500s wanted to maximize the length of straw for various purposes on the farm or village. David Kline, an Amish friend from Ohio says the straw is about as important as the grain in the overall operation of the Amish. Moreover, the mechanics of harvest made cutting easier when the stroke of the scythe stayed close to the ground.

Traditional barns in rural America today are usually similar in architecture to traditional European barns. If we could see where that team and wagon is headed in the painting, there is a good chance its destination is to a traditional barn. In rural America, most now need serious repair (see photo on back cover), have already been torn down, or have fallen on their own (see below). The economic incentive to maintain the barn has mostly vanished because the energy to fuel the farm, the hay, no longer goes into the loft. The loft was the farm's

Below: Steve Renich,
Falling barn, 1999





“fuel tank,” which housed contemporary sunlight whose energy density is many times lower than the diesel oil housed in a metal tank (see below right).

The lower part of the barn, where animals were milked or housed, where that long-stemmed straw absorbed urine and manure, was formerly an essential feature of farm life. With the industrialization of agriculture, energy and nitrogen density greatly increased and comes in a sack or tank (see above). So did labor productivity but only if time is the measure. The need to maintain both the loft and lower story mostly disappears. The farm no longer provides its own fuel and fertility. Perhaps a modest living could still be made with the loft and lower story if the farm was paid for, but even so, the temptation of less labor with industrialized farming was too great. Fossil fuel not only led to the loft’s obsolescence, it contributed to the reduced need for the lower story in that commercial fertilizer is fossil fuel based. The economics associated with these former low densities of resources is not there to support the barn. The cultural instructions of this ecological arrangement, which included nutrient recycling and non-global warming forms of energy, have been destroyed.

Above: Steve Renich,
Ammonia tanks, 1999

Right: Steve Renich,
Fuel tank, 1999

So, when one sees a traditional barn in disrepair or in a heap, our eyes might wander to the diesel and anhydrous ammonia tanks nearby and even speculate on how long their tenure might be relative to the tenure of the traditional barn.



At The Land

In support of the following examples of our increased program activity, our budget has edged up near \$1 million.

Natural Systems Agriculture (NSA)

Research Center

Our long-term plan is to construct a Center for Natural Systems Agriculture at The Land Institute. The facility will include a visitor center and research space that encourages interdisciplinary attitudes and practices. Its architecture will exemplify explicit and subtle assumptions for the new Natural Systems paradigm and serve as a prototype for a twenty-first century research facility. Land Institute Advisory Team member and University of Michigan landscape ecologist Joan Nassauer visited to review and critique our ideas about a building site. Professor Tom McCoy, University of Kansas School of Architecture, and Professor Emeritus Ray Dean, University of Kansas School of Engineering, have been collaborating with us on building design and organized the participation of a University of Kansas architectural class to brainstorm the project.

Our goal is to carry out a 25-year research agenda to bring Natural Systems Agriculture to farm fields sooner rather than later. Meetings are being held with various foundations and individuals toward an eventual development of a consortium of funders to back this major new line of agricultural research.

Staff Scientists

Our long-term plan for NSA calls for ecologists, plant breeders, modelers, environmental historians, and biotechnologists (but under strict conditions!), working under one organizing umbrella. We believe it is possible to open new interdisciplinary pathways as well as new ways of working, thinking, and interacting. For a more interactive science to take hold, this new paradigm requires nothing less.

We've added two scientists. **Dr. Chris Picone** joined us in September 1999 as he completed a PhD in ecology from the University of Michigan. His thesis assessed how the conversion of tropical forests to pasture affects beneficial soil fungi. Here he is studying the mycorrhizal fungi in Natural Systems Agriculture, i.e., whether a perennial polyculture can restore and maintain soil fertility via diverse soil microbes. He is measuring fungus diversity and species composition and how they are affected by tillage and crop diversity.

Chris and David Van Tassel share responsibilities for the Fellowship program.

In March **Dr. Doug Lammer** joined us. Stationed at Washington State University-Pullman, Doug's PhD is in plant molecular biology. With post-doctoral work in yeast genetics, he came to us to do more applied work in line with his concerns about ecology and agriculture. Doug works under the direction of Professor Stephen Jones, who has developed a perennial wheat. Dr. Jones is a member of our Natural Systems Agriculture Advisory Team.

