

# Hallmarks of Sustainable Farming Systems

## John Ikerd

### University of Missouri

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A new paradigm or model for American agriculture is emerging under the conceptual umbrella of sustainable agriculture. The focus of the concept of sustainability is on intergenerational equity - to meet the needs of the present while leaving equal or better opportunities for the future. But, in order to fulfill this purpose, sustainable systems must be economically viable, ecologically sound, and socially responsible. Systems of farming that are lacking in any one of these dimensions quite simply are not sustainable over time. Thus, sustainable agriculture requires that farmers find balance and harmony among the economic, social, and ecological dimensions of their farming operations.

### Pursuit of Higher Self-interests

Sustainable farmers, like people in general, pursue their self-interest. It's an inherent aspect of being human. But, people, by nature, do not pursue only their narrow, individual self-interest. It's within the fundamental nature of people also to care about other people and to want to take care of the earth. People are perfectly capable of rising above *selfishness and greed* to pursue a *higher* concept of self-interest - a self-interest that values relationships and stewardship as important dimensions of individual well being.

This *higher* self-interests includes narrow self-interest (which focuses on individual possessions), but it also includes interests that are shared (which focuses on relationships, community, and social values) and interests that are purely altruistic (which focuses on interests one pursues only out of a sense of stewardship, ethics, or morality). All three - self-interests, shared-interests, and altruistic-interests -- contribute to one's well being or quality of life, but not in the same sense that greed might enhance one's material success. Each contributes to a higher sense of quality of life explicitly recognizing that each individual is but a part of the whole of society, which in turn must conform to some higher order or code of natural laws.

Farmers, in general, presumably would not use chemicals in ways that destroy their health, poison their own food, or pollute their water supply. But, the sustainable farmer must be willing to make ecological investments that will benefit of others solely. Sustainability requires that we consider the health and well-being of those down wind and down stream as well as ourselves. Sustainability requires that we conserve non-renewable resources - soil, energy, clean air, and clean water -- for future generations. Thus, ecological sustainability is deeply rooted in a strong sense of stewardship - our responsibility to take care of things for the benefit of others.

Farmers, in general, recognize they must make investments of time and money in family, community and society in general -- they may expect personal rewards for these investments, but the rewards must be shared with others. However, many may make social investments out of self-interest, for purely selfish reasons - they expect their share of the benefits to exceed their share of the costs. But, sustainable farmers must be willing also to make social investments for purely altruistic reasons - investments from which they expect no direct benefit for themselves. They benefit only from fulfilling their ethical and moral responsibilities for other. Such investments are economically rational, only from the perspective of an *economics of enlightenment*.

The contemporary economic dimension is no less important than are the social and ecological dimensions in ensuring sustainability. A sustainable agriculture requires all three - an agriculture that is ecologically sound, socially responsible, and economically viable. Aldo Leopold, in his essay on land ethics, said we must consider the economics as well as the ethics and aesthetics. We cannot be expected to take care of others unless we are first able to take care of ourselves. Economic viability is necessary if a farmer is to maintain the authority to use the resources for which they are to be good stewards. Or to put it bluntly, if a farmer goes broke, they are not sustainable. Conflicts arise between economics and sustainability because too often economics are allowed to dominate everything else - including relationships and stewardship. Sustainability requires a measure of profitability, but short

run maximization of profit invariably leads to ecological degradation and social exploitation. Sustainability requires balance and harmony among between economics and the other two.

## The New American Farm

Farming sustainably is no simple task. But, thousands of farmers are finding ways to sustain a desirable quality of life for themselves and to support their local communities while being good stewards of the land and the natural environment. They may carry the label of organic, low-input, alternative, biodynamic, holistic, permaculture, or no label at all, but they are all pursuing common economic, ecological and social goals. By their actions, these farmers are defining a new kind of American farm.

