Key Ingredients in a Sustainable Food System:
Purpose, Principles, and People[i]

John Ikerd[ii]

I am pleased to be invited back to speak at the Annual Sustainable Agriculture Conference of the Carolina Farm Stewardship Association. I spoke at your conference nine years ago, in November of 1997, I believe. That presentation marked a turning point in my profession and in my life. In Flat Rock, North Carolina that November evening, I talked about "Reclaiming the Sacred in Food and Farming." To talk honestly about that subject, I had to speak not only from the head but also from the heart. The concepts and ideas came from my mind, but the words I spoke came from somewhere else, somewhere deep within, or perhaps more accurately, from somewhere beyond. That night I begin to understand that I had a purpose in life – a path to follow that I had not chosen, but that had been chosen for me. I could still choose not to walk that path, but I could no longer deny or ignore it.

Since that night, I have tried to go wherever I have felt led to go, to do whatever I felt needed to be done, and to say whatever I felt needed to be said, with little regard for the consequences. To the extent that I have been able to stay on that path, I have found contentment, peace, and happiness in life. And when I have strayed, I have suffered the consequences. I will try to do the same here tonight as I did nine years ago. I believe there is a purpose for me being back here at your conference tonight, and for you being here tonight as well. Together, let's see if we can find the next step along the path that we were meant to walk, as people guided by principles toward our unique purpose for being.

The purpose of this conference is expressed in its theme, "Gathering the Ingredients of a Sustainable Food System." I believe that the key ingredients in a sustainable food system, a sustainable economy, a sustainable ecosystem, a sustainable society, or any other aspect of sustainable living, are all the same: *purpose*, *principles*, and *people*. I believe also that the most important questions confronting us today, as farmers, as food consumers, as citizens, or as humans are questions of sustainability.

The industrial era of economic development has brought wealth and material well-being unimaginable to most people at the time the industrial revolution began, some two hundred years ago. No one would choose to go back to the pre-industrial world of two hundred years ago. But with growing evidence of ecological degradation and of social disintegration, more and more people are asking whether the material progress of the past two hundred years is sustainable. Increasingly, people are beginning to understand that the growing environmental and social problems confronting American society today are linked directly to the system of economic development that has generated our economic prosperity. They also understand, intuitively if not explicitly, that the long run sustainability of our economic prosperity depends upon the natural

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[ii] John Ikerd is Professor Emeritus, University of Missouri, Columbia, MO – USA; author of, *Sustainable Capitalism: A Matter of Common Sense*, http://kpbooks.com; E-mail: JEIkerd@centurytel.net ; web site: http://faculty.missouri.edu/ikerdj/ .

and human resources that our current system of economic development is either using up or destroying.

I spent the first half of my academic career, and two-thirds of my life, as a conservative, bottom-line, free market economist. I believed that free markets were the best way to ensure the long run well-being of nature and of humanity. However, I began to question the sustainability of American agriculture during the farm financial crisis of the 1980s, when even "good farmers" were going broke, farmland was being washed away, streams and groundwater were being polluted with agricultural chemicals, and rural communities were in economic decline and social decay. I eventually came to the conclusion that these ills were not the natural consequences of agriculture, but instead were symptoms of a particular kind of agriculture, an agriculture driven by specialization, standardization, and consolidation – an *industrial* agriculture driven by the economic bottom line. Eventually, I was forced to conclude that America's industrial food system is not sustainable.

As I began to understand what was wrong with American agriculture, I began to understand that the same things were wrong with the American economy and with American society. The roots of the problem are just more obvious in agriculture because of the closeness of connections between farming and the land and between farmers and rural communities. But all life in rooted in "the land," in the natural environment in which we live, and the soil in which we grow our food. And all of society in rooted in community, in the other people we need to thrive, even to survive. The sustainability of our food system, our economy, and our society all depend upon the same thing: the *rightness* of our relationships with the land and with other people. We know this intuitively, but we also need to understand it explicitly and logically, so we can help more people to understand what is happening, to change what is happening, before it is too late.

An industrial food system is not sustainable. This conclusion is not simply a matter of personal opinion; it is based on some of the most fundamental laws of science – the laws of thermodynamics. While thermodynamics may seem a bit esoteric, I believe the basic principles of sustainability are so important to the future of humanity that they should taught in every high school in this country. Everyone needs to understand that 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. Actually, all material things, such as food, gasoline, wood, plastic, and steel are concentrated forms of energy. All useful human activities – working, managing, thinking, teaching, – require human energy, which comes from the physical energy in 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 always changes in form – specifically, from more-concentrated to less-concentrated, more-dispersed forms. In fact, this natural tendency to disperse gives energy its ability to perform work. Energy is dispersed when matter is changed into energy, as when we eat food or burn gasoline. Energy also is dispersed when heat is used to produce electricity and electricity used to produce light. However, regardless of its form or the work it performs, the total energy embodied in matter and energy always remains unchanged. 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, meaning the ability to continue performing work, would be inevitable.

