RE-BUILDING RURAL COMMUNITIES

by Fred Kirschenmann

Based on a talk given at the 1996 Annual Biodynamic Conference in Minneapolis, MN.

I do hope that none of you came here tonight expecting that I would lay out a plan for rebuilding rural communities. I am not that clever. And I seriously doubt actually that anyone is. I think that there is only one way that rural communities can be rebuilt and that is by the communities themselves. I think that Aldo Leopold gave us a clue that we might in fact think about tonight as we think about rebuilding rural communities, and that clue came in his comment about how we can develop a land ethic.

He said that nothing as important as a land ethic is ever written. And then he went on to say that only the most uninitiated believe that Moses wrote the decalog. In point of fact, he said the decalog was a product of social evolution, and Moses simply took down a few notes to do a seminar. And I think that that insight is also true about rebuilding rural communities.

Rural communities are also a product of social evolution. And there is no plan that any individual, I think could create, that would accomplish the task of rebuilding rural communities. I also think that the desire to rebuild rural communities probably cannot be fulfilled by an obsession to be successful.

Too many rural communities, I think, have already been the subject or the objects of the kind of obsession that community leaders and politicians have about bringing success to rural communities. Usually that comes in the form of some kind of successful enterprise to bring jobs into the community. Everything from Wal-Mart stores to waste disposal enterprises to potato processing plants and factory farm hog operations. And I think that kind of success is what we don't need in rural communities.

Wes Jackson tells a delightful story about the origin of the Land Institute that I think might be insightful for us tonight. He says that when they first started thinking about something like the Land Institute, Wes took a sabbatical from his teaching job at the university and he and his family went out to Salina, Kansas and they sort of looked around and tried to figure out what kind of resources they needed to create this institute that they were thinking about.

When the sabbatical period came to an end, the university inquired of him whether he was coming back or not because there had been some question about whether or not he would come back, and so it was time for them to make a decision. And so he said they had a family conference and sat around and tried to figure out whether or not they would be able to do this and they took inventory of all their resources and finally decided that they couldn't succeed. At which point their oldest daughter Laura, who at that time was I think 13 years old said, "Well, I thought the idea here was not to succeed, but it was to be obedient to our vision." And Wes said that was the beginning of the Land Institute.

The original vision in the organic community was quite simple. It was a system of agriculture that would build healthy soils and healthy ecological neighborhoods. That is what it was all about.

I think that these are two critical ideas to keep in mind tonight as we try to think together about building rural communities: that it is the community that has to rebuild the community; no single individual, no lone ranger, and that it is going to be communities that are obedient to a vision about themselves. I think that as we think about this, about communities being obedient to their vision, that the organic community might in fact serve as an interesting case study at this particular point in its history. Because I think the organic community right now is beset with a decision it has to make about whether or not it is going to be obedient to its vision or whether it is going to follow the route of trying to be successful.

The original vision in the organic community was quite simple. It was a system of agriculture that would build healthy soils and healthy ecological neighborhoods. That is what it was all about. From that it was assumed that there would be nutritious food for the human community that ate that product from that ecologically sound neighborhood with healthy soils.

Today, I think, increasingly the organic community is being pulled by the desire to be successful. And so there is increasingly less attention to the vision and increasingly more attention to marketing ourselves. There is an interesting example of this which appeared in a newsletter which I received just this past week from one of the largest,

I guess *the* largest organic dairy in the country.

The newsletter titled the fact that it was a dairy which now was a 1,500 head herd, and the headline on top of the newsletter was "Sustainability On A Large Scale". And so it told the story about this dairy. And as you turn to the inside of the newsletter, the next headline was "Upholding Higher Standards". And as you read through the text about what there was about this dairy which was upholding higher standards, it had to do with things like the fact that they fed their cows organic feeds twelve months before they were brought into the herd as organic, about the fact that when antibiotics had to be used, there was a 90 day withdrawal period; and that the herd was built from within. In other words, they use their own calves because they figured this was a better way to maintain herd health. And all of which makes sense.