These new American farmers are a diverse lot, but they share a common pursuit of a *higher* self-interest. They are not trying to maximize profit, but instead are seeking sufficient profit for a desirable quality of life. They recognize the importance of relationships, of family and community, as well as income, in determining their overall well-being. They accept the responsibilities of ethics and stewardship, not as constraints to their selfishness, but instead, as opportunities to lead successful lives.

These farmers, these common people, are the architects of the New American Farm. These farmers, not the experts or the scientists, are the ones on the new frontier -- the explorers, the colonists, the revolutionaries, and the builders of a "New World." Life is difficult on the frontier because no one really knows how to do what these folks are trying to do - they are creating the future. They are getting little help from the government, their universities, or the agricultural establishment. They are doing it pretty much on their own. They will continue to confront hardships, frustrations, and there will be some failures along the road. But, more and more of these *new American farmers* are finding ways to succeed.

There are no blue prints for the New American Farm. But a few fundamental principles are beginning to emerge. In general, the new farming opportunities arise directly from exploiting the weaknesses resulting from misuses of industrialization -- specialization, standardization, and centralized decision making. The new American farm relies instead on the advantages of diversity, individuality, and decentralized networks of interdependent decision-makers.

New American farmers focus on working with nature rather than against it. The natural resource base that ultimately must sustain productivity is inherently diverse. Industrial systems have had to *bend nature* -- to augment, supplement, alter, and force it -- to create an illusion of conformity out of diversity in order to meet the demands of large-scale, industrial production. The ecological problems arising from industrialization are symptoms of natural resources being used in ways that are inherently degrading to their productivity. Thus, industrialization has created tremendous opportunities for farmers who learn to utilize the inherently productive capacity of a diverse natural resource base, rather than wasting time and money trying to force nature to conform.

These new American farmers utilize practices such as management intensive grazing, integrated crop and livestock farming, diverse crop rotations, cover crops, and inter-cropping. They manage their land and labor resources to harvest solar energy, to utilize the productivity of nature, and thus, are able to reduce their reliance on external purchases inputs. They are able to reduce costs and increase profits while protecting the natural environment and supporting their local communities.

New American farmers focus on value rather than costs. They realize that each of us values things differently, as consumers, because we have different needs and different tastes and preferences. Industrial methods are efficient only if large numbers of us are willing to settle for the same basic goods and services - so they can be mass produced. So, industrialization has to treat us as if we're all pretty much the same. Customers have to be persuaded, coerced, and bribed to buy the same basic things rather than the things they really want. That's why we pay more for packaging and advertising of food than we pay to the farmers who produce the food. The industrial system creates tremendous untapped opportunities for farmers who can tailor their products to conform to unique needs and preferences of individual customers, rather than try to bend the preferences of customers to conform to their products.

New American farmers market in the niches. They market direct to customers through farmers markets, roadside stands, CSAs, home delivery, or by customer pick-up at the farm. They use everything from the Internet to word of mouth to advertise their services. They market to people who care where their food comes from and how it is produced - locally grown, organic, humanely raised, hormone and antibiotic free, etc. They are often able to avoid some or all of the processing, transportation, packaging and marketing costs that make up 80 percent of the total cost of mass marketed foods. They increase value, reduce costs, and increase profits while protecting the environment and helping to build stronger local communities.

New American farmers focus on what *they* can do best. They realize that we are all different -- as producers as well as consumers. We have widely diverse skills, abilities, and aptitudes. Industrialization has had to 'bend people'; -- train, bribe, and coerce them -- to make people behave as coordinated parts of one big machine rather than as fundamentally different human beings. Many social problems of today are symptoms of people being used by industrial systems in ways that are inherently degrading to our uniquely human productive capacities. Thus, industrialization has left tremendous untapped economic opportunities for farmers and others who can use their unique capacities to be productive rather than attempt to conform to systems of production that just don't fit.