NSA Advisory Team

Our NSA Advisory Team, now 111 members, provides advice and critique and endorses our work. Staff-advisor interaction has increased. NSA Advisors referred half of our new Graduate Fellows, and NSA Advisors supervise half of all Fellows in their graduate programs. Throughout the year, Advisors provided useful information and assistance via countless phone and e-mail conversations. Our thanks go to each one. Our priorities have been to convene Advisors interested in developing perennial grains and to meet with soil scientists interested in sampling agricultural lands, native prairie soils, and conservation reserve land.

A half dozen Advisors led sessions for the Graduate Fellow Workshop during a week at Matfield Green. One met with staff, reviewed research, and led a one-day session with assembled NSA Grad Research Fellows. Another stayed on an additional two days to visit Salina and to review research with staff.

Advisor Charles Sing organized and arranged NSF funding for a Montana meeting of twenty-five scientists on Complexity Research and Biotechnology in Agriculture and Medicine. Seven Advisors participated. We visited four Advisors in Iowa to plan the meeting held recently of scientists interested in perennializing the major crops, eventually for a polyculture. We met with ten members of our Advisory Team at Stanford University and at University of California at Berkeley – agricultural biotechnology was a major topic of discussion.

Research Agenda

Nearly everyone knows that Kansas is the Wheat State and that it sits in the midst of the Great American Prairie. This auspicious geographic location and our current assembly of scientists allows us to feature wheat as our central totem in our effort to develop perennial polycultures modeled after the *prairie*. Perennial wheat

is now growing in our greenhouse. Two members of the wheat team at Kansas State University have participated in an NSA meeting. In February, we hosted the first meeting on plant breeding and genomics to consider perennializing the major crops: wheat (number one producer of human calories worldwide), corn, sorghum, soybean and sunflowers were featured. The meeting focus was to: 1) develop an outline for a paper in *Science* or *Nature* to address the scientific questions and to outline the promises and pitfalls expected in perennializing the major crops and 2) to develop concrete steps to launch the program. Questions were: Who will do the work? How will researchers find the time? How much can be done without extra money, and how much will require new funding? How can The Land Institute NSA Graduate Research Fellows assist in the research agenda? Future meetings will address social ramifications of perennialization, including appropriate use of genetic engineering should it be needed, privatization of germplasm, and gaining a constituency of growers and other supporters.

NSA Fellows Program

We exceeded our goal to expand the current Graduate Fellowship Program from five in its first year 1998 to 12 in 1999. We now have 13 Fellows. Our growing science staff at The Land increases the assets available to the Graduate Fellows program. Each Fellow has joined us in a week-long workshop in Matfield Green.

Within twelve years we hope the Fellows program will provide at least one NSA plant breeder and one NSA agro-ecologist on faculty at each of ten major agricultural research universities in the United States. In addition, we envision NSA researchers ensconced in major agriculture research centers in Australia, Canada, and other countries. This cohort of professors, connected by The Land Institute, will be the nucleus for the NSA research mandated by our long-term research agenda.

We also want to see NSA-knowledgeable professors teaching lower- and upper-division biology classes in small and large universities. The NSA paradigm will be transmitted to succeeding generations of college students as some of our Fellows become faculty members. We believe that a ten-year intensive effort to penetrate the centers of higher education will generate the required core of researchers and teachers who are committed to NSA. To maximize our chances of generating this academic nucleus we will try to expose undergraduates to Natural Systems Agriculture so that they are aware of NSA as a line of study and to provide mentoring to assist them to find professors interested in Natural Systems Agriculture graduate research.

Attract and recruit potential Natural Systems Agriculture researchers at an early stage in their careers. Agriculture as a social and ecological issue needs to match the compelling case being made to attract students to medical research, wildlife conservation, social justice, and political reform.

Educate young scientists in the science and philosophy underlying Natural Systems Agriculture. Many undergraduate universities do not offer agriculture courses. Those that do emphasize industrial agriculture, or high-input, chemically-intensive, mechanized land use. In January, we offered our first short course to introduce students to the history and science of agriculture and the exciting opportunities in the area of Natural Systems Agriculture to pique their interest in attending graduate schools where NSA can be a subject.