However, each time energy is used to perform work, some of its *usefulness* is lost. Once energy is used, before it can be used again, it must be reconcentrated, reorganized, and restored; and 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. 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] The desolate surfaces of the Moon and Mars are systems as close to entropy as most of us have seen.

Since this loss of useful energy is inevitable, it might seem that sustainability is impossible. No matter how much we reduce our use of energy, recycle once-used energy, or reuse once-wasted energy, the usefulness of all existing energy eventually will be lost to entropy. In fact, life on earth would not be sustainable without the daily inflow of solar energy. Sustainability ultimately depends upon using solar energy to offset the usefulness of energy lost to entropy.

So what does all of this have to do with sustainability of the food system? Our industrial food system is not sustainable because it uses and reuses both natural and human energy, but does nothing to offset the inevitable loss of usefulness of energy to entropy. That's why industrial systems are so efficient. They do not waste energy replacing depleted energy; they simply find new sources of energy to exploit. Industrial farms don't use the energy from the sun to restore the productivity of the land, they transform solar energy to crops and livestock that are sold off the farm and used up elsewhere. In fact, our industrial food system uses about 17% of the total fossil fuels used in the U.S., in addition to all of the solar energy collected by the leaves of agricultural crops.[2] Our industrial food system is inherently dependent on a nonrenewable, unsustainable source of energy.

The capitalistic markets, which drive our industrial systems, reward investments in means of extraction and exploitation but provide no incentive for investments in regeneration or renewal of resources for the benefit of future generations. All economic rewards accrue to individuals during the lifetime of the workers, managers, or investors. It makes no economic sense to invest for the benefit of some unknown someone at some time in the future. Because it is so efficient in extracting and exploiting, our industrial food system actually accelerates the natural tendency toward entropy.

The law of entropy applies to social energy as well as physical energy, which is less widely understood but no less important. All human resources – labor, management, innovation, creativity – are products of social relationships. No person can be born, reach maturity, and become a productive worker or citizen without the help of other people who care about them *personally*, including their families, friends, neighbors, and communities. All organizations, including farms and food businesses, depend on the ability of people to work together for a common purpose, which depends upon the civility of the society in which they were raised.

Industrialization inevitably disperses and disorganizes *social* energy because it weakens personal relationships. Maximum economic efficiency requires that people relate to each other *impartially*, meaning *impersonally*. People must compete rather than cooperate, if market economies are to work efficiently. When family members work away from home to increase their productivity, they have less time and energy to spend together, and personal relationships are threatened. When people choose to save money shopping in another town rather than buying from local merchants, personal relationships among community members suffer from neglect.

As in the case of physical energy, there are no *economic* incentives for industrialists to invest in renewing or restoring energy by promoting personal relationships within families or communities for the long run benefit of society. So-called "social responsibility" programs of industrial organizations are nothing more than public relations strategies for reducing social and political restraints on their continued exploitation. It makes no economic sense to invest in the sociability and civility of society if the rewards will be realized by some future generation. So industrialization inevitably devalues personal relationships, disconnects people, and thus dissipates social energy, accelerating the natural tendency 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. Economies actually *produce* nothing; they simply transform physical energy and social energy into forms that 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." Our industrial food system extracts its economic capital from the land and from society; it uses up the fertility of farmland and the productivity of people. And when all of the physical and social energy have been extracted and exploited, the industrial food system will have nothing left to support it economically. The industrial food system inevitably accelerates the trend toward economic entropy – it is not sustainable.

We see the ecological consequences of industrialization in the depletion of the natural productivity of soils and pollution of the streams and groundwater of rural areas. We also see the consequences in a food system that uses ten kcals of fossil energy for every calorie of food energy it produces.[3] We see the social consequences of industrialization in rural areas that are decimated by the loss of family farms and in the food system where farmers, farm workers, and food industry workers are underpaid and overworked with few if any fringe benefits.[4]

We see the consequences of economic industrialism all around the world in growing public concerns about global warming, depletion of fossil energy, and even in wars obviously related to the control of scarce energy resources. In American society, we see the consequences of industrialization in increasing incivility, confrontations, and civil lawsuits, in drug abuse, violent crimes, and overflowing prisons, and in growing economic inequities between the rich and the poor. We see the personal consequences in growing incidences of mental stress, physical malaise, clinical depression, and even suicides.[5] Industrial economic development is accelerating the tendency toward ecological, social, and economic entropy – it is not sustainable.

