Sustaining the Family Farm[i]

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Historically, the family farm has been the mainstay of North American agriculture. When people thought of farming, they thought of a husband, wife, and their children, living and working full-time on a farm that they owned and managed. However, the full-time family farm has not been the norm for some time, as more and more families have had to supplement farm income by seeking employment off the farm. Many farming operations now owned and managed by families look more like animal factories or mono-crop plantations than family farms of the past. Today, many people in the agricultural establishment – including commodity organizations, government agencies, agricultural universities, and agribusiness corporations – are suggesting that family farms are outdated and are no longer sustainable. And many seem to question whether family farms are even worth saving, if in fact we could save them.

Are family farms sustainable? Are they worth saving? If not, then agriculture quite likely is not sustainable, and consequently, human life on earth is not sustainable. I am not suggesting that it is impossible to sustain agriculture without family farms, but I am suggesting that no one to date has suggested a logical means by which that might be done. The industrial agricultural operations that are displacing family farms in North America today quite clearly are *not* sustainable. It makes little sense to allow family farms to disappear when they are our only realistic hope for building a sustainable agriculture for the future, and thus, for sustaining civilized society.

First, I need to define what I mean by family farms because different people define family farms differently. A common definition of a family farm is a farm owned by a family, where the family makes the important management decisions, and the family provides most of the labor. While these may be characteristics of most family farms, to me, a true family farm is defined by the fact that the farm and the family are inseparable. To me, family farms can be full-time or part-time, they can be family owned, leased, or rented, and non-family members can do much of the work on the farm, as long as the farm workers become a part of the "farm's family."

On a true family farm, the family would be vitally different if they did not live and work on their specific farm and the farm would vitally different without the specific family that now farms it. The family and farm are essential parts of the same inseparable whole. On a true family farm, the farming operation changes as the family changes, with each family member taking on different roles as they mature. A family farming operation evolves to accommodate each new generation of farmers. The family considers the needs of the land, the animals, the farm, as well as the needs of the family, in making all decisions. The farm is a reflection of the family and the family is a

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reflection of the farm in the local community and in society as a whole. A farm that simply makes money for family members to spend is not a family farm.

Contrary to popular belief, there are still a lot of family farmers in North America. Many of the true family farmers today are identified with labels such as organic, biodynamic, ecological, practical, innovative, or holistic. The "families" may or may not be married couples with children but the people who farm together are committed to each other. They typically market their livestock and crops into specialized niche markets or market fresh or value-added food products directly to their customers. They market through farmers markets, roadside markets, community supported agriculture organizations (CSA), or by mail order using the internet. Increasingly, these new family farmers collaborate with like-minded independent food retailers – supermarkets, restaurants, public institutions – to gain access to larger numbers of like-minded customers. But, these new family farms are defined by the same characteristics as traditional family farms; the farms and the families are inseparable.

Many people question whether even these new family farms are sustainable. I have to admit that most probably are not truly sustainable, in the sense of being able to maintain their productivity and value to society indefinitely, at least not under existing conditions using existing know how. Economic viability remains the most elusive of the ecological/social/economic trilogy of sustainable farming. Access to higher-volume markets shows promise of being the missing economic link for which these ecologically sound and socially responsible farmers have been searching. Also, the economic efficiency of these new approaches to farming will undoubtedly improve over time, as our understanding of sustainable systems evolve and new supporting technologies are developed. Regardless, these new family farms clearly are our best hope for sustaining North American agriculture in the future.

Regardless of what we may think of family farms, North Americans need to move into the future with a clear understanding that industrial farming systems quite clearly are *not* sustainable. We simply cannot sustain the current trend toward the industrialization of agriculture. Industrial agriculture's lack of sustainability is not a matter of personal opinion, it is a logical conclusion based on some of the most fundamental laws of science, the laws of thermodynamics. We might be able to sustain industrial agriculture for another couple of decades, or perhaps another fifty years, but ultimately, it is certain to lose its productivity. In meeting our needs today, it is degrading and depleting the natural and human resources of the earth, leaving nothing with which to meet the needs of future generations.

Sustainability ultimately depends upon our use of energy because anything that is useful in sustaining life on earth ultimately relies on energy. All material things that are of any use to us – our food, clothes, houses, automobiles, – require energy to make and energy to use. All human activities that are of any use to us – working, managing, thinking, teaching, – require human energy. This human energy is extracted from the things people use. Physical scientists lump all such useful activities together and call them "work." Thus, all *work* requires energy.