Screen the available pool of students. We are searching for potential graduate students who possess a) the intellectual and academic tools to succeed in graduate school, and b) a passion for agriculture and a suspicion of the industrial mindset. With limited resources, our Fellowships support students who are philosophically and emotionally compatible with the principles of Natural Systems Agriculture.

Support the best through graduate school in the hope they continue with our research mission.

Funding is scarce to support students who attempt to combine ecology and agriculture in their dissertation research. We have been filling that funding niche for two years and intend to continue funding a unique group of projects. Many more funds are available in mainstream agriculture and ecology. Without our support, these students would naturally turn to these other organizations where their research objectives will almost certainly be diluted to conform with reigning convention.

Involve undergraduates and graduate students in Natural Systems Agriculture research. We are recruiting students for a short-term work program. There is nothing like a hands-on experience in the lab or field to educate students. In addition, they will discover whether such research is for them, a valuable lesson to learn early. Finally, both graduates and undergraduates can contribute to research. Most academic research projects would be impossible without student help. NSA intends to tap into the enthusiasm and creativity available in student researchers.

Our projected long-term outcomes and timeline are as follows. In order to succeed in placing 20 NSA-trained PhD-level researchers in ten of the major American agricultural universities by 2012, we may need to have about twice that number participating in our Graduate Research Fellowship program. Some program participants will not go on to careers in research,

but will make career changes after earning the PhD or teach at liberal arts colleges. By involving five new Fellows each year between 1998 and 2005 (eight years), 40 PhD-level scientists will be ready for or in the workforce by 2012. We expect to fund about 15 students each year. Of these, about five Fellows will be new and ten will be renewed for the second or third year. During the last two years of the program (2006 and 2007), no new awards will be made.

The pre-graduate short course and work programs will serve to increase the pool of well-informed and passionate applicants for the Graduate Research Fellowship.

Sunshine Farm

As part of The Land Institute's mission to use nature as measure for developing sustainable agriculture and culture, the Sunshine Farm Project was formed. The project explores the energetics of farming without fossil fuels, fertilizers or pesticides by using renewable energy technologies and innovative practices to raise crops and livestock. The ten-year project, which began with a one-year feasibility study, begins its eighth field season this spring.

Director Dr. Marty Bender has published three papers in peer-reviewed research journals on biodiesel fuel, plant nutrient uptake, and biomass conservation. Two more papers are being revised for resubmission. All of these publications will contribute to the eventual book on the Sunshine Farm Project. For the book, the director is currently writing a chapter, "Energy production in agriculture and society", that explores the implications of some of the project findings within the context of the energy demands of society.

Briefly, our computer database shows that the Sunshine Farm has been providing 40 percent of its own energy requirements, mainly through biodiesel fuel and animal feed. For every unit of energy spent in factory production of agricultural inputs used on the Sunshine Farm, about 1.6 units of energy were produced as crop and animal products. This ratio is better than published values for most conventional mixed crop and livestock farms and is comparable to those for Amish farms, well known for their efficient agriculture.

As far as we know, this study is unique. We expect the exhaustive data to be useful to many other researchers in their own work, as well as to provide a benchmark for the best that can be done in the use of conventional crops when portable liquid petroleum fuel becomes unavailable or uneconomic. As policy-makers and farmers plan for what we hope is the long term, they will increasingly be forced to consider alternative

energy sources. As Natural Systems Agriculture becomes available to farmers, the Sunshine Farm data will be very useful as a side-by-side comparison of the energy required by a most-efficient conventional farm compared to a mimic of a natural system. The Land Institute expects this project's published results will contribute significantly to the future of food policy considerations here and abroad.

Rural Community Studies

The Matfield Green Consortium for Place-Based Education formed by The Land Institute under Bev Worster's leadership comprises three central Kansas school districts: Baldwin, Chase County, and Flinthills. We are just completing the first of three years funded by a grant from the Rural School and Community Trust. The following projects are examples of the schools' broad interest in field studies in their communities and natural surroundings.