New American farmers may produce grass finished beef, pastured pork, free range or pastured poultry, heirloom varieties of fruits and vegetables, dairy or milk goats, edible flowers, decorative gourds, or dozens of other products that many label as agricultural "alternatives." They find markets for the things they want to grow and are able to grow well rather than produce for markets where they can't compete. Or they may produce fairly common commodities by means that are uniquely suited to their talents. Their products are better, their costs are less, and their life is better because they are doing the things that they do best.

In general, new American farmers focus on creating value through uniqueness -- among consumers, among producers, and within nature. They link people with purpose and place. By linking their unique productive capacities with unique sets of natural resources to serve the needs and wants of unique groups of customers they create unique systems of meeting human needs that cannot be industrialized. The more unique their combinations of person, purpose, and place, the more sustainable will be the value to customers and producers alike. The sameness of industrialization creates opportunities for unique farmers who can create unique linkages with both resources and customers.

Critics argue that these new farm opportunities are limited. On the contrary, there is no limit to the diversity among people nor diversity within nature. There are as many niche markets as there are people. The question is one of how many different markets it is logical to serve, not how many different niche markets exist. Likewise, there are as many differences in production capabilities as there are producers, and as many different niches in nature as there are fields or places to produce.

Some question whether a sufficient number of people who are both willing and able to learn can be found to farm in these new ways. Admittedly, the new American farm will require a lot more knowledge, understanding, and thinking that does farming by industrial standards. However, any future occupation which offers an opportunity for a decent living will require the use of one's mind. The days when someone could earn a good living by the sweat of their brow are in the past. The industrial era is over. There will be plenty of innovative, creative, hard working people to operate the new American farms, once their promise for a more desirable quality of life -- economically, socially, and ethically -- becomes widely known.

Others question whether people can afford to pay farmers the full costs of meeting their food and fiber needs without exploiting either the natural or human resource base for agriculture. However, today's consumer, on average, spends only a dime of each dollar for food -- from which the farmer gets only one penny. Thus, most consumers can afford to pay farmers to produce the food they really want and need rather than settle for something less, particularly if that something less degrades the social and ecological systems from which consumers also much derive their quality of life.

The ultimate strategy for valuing uniqueness is through personal relationships. Each personal relationship is different from all others. Many consumers are alienated from current mass marketing systems not only because they

don't meet their specific needs, but because they have lost faith in the impersonal system of mass production for mass markets. They do not believe large corporations monitored by big government will really protect the natural environment or fulfill important social responsibilities. They trust neither corporate or government assurances that foods in the supermarkets are safe and healthful. They feel more personally secure and socially responsible when they support local and regional food systems rather than rely on international markets dominated by the multinational corporations. In other words, they want to know their farmer -- personally.

The most secure markets for the new American farm will be those based on personal relationships. Producers who develop personal relationships with their customers need not see other producers as their competitors. They can collaborate rather than compete. No two people are alike, thus, no two producers are likely to be viewed as close competitors in the minds of their *relationship* customers. Fortunately, meaningful relationships can only be spread so thin. Thus, there will be natural constraints, or limits to growth, in relationship markets. The necessity of maintaining personal relationships offsets the natural tendency to get bigger, and thus, helps farmers to resist the lure of the industrial treadmill. Local and regional markets will be developed and sustained over time by people who prefer to deal with people they know.

## Strategies for Sustainability

Sustainable farming might at first seem so complex that few farmers would be willing to accept the challenges of management. However, the trails of this new frontier are being blazed by a host of visionaries who see the emergence of a new post-industrial society, of which managing for sustainability will be but one part. Peter Drucker, the time honored business scholar and consultant to industrial corporations, is among those visionaries.

*“Every few hundred years in Western history there occurs a sharp transformation. Within a few short decades, society rearranges itself -- its worldview; its basic values; its social and political structure; its arts; its key institutions. Fifty years later, there is a new world.... We are currently living through just such a transformation” (Post-Capitalistic Society, by Peter Drucker)*

Drucker believes the current transformation began in the early 1970s some 25-plus years ago. If Drucker is on target, we should look to paradigms that have emerged over the past two-to-three decades for clues to the dominant paradigm of the twenty-first century.