In performing work, energy is always changed from more-concentrated to less-concentrated forms. Material things, such as food, gasoline, wood, plastic, and steel actually are concentrated forms of energy. Materials or matter can be changed into energy, as when we eat food or burn

gasoline. Energy also can be changed into different forms, as when we burn natural gas or breathe oxygen. However, the total energy embodied in matter and energy always remains the same, unchanged. When the energy stored in matter is released in the process of performing work, it always changes form, becoming more dispersed and disorganized, but no energy is lost. This is the law of energy conservation, as in Einstein's famous $E=MC^2$. At first, it might seem that we could simply go on recycling and reusing energy forever. If so, sustainability would be inevitable.

However, anytime we use energy to perform work, some of the *usefulness* of energy is lost. Once energy is used to perform work, before it can be used again, it must be reconcentrated, reorganized, and restored. But, it takes energy to reconcentrate, reorganize, and restore energy. The energy used to reconcentrate, reorganize, and restore energy, is simply no longer available to do anything else. It has lost its usefulness; meaning it has lost its ability to perform work. This is the law of entropy; the tendency of all closed systems to tend toward the ultimate degradation of matter and energy; a state of inert uniformity of component elements; an absence of structure, pattern, organization, or differentiation.[1] As a burning log releases radiant energy, for example, the log turns to ashes; its structure, pattern, and organization is destroyed as it tends toward entropy. The barren surfaces of the Moon or Mars are scenes about as close to entropy as any of us have seen. Since this loss of useful energy is inevitable, it might seem that sustainability is impossible. And in fact, life on earth would not be sustainable without the daily inflow of solar energy, which could be used to offset the usefulness of energy lost to entropy.

Industrial systems are very efficient in using and reusing both natural resources and human energy, but they do nothing to offset the inevitable loss of usefulness of energy due to entropy. That's why they are so efficient; they don't "waste" energy doing things for future generations. All forms of industrial development inevitably deplete the natural capital embodied in natural resources. Thus, industrial agriculture, by the logic and reason of the most basic laws of science, quite simply is not sustainable. Industrial farms, like other industries, are essentially resource-using systems; they use land, fertilizer, fuel, machinery, and they use people, but they do nothing to replace the energy that is inevitably lost in the process of performing useful work.

Industrial farmers don't use the solar energy from the sun to restore the productive capacities of their farms; instead, they transform solar energy into crops and livestock that are sold off the farm to be used up elsewhere. In fact, our industrial food systems use about ten calories of fossil energy, in addition to solar energy, for each calorie of food energy produced, using about 17% of the total fossil energy used in the U.S. An industrial agriculture invests in buildings, machinery, equipment, access to land, and other means of resource extraction and exploitation; but it invests nothing in regeneration or renewal of resources to support future generations. It's simply not economically efficient to do so.

Meanwhile, the world is running out of cheap energy. Peaks in oil production, for example, have been found to occur when approximately half of the total amount of oil in a particular oil field has been extracted, which typically occurs some 30-40 years after its initial discovery. [2] Beyond that point, extraction becomes increasingly difficult and costly and total production inevitably declines. U.S. domestic oil production peaked in 1970, thirty-plus years following the peak in U.S. oil discoveries. The peak in global oil discoveries occurred in the mid-1960s. While experts

disagree on the exact timing, a peak in global oil production is destined to occur early this century, and nothing can be done to prevent it.

Changes in extraction methods and uncertainty regarding Middle East oil reserves make precise calculations difficult, but most forecasters now predict a global peak in oil production somewhere between 2006 and 2010. Even Exxon-Mobil has forecast a peak within five years.[3] After the peak, oil production is expected to decline an average of 2-3% per year, dropping by about 70% over the next fifty years. The peak in natural gas in projected to occur within a few years of the peak in oil, and if coal is used to offset shortfalls in other fossil fuels, the 200-year coal reserves become something like 50 years. Alternative fossil energy sources are all limited, expensive, and energy inefficient. Our fossil energy dependent agriculture is on the verge of running out of energy.

In addition, industrialization not only uses up the natural resources required for sustainability, it also uses up the human resources. The law of entropy applies to social as well as physical energy. All human resources – labor, management, innovation, creativity – are products of social relationships. No person can be born or reach maturity without the help of other people who care about them *personally*, including their families, friends, neighbors, and communities. All organizations, including farms and businesses, also depend on the ability of people to work together toward a common purpose, which depends upon the civility of the society in which they were raised.