- The primary school children in Cassoday created an original musical based on their prairie studies depicting the history of the Flint Hills – from the emergence of the grasslands, through settlement, to the current threat to native grasses from the exotic invasive plant *Sericea lespedeza*. They will perform in area communities throughout spring and summer.
- Students of several schools are landscaping parks and education centers with prairie plants.
- Middle schoolers in Chase County are watching the various rates of snail reproduction in three classroom aquaria containing water from a local spring, treated water from taps, and polluted water.
- Flinthills District teens are gathering visual and oral histories of local residents and will fashion a living history, "The Prairies Burn in the Spring."
- Several teens from the Consortium will present ideas from their district's community and environmental work at a Rural School and Community Trust-sponsored "Student Extravaganza" in Kearney, Nebraska, on March 25.

Our third annual summer workshop for teachers (June 5-9) will explore the significance of watersheds in shaping the history, geology, archaeology, and natural history of the prairies. Twenty-five consortium teachers are expected to participate. The Baldwin City District will host a one-day workshop for teachers (June 2) on hands-on, experiential learning across disciplines. An early fall workshop for the Consortium, "Entering the Web," will train teachers to build school and community websites and link Consortium sites to each other and to more than 700 other place-based rural schools across the nation.

Public Notices

Our website went live during September 1999. By February we were noticed by search engines, so new readers may find us. You may take a look at www.landinstitute.org. There you will find full texts of Wes Jackson's "Clear-Cutting the Last Wilderness: Compromising the genomes of our major crops" published in *Land Report* 65, and the recent articles in *Utne Reader/Audubon* and *Newsweek*.

Wes Jackson served on a panel of four invited by Sea Change Inc. and Environmental and Energy Study Institute to conduct a Press Conference and Congressional Briefing on the benefits and risks of agricultural biotechnology in Washington, D.C. In October, Jackson spoke at the Conservation Land Trust's Meeting in Santiago, Chile. The meeting, "Environment and Development: The Challenges for a New Millennium," was designed to educate the political party headed by then-presidential candidate Dr. Ricardo Lagos. Lagos won the election by a narrow margin. Jackson delivered talks in California at the Environmental Grantmakers Association Fall Retreat and the 20th Annual Ecological Farming Conference. During autumn and winter, he spoke at: Denison University, Calvin College, McPherson College, Stanford University, Harvard University, Harvey Mudd College, Allegheny College, and most recently at Oberlin College, Michigan State, Evergreen State, Meredith College, and San Juan College.

Among recent media mentions are: *Chronicle of Higher Education*, *US News & World Report*, *Utne Reader* reprint of the *Audubon* article "Lessons from The Land Institute" (text on our website); *Hastings Center* Annual Report, and the *Salina Journal* in a half dozen articles.

About the authors...

John Daniels lives west of Eugene, Oregon, in the foothills of the Oregon coastal range. He is the author of two poetry collections, *Common Ground*, and *All Things Touched By Wind*. *The Trail Home* and *Looking After*, a memoir, are recommended reading. "Ourselves" is reprinted from *Common Ground* with the permission of Confluence Press. Copyright 1988 by John Daniel.

Raymond Epp was raised on a farm in the Mennonite community of Henderson, Nebraska. Ray now farms because he wants to see what ecological ideas look like in *his* fields and to make the ideas practicable.

Ellen Bromfield Geld was born in France in 1932, and raised from the age of six at Malabar Farm, outside Mansfield, Ohio. After graduating from Mansfield High School, she studied agriculture at Cornell University.

There she met and married Carson Geld, an agricultural student from New York. She has written for *The Wall Street Journal* and *Atlantic Monthly Magazine*, and contributed weekly columns to Brazil's leading newspaper, *O Estado de Sao Paulo*, as well as to various Brazilian agricultural magazines. She has published eight books in various languages, most available through Doubleday in the U.S. The Epilogue is reprinted from *The Heritage* with permission from Ohio University Press.

Mary Mackey is a poet and author of several novels. Her poetry has appeared here before. She is a professor at California State University at Sacramento.

Norman Wirzba, a southern Alberta farm-boy-turned-philosopher, chairs the Philosophy department at Georgetown College, Kentucky. His current focus is on taking philosophers and their reflections "back to the land," elucidating how philosophical reflection (despite its heritage of being mostly an urban affair) is transformed when it is informed by agrarian life. He is working on a book on Creation, Ecology, and Ethics.

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The photograph of sisters Bertha Stover Swan and Ina Stover printed on page 19 of *Land Report* 64 was provided courtesy of Luree Wacek of White River, South Dakota.