But then it went on to say that by July 1997, they were planning to increase their herd to 4,000 head. Now, all of you who are farmers here who know anything about animals, would recognize that that is an interesting biological achievement, to build a herd of 1,500 to 4,000 in less than twelve months. At least on my farm, cows only produce one calf a year and you generally have to cull a few – and half of those calves that are produced are generally bull calves, and it usually takes two years minimum before a calf is ready to produce another calf and to enter the milking herd.

I think this is simply one example of how being driven to be successful takes over the original vision that we were about. Incidentally, it seems to me also that even more importantly about this particular story in this newsletter is that I think sustainable agriculture animal scientists now are agreed that a fundamental ecology gets broken when you get to a herd size that is over 75 to 100 head. Because once you expand beyond that point, it becomes very difficult to feed the feed to the cows that are growing on the land where the cows are and the manure gets returned to the land to produce more feed for the cows.

This conference is about whole farm and it means an ecological whole. And so there is really a fundamental contradiction here in terms of the "higher standards" of this particular dairy and its marketing. In fact the newsletter itself says in its text that not all of the feed is produced on the farm. It also talks about its manure handling system which has large manure lagoons in which the manure settles for a fairly long period of time and then it is taken out and composted, and the composting is fine, but they call the manure lagoons – "ponds". And of course the thing that any of us who have been around manure lagoons at least have to think about is what difference is there between a manure lagoon from a 4,000 head dairy herd and a manure lagoon from a 20,000 head factory farm hog operation.

Besides, one of the other things in terms of building rural communities is when you have a 4,000 head dairy, you are replacing 40 to 50 dairy farmers that could be producing that milk in a cooperative and be a part of building a rural community.

What I want to say with all of this is that the difference between being obedient to our vision and being successful are two very important different concepts I think we need to think about as we think about rebuilding rural communities. So if it is a vision that we need to be obedient to that is at the heart of rebuilding rural communities, what kind of vision do we need?

What I want to say with all of this is that the difference between being obedient to our vision and being successful are two very important different concepts I think we need to think about as we think about rebuilding rural communities. So if it is a vision that we need to be obedient to that is at the heart of rebuilding rural communities, what kind of vision do we need?

It seems to me there are at least three things that we should think about as we think about a vision that can rebuild our rural communities. The first is the social vision. We need in rural communities a new image about ourselves. A few years ago Kurt Stoffern, who is a rural sociologist at the University of North Dakota, did a study which was published in the *Journal of Agriculture and Human Values*. He and his colleagues conducted a survey among small communities in North Dakota to find out how people felt about themselves, what kind of image they had about themselves.

The research team concluded that the predominant metaphor, which was in the minds of people in rural communities, was the corpse. And the way in which that worked itself out in the minds of people in rural communities was that they were convinced that they were in a dying community. The reason that they remained in the community was one of two reasons: either they were there because they knew the community was dying and they wanted to stay to the bitter end for the funeral, or they were convinced they were in a dying community and were hoping that some

kind of miracle drug in the form of a new industry would come and resuscitate the corpse. But in *both* cases, the predominant metaphor was the corpse. Now, if we are going to rebuild rural communities, we have to change that. We have to change our image about ourselves. And the reason that we have that image, of course, is not really entirely the fault of people who live in these communities because they have been told by the experts that they are dying. *USA Today* a couple of years ago ran on their front page an article which was almost a full page, in which they compared rural communities to the Model T Ford. You know, it was nice but it outlived its usefulness. And the whole reason that they came to this conclusion was because rural communities were not contributing to the global economy. And so since they are not contributing to the economy, they have no reason to exist, no reason to be.

Well, Sir James Goldsmith wrote a book which was published a little over a year ago called *"The Trap"* which had a very different view about rural communities. He pointed out very convincingly that the deterioration of urban communities were directly related to the demise of the rural communities. That welfare, crime, all of the kinds of major problems that we have in urban communities can be traced directly to the demise of rural communities. So do they have a place to play in our society? Well, according to Sir James Goldsmith they certainly do. Cornelia Butler Flora has written a short article entitled *"The Future of the Midwest"* in which she says that if we have a different mindset about rural communities, when we begin to think about them differently, it really is possible to create a different kind of reality. And she writes a scenario of what the Midwest could really look like, the kind of future which she hopes can, and in fact believes will evolve in many of the rural communities in the Midwest. And she feels that a lot of this has to do with what she calls "social capital". The social capital being this image that we have of how we think about ourselves and how we go about our task, how we regard our communities, how we relate to our neighbors in our communities; all of that she believes is the capital, the social capital which can make the difference in terms of rebuilding rural communities. And here are some of the shifts that she suggests in this vision of the future for the Midwest:

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A shift from producing commodities to producing products, which includes a shift from being raw material suppliers to being value-added processors. It is a basic fundamental shift in the way we see it. We see ourselves in most rural communities as simply providing a lot of mass raw materials. And whether it is wheat or corn or pigs or whatever, it gets shipped out of the community and value gets added elsewhere. As a matter of fact, Marty Strange describes rural communities as being essentially Third World entities. It is a colonial economy. We sell a lot of raw materials produced with cheap labor which flows out of the community and we never see the value of that production, and then we buy back a lot of expensive value-added products. That is a colonial economy. So she sees this shift, a shift from producing commodities to producing products, from being raw material suppliers to being value-added processors.

She also sees a shift from the traditional wage jobs to self-employment. And that in fact is already happening. And we ought to celebrate those Farmers Markets and CSA's. They are all self-employed operations. So it is already happening.

She also sees a fundamental shift that we need to make in our thinking from going from "needs assessment" to "asset assesments". Rather than looking at our community and saying, "Oh, my god, look at all of the problems. The main street is being boarded up and farmers are going out of business, and we have all of these terrible things that are happening." Suppose that we simply started looking at our assets. Rural communities have one of the most educated populations in the country. We really have a lot of intelligence per capita in our rural communities. Rural communities have, still to some extent at least, a sense of community, sense of helping out our neighbors. That is an asset. There are a lot of assets in our rural communities. If we focused on the assets instead of the needs, she suggests that we would suddenly see our communities very, very differently and would have a different attitude about them, would start building on our strengths instead of our weaknesses. There is another related factor here which is terribly important, and that is that when you look at a community in terms of its needs, you tend to think in terms of somebody from the outside to come and save you. When you start thinking in terms of our assets, you start thinking in

terms of how you can put the resources into the community with the very people that can rebuild the community. So it is a different way of thinking about resources.

She also thinks that one of the things that can happen is, the scenario of the future, is to move from centralized banks to local credit unions. Centralized banks generally do not care about the kind of credit needs that rural communities have. If you aren't going to borrow $100,000 for some kind of major venture, they do not want to talk to you. If you need a small loan for $10,000, you cannot get it from a centralized bank. And so she sees the evolution of local credit unions who understand local issues and that are going to be very stable because they are going to understand the credit risks of the local people that they are dealing with. We in our own community deal with a community bank which is still operated by a local board of directors and there is no problem getting loans which are appropriate to what you want to do within the community. And they still go out to farms and visit the farms that they are loaning the money to so that they can understand. So they aren't looking at some kind of routine, you know, if you aren't using "X" pounds of chemicals, et cetera, you aren't a good farmer and therefore you cannot get a loan. I mean, they know who the good farmers are because they have been on the farms.

Cornelia Butler Flora also sees a shift taking place from individualized competition to community cooperation. Individualized competition does not work in rural communities. We need to work together. We talked earlier today in one of the seminars that with the centralized markets that we have, you know, how are young people ever going to get into farming? Because we do not have free and open markets anyway. The people who get the preferred contracts are those that have at least 20,000 hogs or 4,000 acres of wheat. How do you do that? Well, somebody said right away, "Well, you know, we could build cooperatives, and then a group of farmers together can have the kind of volume where they can get the preferred contracts." And it is that kind of cooperation in rural communities that is going to be necessary.

And then she says we can go from selling into highly concentrated mass markets to direct marketing and forward contracting with the risk specialized markets. And again, we are already seeing that happen, and we can build on that. She then goes on to say, and this is a quote from her article, *"Working toward such a new vision is problematic because it depends on the thing that we measure least. Social capital. It depends on people getting together and working together. And it depends on the absence, I would say getting rid of, perverse incentives that inspire dysfunctional activity on the part of individuals in pursuit of short term gain. In other words, it is the social capital that we seldom measure. We do not recognize that as an asset, and yet that is the very asset which is going to be necessary to rebuilding rural communities. And once we recognize that social asset, we will begin working together and cooperating to rebuild the community rather than being on this path of our individual competitiveness for short term gain for ourselves."* And that is the key, in her mind, to rebuilding rural community. Okay. So we need that new social vision.