In its most basic sense, sustainability can be defined as the continuing ability to do *work* – the ability to continue being *useful* indefinitely. This definition is completely consistent with the

more common definition of sustainability as the ability to meet the needs of all in the present, while leaving equal or better opportunities for those of the future. All economic capital, from which all economic benefits are derived, comes from nature and society. Thus, the sustainability of economic capital depends upon the continual renewal and regeneration of natural and social capital. Sustainability requires ecological integrity, social responsibility, and economic viability. Lacking any one of the three, sustainability is not possible.

A sustainable food system obviously must be fundamentally different from the current industrial food system of today. Sustainable systems must be based on the paradigm or model of living systems. Living things are self-making, self-renewing, reproductive, and regenerative.[6] Living systems use energy but they also continually reinvest energy in renewal and regeneration. Living plants have the natural capacity to capture, organize, and store solar energy, both to support other living organisms and to offset the energy inevitably lost to entropy. Living things also have a natural propensity to be reproductive as well as productive.

Luckily, the paradigm of living systems is not difficult to understand because we humans are one – our bodies are living organisms and we are members of living communities. For example, we know that humans devote large amounts of time and energy to raising families, with very little economic incentive to do so. Living things do not require any external motivation for regeneration. Obviously, an individual life is not sustainable because every living thing eventually dies. But, communities and societies of living individuals clearly have both the capacity and natural propensity to be productive while devoting a significant part of their life's energy to conceiving and nurturing the next generation. Living systems capture, concentrate, and store energy; by their nature, they tend toward greater diversity of structure, pattern, and organization – away from entropy.

Living organizations and industrial organizations are fundamentally different in their purpose and in the principles that guide their functioning. The purpose of industrialization is productivity. Industrial organizations specialize, standardize, and consolidate control to achieve their purpose of productivity. In capitalistic societies, industrial organizations are motivated by the pursuit of profits and growth. In competitive free-market economies, profits are a consequence of increased productivity, and consolidation of control, resulting in economic growth, increases the potential for both productivity and profits. Even in situations where growth results in no increase in productivity, consolidation yields market power, which increases the potential for profits. The purpose of industrialization is productivity and industrial organizations are driven by the principles of profits and growth.

The purpose of living organizations is permanence, which requires both productivity and regeneration. Communities of living organisms are *designed by nature* to be productive and regenerative; it's encoded in their DNA. We humans, however, are unique among species in that we have the capacity and the inclination to choose with whom and for what purposes we associate with other humans. Thus, the purpose of human organizations – communities, societies, and economies – must be intentionally encoded in the principles of the organizations. When human organizations *choose* to function as living systems, they have both the capacity and natural tendency to be productive as well as regenerative – they have the natural proclivity for permanence. But for human organizations, sustainable is a choice, not predestined.

The basic principles of sustainability are ecological, social, and economic integrity. These principles are encoded both in "Natural Law" and in the "Laws of Nature," which define the *rightness* of relationships among humans and between humans and their natural environment. "Laws of nature are the 'principles' which govern the natural phenomena of the world. That is, the natural world 'obeys' the Laws of Nature."[7] Philosophers refer to this as Necessitarian Theory, in that such principles are considered to be necessary for nature to fulfill its purpose. Others define the Laws of Nature as statements or descriptions of the regularities in the world; the way the world works, period, denying any purpose for the principles of nature. Regardless, the Laws of Nature are inviolable principles, which cannot be changed and have inevitable consequences in relationships between humans and their natural environment.

Principles of relationships among humans are called Natural Law rather than Laws of Nature. Natural Laws include ethical and moral principles, which determine whether human thoughts and actions are right or wrong, or good or bad.[8] The principles of Natural Law are variously attributed to the basic nature of human beings, to God or some other supreme being, or to the nature of the cosmos and the place of humans within it.[9] Regardless, such principles exist independently of any given religion, culture, society, or political order. Principles of Natural Law are expressed in such historic documents as the Magna Carta and American Declaration of Independence, where certain rights are described as being *inherent* or *self-evident*. Natural Laws are the common sense of people regarding *rightness* in relationships and apply to all people of all times.

The principles needed to guide human organizations toward permanence can be derived from the ecological, social, and economic principles that must guide sustainable living ecosystems, societies, and economics. These principles include both Laws of Nature and Natural Law. These same principles are necessary for a sustainable food system.