Industrialization inevitably dissipates, disperses, and disorganizes *social* energy, or social capital, because it weakens personal relationships. Maximum economic efficiency requires that people relate to each other *impartially*, which means, *impersonally*. People must compete rather than cooperate if free markets are to work efficiently. When family members work away from home, they have less time and energy to spend together, and personal relationships are threatened. When people shop in another town rather than buying locally, personal relationships among community members suffer from neglect. Industrial economic development inevitably devalues personal relationships and disconnects people, and thus dissipates social energy. There are no *economic* incentives for industries to invest in renewing or restoring personal relationships within families, communities, or society. It's always more economically efficient to find new people and new communities to exploit. Thus, industrialization inevitably tends toward *social entropy*.

Economies are simply the means by which we deal with relationships among people and between people and the natural environment in complex societies. There are simply too many of us to barter with each other and to produce our own food, clothing, shelter. Economies actually *produce* nothing; they simply transform physical energy and social energy so they can be traded or exchanged in *impersonal* marketplaces. All economic capital, meaning anything capable of producing anything of economic value, is extracted from either natural capital or social capital. Thus, when all of the natural and social capital, or energy, has been extracted and exploited, all of the energy in the system has been dissipated, and can no longer produce anything of economic value; the system has reached a state of *economic entropy*.

Living systems, however, are self-making, self-organizing, and regenerative; they recreate pattern and structure, tending toward greater diversity, away from entropy. [4] The new family farms respect these basic principles of living systems and thus are our best hope for agricultural sustainability. Living organisms, including soil microorganisms, plants, animals, and people, have the natural capacity to be productive while devoting a significant portion of their life's energy to renewal and regeneration. Living plants also have the capacity to capture, organize, and store solar energy that can be used by other living things to offset the energy that is inevitably lost in the processes of performing work. Obviously, an individual life is not sustainable because every living thing eventually dies. But, communities of living individuals clearly have the capacity to be productive, and at the same time, to devote a significant part of their life's energy to conceiving and nurturing the next generation, thus sustaining the life of the community. The new family farms are regenerative living systems and thus clearly have the capacity for permanence as well as productivity. The most critical question today is whether they can achieve economic permanence.

Those who question whether family farms are worth saving tend to focus only on productivity rather than both productivity and permanence. Obviously, industrial farms can be more efficient in the short run, because they invest nothing in either the natural capital or social capital needed to sustain future generations. Anything an industrial organization invests, must promise a positive expected return for *current* investors and anything an industrial farm invests in must promise a positive return for the current farm decision maker. Industrial management is about managing for the economic bottom line, and it makes no economic sense to invest in something from which someone else is expected to realize the return. Family farms, on the other hand, make investments that make sense in terms of the overall well-being of the family, which is inseparable from the well-being of the farm, and is directly related to the well-being of society. Family farms seek balance and harmony between productivity and permanence, between economic efficiency and ecological, social, and economic sustainability.

Family farms are managed for the well-being of people, not just for profits or wealth. People are multidimensional beings with social and spiritual needs as well as individual material needs. People need relationships with other people; we are social beings, by nature. People need to have a sense of purpose and meaning in life; we are spiritual beings, by nature. Our lives derive their purpose and take on meaning within the context of some higher unseen level of organization or order. A true family farm reflects the humanness of the family in their relationships with their farm, their community, and with society. They are good neighbors and good citizens because caring for others adds happiness and joy to their lives. They take care of the land and care for the other things of nature, because stewardship gives purpose and meaning to their lives. Family farming is a way of life, as well as a way to make a living. But it is not just about the quality of family life, it is also about sustaining a desirable quality of life for society as a whole. If we value the future of human society, family farms certainly are worth saving.

A difficult time of transition lies ahead as the economy moves from industrialization to sustainability. If family farmers are to survive this transition, they must manage for sustainability as well as profitability. Living systems must be nurtured and guided rather than controlled, thus no simply step-by-step process exists, or will ever exist, to ensure a successful transition to sustainable farming. A sustainable farm is a living organism; it must continue to renew itself and

evolve to accommodate its ever-changing natural and social environment. However, several general strategies flow quite naturally from an understanding of where we are today and where we need to go in the transition from industrialization to sustainability.

First, new family farmers should focus on quality, nutrition, and safety. A rapidly growing environmentally conscious food market is reflected in the growing popularity of organic foods. Related growth in a socially conscious market is reflected in the current explosion in popularity of local foods. Local markets, allowing personal connections between farmers and food customers, seem to have grown even more rapidly as organic foods have moved into the impersonal mainstream supermarkets. The people in this new sustainable/local food culture clearly give a high priority to ecological and social integrity, but they will not and need not compromise on the basic quality, nutrition, and safety of their food. They may not be so concerned about cosmetic appearance, packaging, and convenience, but they are perhaps even more concerned than are mainstream consumers about flavor, nutrition, and safety.