According to Barker, new paradigms emerge when it becomes apparent to some people, not necessarily many, that the old paradigm is not going to be able to solve all the relevant and important problems. Thus, a new paradigm emerges while the old paradigm seems to be doing quite well -- at least in the minds of most. Consequently, Barker claims, new paradigms typically are met with initial rejection. Therefore, we must be willing to consider ideas still *rejected* by most, but gaining a following, for insights into new paradigms. New paradigms are almost always championed from the *outside* rather than from *within*. We must be willing to look *outside* rather than *inside* for guidance in pursuit of the new paradigm of sustainability. The new territory of agricultural sustainability is just now being settled by the post-industrial pioneers.

Some of the visionaries from the outside include Drucker, Toffler, Naisbitt, Hock, Reich, Capra, and others. These visionaries are gaining a following that spans the political spectrum from Hilary Clinton to Newt Gingrich and the business spectrum from Tom Franzen, an Iowa family farmer, to the Dee Hock, the founder of VISA Corporation. But the practical strategies for sustainability are being outlined by the *outside* pioneers which include Covey, Savory, Senge, Kriegel, Peters and others. These pioneers are teaching the day-to-day, nuts-and-bolts process of guiding the process of decision making using paradigms consistent with the emerging paradigm of sustainable agriculture.

Those who are ready to learn and teach strategies for a sustainable agriculture might do well to begin with strategies that have already been developed and move out conceptually from there. The following are but a few examples of readily available sources of uncommon wisdom, based on common sense that is fundamental to the concepts of agricultural sustainability.

Allan Savory's approach to holistic resource management (HRM) is built on a set of four "ecosystem foundation blocks" -- water cycles, mineral cycles, energy flows and succession or community dynamics. These building blocks represent a down-to-earth, practical representation of the *laws of nature* -- rules of the sustainability paradigm. Savory contends that all *new wealth* is generated by *energy flow* -- the product of the solar chain that transforms solar energy into human-useful forms. The water cycle and mineral cycle are essential elements in this solar chain. The process ultimately is dependent upon biological diversity and community dynamics or biological succession -- processes by which water, air, and minerals are utilized in transforming solar energy.

The three-part, holistic goal of HRM essentially is *sustainability* -- despite Savory's claims that HRM is fundamentally different from sustainable agriculture. The quality of life, production, and future resource dimensions of HRM goals are essentially the same as the social, economic, and ecological dimensions of sustainability. The HRM "whole under management" includes the land base, people, and money -- very practical terms for the ecological, social, and economic resources that must be managed to sustain agriculture over the long run. HRM is far stronger in practical ecology than either the social or economic dimensions. However, HRM recognizes explicitly that things economic, ecological, social are inseparable aspects of the same whole.

Steven Covey's "Seven Habits of Highly Effective People" is a principle-centered approach to life and relationships. Fundamental principles of human relationships are a practical representation of the *law of human nature* -- the other rules of the sustainability paradigm. Covey claims these natural laws of the human dimension are just as real, and just as unchanging, as laws such as the law of gravity of the physical dimension. He calls them "true north" principles -- not invented by individuals or society, but laws of the universe that pertain to all human relationships and human organizations. These principles surface in the form of values, ideas, norms, and teachings. But unlike values and norms, principles are objective, external, and unchanging - reflecting some higher order of things.

Covey's Seven Habits of Effective People may be as good a place as any to start in understanding and teaching the laws of human nature within which a sustainable agriculture must be built. The seven habits begin with developing effective individuals -- (1) Be proactive, (2) Begin with the end in mind, but (3) Put first things first. These habits are designed to move beyond dependence to independence. But the next evolutionary step is to go beyond independence to interdependence -- to move beyond effective individuals to effective *relationships*. Dependent relationships arise out of necessity, but interdependence relationships arising out of choice. To develop effective relationships Covey suggests we must (4) Think win-win, (5) Seek first to understand and then to be understood, and (5) Synergize -- value *interconnectedness*. Finally, success is a process, not an attainment, in that we must continually (7) Sharpen the saw.