The first principle of ecology is "everything is interconnected." From this, we can derive the guiding principles for healthy natural *ecosystems*: holism, diversity, and interdependence. Living organisms and ecosystems are inherently holistic; they cannot be dissected into their individual parts or processes without destroying their essence – their life. The ecological whole is always something more than the simple sum of its parts, relationships among the parts matter. Thus, a sustainable food system must be managed holistically. Farmers and other food system participants must have a clear sense of the essence of the system as a whole, if they are to be able to manage their particular parts – their practices, methods, processes, and enterprises – so as to sustain the system as an ecological whole.

Biological diversity, across both space and time, is essential in sustaining all living systems. Diversity is necessary for renewal of structures, resistance to stresses, resilience to recover, regeneration of species, and evolution to accommodate ever-changing environments. Thus, sustainable farming systems must rely on a diversity of soil microorganisms, crops, livestock, and ecological processes, and sustainable food systems must rely on a diversity of physical structures, organizations, and processes. When a food system loses its diversity of patterns, structures, organizations, as happens with industrialization, the system inevitably tends toward entropy – it is not sustainable

Interdependent relationships are necessary to transform the potentials of holism and diversity into positive ecological reality. Diverse cells, organs, organisms, communities, and ecosystems – diverse wholes – are defined by selective boundaries. These boundaries, whether in cell membranes, connective tissue, or natural topography must be semi-permeable or selective in nature to ensure mutually beneficial relationships among the diverse entities within ecological wholes. Thus, relationships among the diverse entities on sustainable farms and within a sustainable food system likewise must be selective, reflecting neither isolation nor complete openness. In farming, diversity and holism alone are not sufficient; relationships among soils, crops, plants, animals, and people must be interdependent or mutually beneficial, if the farm as a whole is to be sustainable.

The guiding principles for healthy human relationships include trust, kindness, and courage. These basic social principles reflect core values, which transcend religion, philosophy, race, nation, and culture. Different groups of people obviously have different values, but a select group of *core values* is held in common to all groups. The Institute for Global Ethics, for example, has conducted surveys, interviews, and focus groups with diverse groups of people around the world, asking, "What do you think are the core moral and ethical values held in the highest regard in your community?"[10] Responses varied widely, as would be expected, but five values consistently ranked high in virtually every inquiry: honesty, fairness, responsibility, compassion, and respect.

The core values of honesty, fairness, and responsibility, together define the principle of trust or trustworthiness. People trust people that they believe to be honest and truthful, fair and impartial, and responsible and dependable. As relationships grow in trust, they grow stronger – they build social energy or social capital. When trust is diminished, the relationship grows weaker – social energy or social capital is depleted. When social capital is depleted, relationships are no longer sustainable. Thus, a sustainable food system must be built upon relationships of trust and trustworthiness among and between farmers, food processors and distributors, and food consumers. When trusts are violated, the system will become more vulnerable, and when trusts are validated, the system will become more sustainable.

The core values of respect and compassion, along with empathy, define the principle of kindness. People act with kindness when they are empathetic, when they are able to see themselves in the place of others, and then, to treat the other as they would like to be treated. Kindness is rooted in respect – respecting others, as they would like to be respected by others. Kindness goes beyond impartiality, responsibility, and *brutal* honesty, showing compassion whenever mercy is deemed more appropriate than is justice. Thus, a sustainable food system must reflect a sense of caring and kindness, which is necessary to maintain social relationships, but is uncommon in business relationships today. Trustworthiness is little more than a characteristic of good businesspeople; sustainability requires that we be good people.

Trust and kindness, however, accomplish little without the courage to take action. The social principle of courage is built upon the core values of self-confidence, discipline, and perseverance. It takes courage to form meaningful relationships with other people and to stay committed through times of inevitable misunderstanding and disappointment. People of courage

have confidence in themselves, a commitment to their purpose, and the discipline and perseverance to live by the principles that must guide them toward their purpose. The people within a sustainable food system must find the courage to reject the deception, inequity, irresponsibility, ruthlessness, and disrespect that characterizes today's industrial food system. Many Americans today are longing for and actively seeking relationships of trust and kindness, but it takes courage to be trustworthy and caring. A sustainable food system must be built upon a foundation of *moral* courage.[11]

The principles that must guide successful economic activities include value, productivity, and sovereignty. Economic value is determined by scarcity, meaning the quantity of something that is available, relative to how much of something else people are willing and able to give up to get it. Economic value differs from intrinsic value in that the economy may place little value on things of great intrinsic value, such as sunsets or friendships. Some of the best things in life are free and others are priceless. Money is a common measure of scarcity, because money can be traded for many different things. If people can get all they want of something without buying it, it isn't scarce, and thus, has no economic value. A sustainable food system produces things of great direct ecological and social value, but it also must produce things that are scarce – things that have economic value. If farmers and other food system participants are to thrive economically, they must provide foods, and related ecological and social benefits, for which people are willing and able to pay a profitable price.