Second, new family farmers should focus on ecological, social, and economic sustainability. The new food culture is not just concerned about pesticides, growth hormones, and GMOs. They are concerned about the impacts of their food decisions on the natural environment, on the treatment of farmers and food industry workers, on who benefits from the process of food production and who pays the costs. Obviously, they do not ignore food prices, but they willingly pay premium prices for their food if they are sure that nothing and no one is being exploited in the production process. They are more than willing to pay farmers a fair return for their time and efforts, if they have confidence in the ecological, social, and economic integrity of the foods they are buying.

Third, the new family farmers should focus on their uniqueness. Each family farm is unique, in terms of its natural resources, its location, or the personal abilities and aspirations of the family members. New farm families must focus on the unique advantages they have in producing specific foods to meet the unique needs and preferences of the discriminating consumers of the new food sustainable/local culture. Other farmers can produce high quality, safe, and nutritious foods. Other farmers also can differentiate themselves from the industrial mainstream by producing foods that have ecological, social, and economic integrity. If a farmer develops a profitable market niche market based on these factors alone, their profits will not be sustainable. As other farmers decide to produce essentially the same products for the same customers, the profitability of such markets will disappear. The economic sustainability of a family farm depends on its uniqueness, on those things that other farmers cannot replicate.

Fourth, new family farmers should focus on finding like-minded customers. If you can't find anyone who values your products, there is no advantage in having unique products, processes, or locations. Farmers who break away from the industrial food mainstream have a distinct advantage in finding customers who share similar values in the new sustainable/local food culture. If the new farmers are willing to seek them out, like-minded customers can be found just about anywhere in North America. Many farmers who today have CSAs or sell directly from their farms, made the initial connections with their current customers at farmers markets. At farmers markets, they could try out a wide variety of products and meet a variety of customers, and thus, had an opportunity to find people who valued the things they could and wanted to produce. Many farmers now moving into higher-volume retail food markets understand the

opportunities and challenges, because they have had direct contact with specific members of the sustainable/local food culture through direct marketing activities.

Fifth, new family farmers should focus on developing personal relationships with their customers. Finding customers that value what you do and how you do it isn't enough; your customers must also value who you are. Even if your products, processes, or locations cannot be duplicated, they can still be approximated, which limits your advantage in the marketplace. But you are unique and so are your customers, and relationships between you and your customers are even more unique. Perhaps even more important, positive personal relationships have not only economic value but also intrinsic value. And, personal relationships linked to functional activities such as making a living and eating can be even stronger and more valuable than are relationships of chance. The new food culture values personal relationships. As farmers move into higher-volume markets, ways must be found to maintain some sense of personal connectedness among consumers, retailers, farmers, and the land, or the primary market incentive for sustainability will be lost.

Sixth, new family farmers should focus on integrity and empathy as the ethical cornerstones of farming and living. The Institute for Global Ethics has conducted surveys, interviews, and focus groups with people around the world, asking people, "What do you think are the core moral and ethical values held in the highest regard in your community?"[5] Answers obviously varied widely, but five values consistently ranked high in virtually every inquiry. They were honesty, fairness, responsibility, compassion, and respect. Actually, it's just plain common sense that if we expect to maintain positive personal relationships we have to treat other people, as we would like to be treated, with honesty, fairness, responsibility, respect, and compassion. Different people have different values, but these values we share in common.

The first three, honesty, fairness, and responsibility, can be combined to define the principle of integrity. A person of integrity must be reliably honest and fair and must accept responsibility for their actions or inactions. Relationships of integrity are relationships of trust and trustworthiness. The values of respect and compassion can be combined to define the principle of empathy. Empathy requires that we visualize ourselves in the place of another, and then, treat the other person, as we would like to be treated. Empathy goes beyond integrity, at times requiring that we be more than fair to a person in need and be respectful of even those who do not respect us. The people of the sustainable/local food movement are not merely searching for a reliable source of fresh, local food; they are searching for ways to reconnect with people of integrity in trusting and caring relationships. In return, they are willing to trust their farmers and to reward them both personally and economically, as they, themselves, would like to be rewarded.