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The second thing we need is a new economic vision. As I said, Marty Strange has pointed out that rural communities are essentially colonial economies. Well, so we need to shift from that. So what do we shift to? In the new economic vision we need to shift from a colonial economy to a value-retained economy. In other words, we need to recognize that it ultimately does not make a lot of difference what price farmers in an agriculturally dependent community get for wheat, or for anything else that they mass produce into the global economy. Because here is what happens: If the price of wheat goes from $3 to $5 a bushel, all of the input costs go up, the market sector takes out a greater share and you still end up with about the same money going to the bank that you had when the wheat was $3 a bushel.

Stewart Smith pointed this out very clearly in an essay which I think many of you have seen, I have talked about it a lot, which he wrote back in 1992, which he did for the *Joint Economic Commission of the United States Congress*. And what he pointed out in that essay was that we do not understand what happens to farmers and why farmers are in economic difficulty, and therefore rural communities who are dependent on the agricultural economy, we do not understand why we are in trouble until we recognize that there are really three sectors to the agricultural economy: there is the market sector and the input sector and the farm sector.

Stuart Smith points out that what has happened between 1910 and 1990, that 80 year period, is that the input sector of the agricultural economy has increased its share of the agricultural economy from roughly 12% to 23%; the market sector has increased its share from roughly 44% to 67%; and during that same period of time, the farm sector share has shrunk from 44% to 9%. So farmers take home 9%. The value they retain of their production is 9%. And so whether you get $5 for a bushel of wheat or $3 for a bushel of wheat, you still take 9% to the bank. And that is a fundamental economy that we have to change. The only way we can change that is by retaining more value within the farm sector and therefore within rural communities. And there are a number of ways that we can do that. One of the ways is, of course, and Stewart Smith makes this very clear, that the only way to improve the agricultural economy is for farmers to wean themselves from the input sector so that more of that wealth gets retained in the farm sector and to recapture more of the market sector activity. That is the way to retain more wealth in the farm sector and therefore in agricultural dependent communities.

That is the new economy. And she argues that what she calls "sustainable agriculture", things like Biodynamic agriculture and organic agriculture are well-suited to this new economy. We should not try to be in the business of mass producing a common commodity like wheat or any other kind of raw material. We should be thinking about producing these very specific commodities for specific markets and marketing directly so that we have the contract in hand before we ever put the seed in the ground or give birth to the pig or whatever else.

One of the ways of doing that is to use cultural practices for production as biodynamic and organic farmers do instead of relying on off-farm inputs; close the nutrient cycle, because then you pay yourself instead of the input company And the other way to do it is to add more value to the production before you sell it. A second new economic vision that we need to think about is to move from what Cornelia Flora calls "a Fordist economy to a post-Fordist economy." What she means by this is that the "Fordist economy" is following the example of Henry Ford, to mass produce a single uniform commodity as efficiently as possible. This has been what has built the industrial economy. And it certainly has played a role for developing wealth of a certain kind.

The problem is that in rural communities, and in fact she argues that in the economy as a whole, this is not working anymore. In the new economy, the "post-Fordist economy", instead of producing a uniform product on a mass basis you produce a commodity which is designed for a specific market, forward contract it so that you already know what you are going to get for the commodity before you start producing it, and you keep it small enough so that you can modify and be flexible enough to change it as the market changes or as the demand changes.

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And of course, again, programs like CSA's are exactly models of this kind of new economy in which people who are going to buy the product get together with the farmer who is going to produce this, and contract for that product before the farmer ever puts the seed in the ground. It is an excellent example of the new economy. So we need to shift from a colonial economy to a value-retained economy, from a "Fordist economy" to a "post-Fordist economy".

And then we need to move from an industrial economy to an ecological economy. What I mean by that is the industrial economy has a particularly peculiar way of measuring economic health. Herman Daly in his new book *"Beyond Growth"* refers to this as two different kinds of what he calls "pre-analytic visions, two different kinds of paradigms".