The quotes by Charles Allen Smart, printed throughout *Land Report* 64, were taken from *RFD*, a 1938 memoir by Smart, republished with a foreword by Gene Logsdon by Ohio University Press in 1998.

Position Available

The **Development Director** will manage a comprehensive development program at The Land Institute. Current annual fund raising is \$1 million plus capital funds as appropriate. New opportunities for funding make us optimistic that our budget and programs could increase significantly over the next five years.

Job qualifications include a Baccalaureate degree and successful experience in fund raising. A list of duties and responsibilities can be seen on our website in the "People" section at www.LandInstitute.org. Letter of application with resumé may be mailed to:

Ken Warren, Managing Director
The Land Institute
2440 E. Water Well Road
Salina, KS 67401



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PRAIRIE FESTIVAL 2000

"The Art of Living in Place"

May 26-28, 2000

Friday Evening through Sunday Afternoon

On the prairie, we'll gather
Artists, scholars, curators,
Critics, photographers, farmers,
Poets, historians, sculptors

And you

...to think about the interrelatedness of
aesthetics, beauty, place, sustainability,
and the art of living in place.

"Believing as I do that connection to place is
a necessary component of feeling close to
people and to the earth, I wonder what will
make it possible for artists to 'give' places
back to people who can no longer see them,
and be given places in turn, by those who are
still looking around."

Lucy Lippard, *The Lure of the Local*

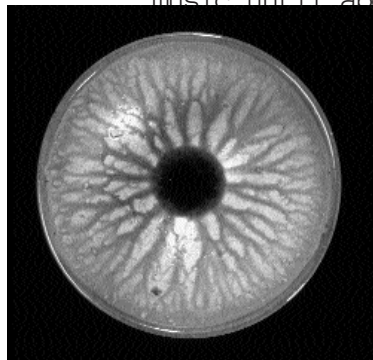
"People need many different ways of rein-
forcing their bonds with the land to guaran-
tee that their souls develop an ample capaci-
ty for affection and care. Coming to know and
use a place responsibly is connected to slow-
ly perceiving in an ordinary landscape a
beauty that is more than scenic."

Brian Donahue, *Reclaiming the Commons*

Friday: Join an evening bonfire.

Saturday: Early prairie and bird walks,
presentations, food, an evening
barn dance.

Sunday: More thinking, visiting, food, and
music until about 4 p.m.



Deep sea sediment
organized into this
patterned glaze
during firing on this
ceramic bowl by
Joan Lederman,
Festival Participant

Speakers include: writer/activist Lucy
Lippard, noted author of *Plainsong* Kent
Haruf, environmental historian Brian
Donahue, photographer Greg Conniff, poet
Bill Kloefkom, ceramist Joan Lederman,
photo curator Merry Foresta, logger/artist
Jesse Sedler, singer/guitarist John Walker,
and many others.

PRAIRIE FESTIVAL 2000 REGISTRATION

Pre-register \$12/\$17; at Festival \$15/\$20

You are a Friend of the Land if date on reverse is 5/26/99 or later or if you join with this registration.

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Children under 12 register free

____x \$0 \$ _____x \$0 \$

Sunday lunch (vegetarian only, payable by May 19) ____x \$8 = \$

____x \$8 = \$

Enroll as Friend of The Land one year, tax deductible \$25 minimum ____\$

\$25 minimum ____\$

Additional contribution to The Land Institute, tax deductible _____

\$ _____\$

Total Encl: \$ _____

\$ _____

Charge ☐ Visa ☐ Mastercard Account # _____ Expir Date _____ Signature _____

Names attending: _____

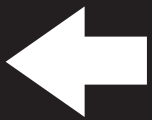
Street: _____ City _____ State _____ Zip+4 _____ - _____

Phone (home) _____ Phone (work) _____ Email _____

- We will not confirm your registration.
- Program, prepaid nametags and meal tickets will be available at the Registration Desk.
- To register with credit card via phone, call The Land Institute, Monday-Friday, 8-5pm (CST).

☐ Send map to Land Institute.

The Land Institute • 2440 E. Water Well Road • Salina, KS 67401



PRAIRIE FESTIVAL 2000 "The Art of Living in
Place"

May 27-28 | Registration form on page 31!



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