Seventh, and finally, new farmers should focus on being happy rather than making money. Most family farmers who have gone broke in the past did so while focusing on the economic bottom line. After all, happiness is the ultimate purpose of everything that we do, regardless of whether it's making money, making friends, or farming. Happiness has been a focus of philosophical discussion throughout human history. However, we don't need to study philosophy to know that personal income or wealth alone cannot make us happy. We know that positive relationships with other people – trusting, caring, loving relationships – are essential to our happiness. We were created as social beings. We know that to bring happiness relationships must

be honest, fair, responsible, caring, and respectful. Farmers that seek *rightness* in their relationships will find happiness in life. And as they extend this sense of rightness to their relationships with the earth, they are building the foundation for a sustainable society. I have met a number of farmers who started making more money when they broadened their focus to include stewardship and overall quality of life. Regardless, happy people always seem to have *enough* money.

True family farms today are very different from the family farms of the past. So, it's difficult to speculate on what family farms of the future might look like. My best guess is that in the next 20-years or so the new family farms will become the new mainstream of family farms. Thus, family farms of the future will look a lot like the new family farms, meaning like the true family farms of today.

On the family farm of the future, the farm and the family will be inseparable. Farmers will take good care of their land, their crops, their animals, and their workers, because they are all part of the farm's family. Farmers will manage their farms in ways that respect the values and preferences of their customers, their neighbors, and society, because relationships between the farm and the community are reflections of relationships between the family and the community. Farm families will be good stewards of both the land and of civil society because, as members of the extended family of humanity, they will realize that we all have a debt to those of the past that we can only repay to those of the future. The farm family of the future will be a family of integrity and empathy.

The most striking outward differences between family farms of the future and those of today may well be the functional roles of the extended farm family. Family farms of the future must be prepared to extend themselves vertically, whereas farms in the past have extended themselves horizontally. Rather than becoming larger in scale, family farms of the future will become better connected, meaning more effectively and productively connected. They will extend back into the regeneration and renewal of resources, including both natural and social capital, and extend forward into marketing and distribution, connecting with their final customers.

Different people within farm families, including the *farms'* family members, will have different aptitudes, skills, and aspirations, making them uniquely suited for different roles in the extended family farms of the future. Some will accept responsibility for stewardship of the land, others for quality and efficiency of production, some will take the lead in community matters and public relations, some will like the details of finance matters, marketing, or distribution, while others will be at their best with people, facilitating good customer relationships. However, specialists will have no place on family farms of the future; everyone will understand that they are in an essential part of an inseparable whole, a living, social organization, a true family farm.

Perhaps the most important difference between family farms of the future and those of today will be a new and different way of doing business. A new organization, The Association of Family Farms, states on its website, “In [the new] value chains… the producers, processors, distributors, and retailers are partners bound by pledges and contracts that reflect shared core values: sustainability, transparency, fair distribution of profit, high quality product, and relationship with the consumer.”[6] Family farms of the future will be a part of a new sustainable food economy.

The new food economy will still be a capitalist economy, but competition will be tempered by the need to cooperate, profits tempered by the need for permanence, and accumulation of wealth tempered by the need to share with others. Participants will pursue a more enlightened concept of self-interest, realizing their own economic success can be sustained only by helping others to succeed and leaving opportunities for those of the future to succeed as well. They will realize their own happiness and well-being is linked with the well-being of the people around them and with those of the past and future. They will manage for the triple bottom line, giving equal priority to ecological, social, and economic performance in their business endeavors. Today's family farmers are among the leaders in creating this new sustainable food economy.

Is the family farm being threatened today? Yes, it most certainly is. Even so, is it sustainable? Yes, if we allow it to be. Is the family farm worth saving? Yes, if we value the future of humanity. Can we save it? Yes, if we embrace and support it rather than allow it to be destroyed. Somewhere on the way to happiness, we became distracted by the pursuit of wealth. Nowhere do we in North America seem more misguided and lost than in our systems of farming and food production. Today, the new sustainable family farmers are showing us the way back to happiness. The future of humanity may well rest upon our finding the wisdom to follow them.

End Notes:

[1] For a more in depth discussion of entropy, see John Ikerd, *Sustainable Capitalism: A Matter of Common Sense,* Chapter 3 (Bloomfield, CT: Kumarian Press Inc., 2005).
[2] For a good basic discussion of the issue of "peak oil," see, <http://www.communitysolution.org/peakqanda.html>
[3] Alfred J. Cavallo, "Oil: Caveat empty," Bulletin of the Atomic Scientists, May/June 2005 (vol. 61, no. 3), 16-18.
[4] For a more in depth discussion of living systems, see Ikerd, *Sustainable Capitalism,* Chapter 5.
[5] Rushworth M. Kidder, *Moral Courage* (New York: William Morrow, HarperCollins Publishers, 2005), 43.
[6] See *The Association of Family Farms,* <http://www.associationoffamilyfarms.org/overview.asp>