There are really two different ways to measure economic health. The one, which is what the industrial economy uses, sees the economy as sort of a free floating box in space with unlimited resources coming in and unlimited sinks for waste coming out. And so all you measure is what goes on inside the box. And he argues that if we are ever going to have a sustainable economy we have to change that vision. We have to change that paradigm. And what we need to do is to recognize that the economy is a subsystem inside of the environment and therefore the economy always has to function within the limitations and capacities of the environment. Both the limitations of

its resources going in and the limitations of the sinks to absorb the waste coming out. And when you look at it that way, you start measuring the economic performance in a very, very different way.

Let me just give you a story to exemplify what I think Daly is talking about. In Jamestown, North Dakota, my hometown, we got all excited, well not all us did, but some of us in the community got all excited about a new french fried potato processing plant that was going to come into town. This is a $60 million plant which is going to produce, I forget how many tons of french fries, and so a lot of people got excited about this because they were looking at the number of jobs that it would create, the kind of economic activity that it would create within the community, et cetera.

Now, if you measure this activity in our community by the box, it is going to be successful. It is going to generate jobs. It is going to create a new product that growers can produce, it is going to generate wealth. Some it is going to stay within the community, a lot of it will float out, but some will stay. You can call it a success.

If you use Daly's second paradigm, the subsystem within the environment, you start to get a very different picture about this, and a number of folks within the community are already starting to recognize the cost that is going to be a part of this. I am not going to mention all of the costs, I am just going to focus on one.

You have to kind of start with the beginning here. The potato industry today is controlled by two major transnational corporations. It is Frito-Lay and Simplot. Well, Frito-Lay and Simplot came to North Dakota a few years ago and talked to a group of potato farmers who were dry-land potato farmers in North Dakota, had been dry-land potato farmers since the beginning and that is what they wanted to be. And Frito-Lay and Simplot came to North Dakota and said to the potato farmers, "Now, we need french fries that hang out over the box." And they sort of said, "What do you mean by this?" And they said, "Well, we gotta have french fries that when a customer gets their french fries from McDonald's or wherever, the french fries gotta hang out over the box. And the only way that we can consistently get french fries that hang out over the box is to have irrigated potatoes because that is the only way you can get potatoes consistently large enough to have French fries that hang out over the box." And the North Dakota farmer said, "Well, we don't really want to raise irrigated potatoes. That involves us in a whole other system, it's more intensive farming, it's more capital, and we just don't think that that's what we want to do." And Simplot said, "Well, if you don't want to do that, we have growers in Idaho, et cetera, who will."

And Frito-Lay and Simplot came to North Dakota and said to the potato farmers, "Now, we need french fries that hang out over the box." And they sort of said, "What do you mean by this?" And they said, "Well, we gotta have french fries that when a customer gets their french fries from McDonald's or wherever, the french fries gotta hang out over the box. And the only way that we can consistently get french fries that hang out over the box is to have irrigated potatoes because that is the only way you can get potatoes consistently large enough to have French fries that hang out over the box."

So the writing on the wall was very clear that this is what they were going to have to do. So now they are faced with a capital expenditure that many of them cannot afford. What happens is, the smaller producers start contracting with the major producers who have the capital to buy the equipment to plant the potatoes and harvest them, et cetera. And they make those kinds of arrangements, but what has to happen is that you have to raise these irrigated potatoes in particular kinds of soil. And the ideal is sandy soil or shallow ground water because that is the best way to raise the potatoes and provide the irrigation that you need.

So, much of the potato growing industry went to Topin, North Dakota, in Kitter County which is a place which has a huge aquifer. Around there they joke about the fact that in the spring the aquifer is actually on top of the ground rather than underneath because the water is that close to the surface. Huge acreages of potatoes now are going in with center pivot sprinkler irrigation systems for the water to produce these potatoes.

Now, as it happens, Kitter County is also the county in North Dakota which has the largest concentration of organic farmers. So there is an interesting community kind of conflict that is emerging here and already we have had organic farmers who have had fungicides accidentally sprayed on their buckwheat and have lost their crop. The community knows that it is only a matter of time before this intensive agriculture with multiple sprayings and nitrate inputs reaches the ground water and it is going to ruin the water because this aquifer is not a contained aquifer, it is an open aquifer. And so what the extent of the damage will be, no one even knows.