Savory and Covey both address organismic approaches to decision making through their emphasis on holistic management, synergism, and interdependence. However, neither goes as far toward developing a practical way of thinking about such issues as does Peter Senge, a MIT business professor and consultant. In his book the "Fifth Discipline," Senge proclaims that a new discipline is needed to integrate the other disciplines, to fuse them into a coherent body of theory and practice, to keep them from being separate gimmicks or fads. While his objective may be philosophical, his approach to developing this new discipline is very practical. For example he proposes a set of "laws of systems thinking."

- Today's problems come from yesterday's "solutions."
- The harder you push, the harder the system pushes back.
- Behavior grows better before it grows worse.
- The easy way out usually leads back in.
- The cure can be worse than the disease.
- Faster is slower.
- Cause and effect are not closely related in time or space.
- Small changes can produce big results -- but highest leverage areas may be least obvious.
- You can have your cake and eat it too -- but not all at once.
- Dividing an elephant in half does not produce two small elephants.
- There is no blame -- we and our problems are parts of the same system.

One could argue that today's questions of sustainability can be traced to the violation of nearly every one of the ten laws of systems thinking. This would seem to imply that a shift to systems thinking would be a logical approach to answering those questions. Thus, Senge's systems strategies for developing "learning organizations" may provide some practical, valuable insights into the strategies needed to manage sustainable systems of farming.

Savory, Covey, and Senge are just three of the more popular authors and educators who are teaching fundamentally new paradigms of personal, professional, and community decision making. All have expanded beyond their original scope of dealing with farm, individual, or business decision making. They all seem to agree that the same paradigm of decision making is both necessary and sufficient at all levels of aggregation, from managing one's personal life to managing the resources of the biosphere. All have rejected mechanical-industrial models and have adopted organismic-sustainable approaches instead. All are based on the *beliefs* that there are limits to growth, that everything is interconnected, and that our decisions must be harmony with inviolate laws of nature. The beginning texts for understanding and teaching the strategies for sustainable agriculture already have been written. They have been written by Savory, Covey, Senge, and others *outside* of the agricultural mainstream.

## **The Hallmarks of Sustainable Farming Systems**

Some look to farming practices and methods for the hallmarks of sustainable farming - organic farming, management intensive grazing, direct marketing, integrated crop and livestock systems, crop rotations, etc. However, these are but the means by which farmers practice the principles of sustainability. The hallmarks of sustainable farming strategies underlying these farming methods are diversification, individualization, and decentralization of decision making within interdependent networks. Sustainable farmers work with nature, they focus on value, they market in the niches. They value their uniqueness as individuals and the uniqueness of their relationships with others. Sustainable systems match unique farming operations to the uniqueness of the farmers, their potential markets, and the natural resources of their farm. The farming practices and methods of a sustainable farming system are unique to the farmer, farm, market, and community.

Sustainable farmers are linked by their common commitment to the principles of sustainability. Intergenerational equity is the hallmark of sustainability - meeting the needs of the present while leaving equal or better opportunities for the future. The hallmarks of sustainable systems, derived from intergenerational equity, are economic viability, ecological soundness and social responsibility - interdependent dimensions of the same whole. Thus, holistic management is a hallmark of sustainable farming -- balancing economic, ecological, and social objectives - in harmony with some higher order of things. Nature and society are within the bounds of their decision-making - they consider the environment and the community in every decision. Guided by a *higher self interest* sustainable farmers build relationships and practice stewardship, neither for economic gain nor personal sacrifice, but instead to enhance their overall quality of life. The principle hallmark of sustainable farming is the pursuit of higher quality of life -- for farmers, families, communities, for all people, both now and in the future.

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