When you do the economic accounting based on a subsystem inside the environment, you have a lot of costs to add to this operation, and whether or not it would still

be an economically robust venture, is at best very, very questionable. And so these are the kinds of things that we have to begin doing if we want to rebuild rural communities because what will very likely happen, my prediction of what will happen, is what is happening in many places in the country where these kind of potato operations have gone in. They continue to operate until either the ground water is no longer suitable or some other part of the natural capital has been used up and then they move on to another location, and that is not the way to rebuild rural communities.

Another issue that we need to deal with here in terms of the new economic vision is this business of concentration. It is going to be very difficult for us to rebuild rural communities as long as our markets in the agricultural economy continue to be concentrated in the way they have. We have all heard about the broiler industry concentration and the hog concentration, but cattle concentration has not gotten quite the same amount of press, but it is certainly also there. Eighty-seven percent of the steers and hefers now are packed by just four packers.

There is no way to rebuild rural communities in these kinds of settings because again, what is going to happen is that these huge companies are going to want to primarily do business with the largest producers because that is the most efficient for them.

Another of the things that hasn't gotten hardly any of the press is the concentration in the grain industry. But it is also happening. It is being called regionalization. The major grain traders are dividing up the country. One is going to take one region and another take another region. And, if you want to sell grain you have to contract with that one company. It is the end of free and open markets.

There is no way to rebuild rural communities in these kinds of settings because again, what is going to happen is that these huge companies are going to want to primarily do business with the largest producers because that is the most efficient for them.

To do business with a lot of small producers just does not pay. They will become residual suppliers which means they will sell their grain if there is a market and they won't if there isn't. It will do the same thing that it has in the hog industry, the same thing it has done in the broiler industry, namely, it puts the independent producers out of business in a short period of time.

If we want to rebuild rural communities, we have to do two things. One is to add value to our production so that we can at least retain the value of that production before it flows into these international markets. And secondly, to do as much direct marketing as we can with the kinds of commodities that we can do that with and build that other economy.

We need a new social vision, we need a new economic vision, and finally, we need a new ecological vision. There was an interesting short story in the October 13 issue of the *New York Times Magazine* this year which tells us why we need a new ecological vision if we want both agriculture and agriculturally dependent rural communities to survive let alone be rebuilt. It was an article by Derrick Jensen who is the author of that delightful book, *"Listening to the Land"*. And Derrick Jensen is not only an author, he is also a bee keeper. So he wrote this little article entitled *"Hush of the Hives"*. If you haven't seen it, I would recommend it to you because it is a wonderful, short one-page article.

Derrick starts out by saying that chickens are now laying eggs in his bee hives and things are rotting and deteriorating, and he has been feeling really badly about the fact that he no longer has these thousands of buzzing bees around in his yard.

He said he used to feel badly because all of his bees died and he figured that he must have done something wrong. But then he began to discover that bees are dying all over this country and when you read the list of the death of bees, it reads like an obituary of a massacre; 80% of the bees in Maine, 55-75% of the bees in Massachusetts, and state by state it is the same kind of statistic. And so he said, "Okay. So we could blame the *virolo* which is the major cause of the bees dying, or we could blame the bee keeper who smuggled in the queen bees to interbreed with his bees to increase his honey production." But he said, "That doesn't do it either because it was inevitable." And then he starts to describe the structure of agriculture that we have created in our industrial agriculture system in this country with huge concentrations of dense almond orchards and pear orchards and apple orchards and cranberry bogs, all of which have to be pollenated at the same time, and it is simply no longer possible, he says, for the wild pollenators, the moths and the bees and the other insects that are out

there, to pollenate all of this.

Now, we have to import equally dense concentrations of bees during this four-week pollenation time so that the flowers will set fruit. So he said it was inevitable. It was this kind of industrial agriculture that enabled something as tiny as a mite to destroy the honey industry.

When I had the opportunity to talk with the economic research services researchers a couple weeks ago, I told them this story that Derrick Jensen had written, and I said, "What this means is that when you create your economic measurements for measuring the economic viability of an agricultural system, you have to add the destruction of the honey industry into the cost."

Why do we need a new ecological vision for agriculture? It is because our industrial agriculture has not taken into account the destructiveness of this kind of agriculture and therefore the destructiveness of the agriculturally related rural communities that are dependent upon agriculture.

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We need to begin thinking about whole farms. And by whole farms I do not mean whole real estate. I do not mean that if you own 3,000 acres you have to have all 3,000 acres in that particular system. I mean whatever farm you are going to farm as an ecological unit, is whole ecologically. It has sufficient biodiversity in it so that the production problems are solved from the resources, from the diverse biological resources within the system. What Biodynamics has been about from the beginning.

We have to have this kind of new vision for agriculture if we want agriculturally dependent human communities. If we want to become healthy again. Because the other capital that is critical is the natural capital. We are now faced, particularly California is faced, but also those of us who raise sunflowers in North Dakota are faced, with the prospect that we may have to find an artificial pollenator to grow our crops. You cannot build rural communities with that kind of destruction of natural capital.

I think what this means is that if we are going to have sound, ecological, whole farms, we have to diversify the food system. And we have to create food systems that are much more regional and local. The whole concept of "food sheds" becomes important for this very reason. It is not so much a matter that people can buy local and support a local farmer. It is because the only way we can have sound ecologically whole farms is by having the kind of diversity within those farms so that they can be integrated, so that they can be parts integrated into a whole, and that will never happen as long as North Dakota is under pressure economically for its markets to just produce wheat for export.

It can only happen if we have enough markets within a particular region, an ecological region, that generates the kind of markets for the kind of diversity that will make it possible to have a whole ecological farm.

I think that there are a number of things we can do around us. Certainly we need to continue to support the kind of diverse direct markets which are emerging in things like CSA's. But I think there is another thing that we can do politically. And this may seem like a far out idea, but I think it is one that could gain political acceptance pretty quickly if we continue to think about it.

Suppose that we took our various political boundaries, a county, say, or maybe even a township in some instance, and we establish a policy maybe through a public referendum that said, "Thirty percent of the food which is purchased in that community with local tax dollars has to come from local farmers." In other words, if you have a hospital, the school lunch program, any place that food is purchased with tax dollars, we have a right to say as taxpayers that we want at least 30% of that food to come from local farmers. This would begin to create the kind of infrastructure which is lacking now for local production. That then could let the private industry come in and use that same infrastructure to produce locally produced food which would necessarily have to be more diverse because you cannot just feed wheat to the kids in the school lunch program.

To compliment this kind of local, regional, biologically defined food system, we need to begin developing bioregional kinds of research and development. One of the problems is that most of the research that is done is done as if all ecologies were the

same. So we produce research for increasing corn production or increasing soy bean production or increasing wheat production or increasing animal growth as if all ecologies were alike, and they aren't. Ecologies are always local and they are always changing, and so the research should be local so that it suits the needs of local communities.

Let me just say in conclusion that if we want this kind of vision to become a reality in rural communities and for rural communities to act upon them, we cannot depend on the free market. The free market is very important. It is a very important part of the market activity. But the free market only does one thing, and that is it gravitates to the most efficient system. And efficiency is not always compatible with the development of sound, local, ecological systems. So we have to have a vision that recognizes that there is more here that we need to do besides simply doing the thing that is most efficient from a market perspective. We have to create markets that will support these other social, ecological, and economic goals within our communities.

Let me just give you one quick example of what the free market by itself often does in terms of ecological health, or the lack of it in this case. As we all know, we now have a *Freedom to Farm Act* which is a policy decision to provide, to make it possible for farmers to "farm the market, instead of the government". I happen to support that incidentally. I think it is basically a good idea. The problem is that it did not go far enough. We have the *Freedom to Farm Act*, and then we had also this spring a market which encouraged farmers to raise wheat because wheat had gone to $2.80–$3 a bushel at one point last winter. In our community, I think it was up to $5.50 a bushel.

The free market does not ensure ecologically sound farming. Never has, it never will. We have to have a vision and a moral commitment, an obedience to a vision to use Laura's term in the Wes Jackson family. If we want to have the kind of ecological soundness that will rebuild rural communities, there are some resources that we can use.

So the free market said, "You know, if you want to get ahead, and you're a farmer in North Dakota, you raise wheat." So what happened is that many of the farmers said, "Okay. I get a guaranteed income because of cash rent guarantee, I don't have to take the risk of whether I'm gonna get a crop or not." So they in fact went along with the lease arrangement and many of them leased their land to the largest farmers. The largest farmers came in, planted everything in a week.

They happened to make out okay from a strict short term economic return because since the farmers in Oklahoma and Texas and Kansas lost more of their crop, the price of wheat went up some. It is now back to around $3 something I guess, in the local elevator, but mostly at harvest time they were selling it for $4–$4.50 a bushel. So they made out pretty good on the short term.

But there are a couple of other things that happened. Since they now had all of this wheat and in North Dakota where I am, in the mixed grass prairie, the land is rolley and the wheat does not all ripen at the same time. It ripens faster on the hilltops than it does in the valleys. And of course they now had all this wheat and they could not handle it all with their own combines so they needed to bring in custom combiners to help them harvest.

Well, the custom combiners did not want to come in and harvest the hills first and then come back and harvest the low places. Custom combiners also do not like to pick up wheat so you cannot swath it down to dry uniformly because they do not want to do that.

So the farmers simply went out there and burned it all down with Roundup ten days before harvest so that it would ripen uniformly and then they came in with the combines and harvested it all.

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The government is not always wrong. We do have a program now called the *Fund for Rural America* which makes $100 million available every year for the next three years on a competitive grants basis to rebuild rural communities. Now, a third of that money is earmarked for research, a third of it is earmarked for rural development, and a third of it is at the discretion of the Secretary. Now, we could in fact urge the Secretary to make sure that a majority of the third that is in his discretion goes for rural development. But in any case, there is a minimum of $33 million a year and a potential $66 million a year that rural communities can use on a competitive grants basis to

help with jump starting and creating some of the ideas which have to come out of the community to rebuild rural communities. This is a wonderful opportunity. It is an opportunity for local people in rural communities to get together, to decide what it is they want to do, to write the grant proposal.

It is an opportunity for people in rural communities, for church leaders, for ordinary citizens, for farmers, for politicians to sit down together and say, okay, what kind of vision do we have about our community, where do we want to be 20 years from now, and how can we get there? Put the proposal together and get some funding to help with that process. That is a real resource.

I think that our Land Grant Universities are also a resource. Many of them have a long way to go to embrace the kind of vision that I am talking about tonight. But we need to hold them accountable. They still do get public support. We need to especially hold accountable people like an extension agent in South Dakota who said, "We need the economic development of these factory farm hog operations, and citizens simply have to get used to the odor." That is a quote.

Now, the thing that is particularly disheartening about that is not only that he feels that the taxpayers who pay his salary have to get used to the odor, but that he felt that the odor was the only problem. So we need to hold our Land Grant Universities accountable, but they are a resource, a tremendous resource which we can use in helping to build the kind of vision, to endorse the kind of vision, and to rebuild the kind of communities that we want.

I think there is particularly hope in all this, and I will close with that, since what we are talking about a model which is in concert with nature, we have nature on our side and the power of evolution is a formidable power. It is more powerful than Monsanto, it is more powerful than Ciba-Geigy, and the nature-subduing strategies that they have put in place are going to fail. They always have, they always will.

One of the strategies which they have developed for subduing nature now, of course, is genetic engineering, but part of the clues are already in in terms of the failure of that system because all of you know the cotton boll weevil has not been subdued by the genetically engineered BT cotton plant. That technology has essentially crashed. I asked a friend of mine who is an entimologist down in Texas, I said, "What happened?" "Oh", he said, "it was quite simple." He said, "The boll weevils figured out early on that the BT expression in the top part of the growing plant was much weaker, almost nonexistent. Most of it was in the bottom part of the growing plant. And so the boll weevils simply laid all their eggs in the top part of the plant. In other words, the boll weevils outsmarted the collective intelligence of all of the folks, all of the technicians, at Monsanto. And there is hope in that for all of us in rural communities. Thank you.