Economic productivity is the creation of economic value. Production results from the combination of different productive resources, the most basic of which are land, labor, capital, and management. So productivity, like value, is a matter of choices – choosing how much of which resources to use in the production process. The more effective the allocation of resources, the more productive will be the process. Thus, a sustainable food system must make productive use of land, people, intellect, energy, and money; it must effectively allocate scarce resources among alternative uses. Farmers and others in the food industry must use their land, time, efforts, and intellect wisely if they expect to be economically sustainable.

The economic principle of sovereignty receives less attention than value and productivity, but is no less important. Without sovereignty, without the freedom to choose, a market economy cannot function effectively. Buyers must have adequate information about alternative choices, and must be free of coercion or persuasion. Producers must have access to markets, without unnecessary requirements or intimidation. When choices are restricted, when people are not free to choose, market economies simply cannot function effectively, not even for the material well-being of society. All participants in a sustainable food system must be sovereign – they must be free to choose sustainability.

A sustainable food system must have integrity. Integrity suggests wholeness, completeness, strength, and soundness. Sustainability requires ecological, social, and economic integrity, not only within ecosystems, communities, and businesses, but also among ecosystems, communities, and businesses. The same basic principles must permeate all aspects of a sustainable food system.

With regard to ecosystems, relationships between participants and their natural environment must reflect a sense of trust and kindness toward other people, including those of future generations. And the economic principles of value, productivity, and sovereignty are equally important in creating benefits of direct ecological value, such as landscapes, wildlife habitat, and privacy. With regard to communities, relationships among diverse people within communities must be interdependent, benefiting the community as a whole. And the economic principles of scarcity, allocation of time and energy, and freedom to choose are just as important in sustaining personal relationships as in creating economic value. With regard to businesses, sustainable businesses must be managed holistically to maintain diversity and mutually beneficial relationships. And those who sustain economic relationships must find the courage to be trustworthy and kind in their dealings with others. These same ecological, social, and economic principles must permeate all aspects of a sustainable food system.

Americans by the millions are rejecting the industrial food system today because it is lacking in ecological, social, and economic integrity. The tremendous growth in markets for organic and locally grown foods today is direct reflection of the scarcity or lack of integrity in the industrial food system. American consumers are losing confidence in the industrial food system; they want to buy foods with ecological and social integrity, and many are willing to pay the full economic costs of ecological and social sustainability. Things that are scarce have economic value. There is no scarcity of competitiveness, assertiveness, or cunning in America today. Many American consumers today are willing to pay the economic cost of integrity.

The final ingredient in a sustainable food system is people. The people aspects of sustainability transcend ecology, society, and economics. As people, we are unique among species in our abilities to make conscious, purposeful choices. We can choose to accept or reject our purpose for being, even though we can't change it. We also have the unique ability to know the difference between good and evil. Other species do what they do by nature, not by choice. They can do no evil, because they have no knowledge of good and evil, but we humans do.

As people, we have an innate sense the *rightness* of our relationships with the other things of the earth and with each other, regardless of whether we are willing to reflect that sense in our thoughts or actions. As people, we understand the principles that should guide all aspects of our lives, and thus must also guide us toward the purpose of permanence or sustainability. The most fundamental of these timeless principles are faith, love, and hope.

Faith is the ability to believe in something that cannot be proven. We accept certain propositions by faith simply because we know in our heart, mind, and soul they are true. It is only by faith, for example, that we know that our life has purpose and meaning. We can't prove it, but we know it is true. Lacking purpose, it would make no difference what we do or don't do, anything would as good as anything else, or nothing at all. Without purpose in life, there would be no reason to get out of bed in the morning, but again there would be no reason not to. Without purpose, life would be meaningless. Without purpose, life simply makes no sense.

Most people probably never question whether life has purpose, but scientists do. “Scientific materialism,” which dominates modern scientific thought, “asserts that all events are due to the interaction of matter and motion, acting by blind necessity in accordance with those invariable

sequences to which we have given the name laws." [12] To the scientist, human life is nothing more than a thoughtless interaction of motion and matter, lacking in any sense of human intellect, self-will, and feelings, insofar as these things are supposed to be different from material processes.

In the science that has driven our system of economic industrialization, there is no place for faith, and thus, no place for purpose. There is no admission that people can willfully choose the ethical and social purpose of permanence over the blind acceptance of economic, materialistic productivity. Thus, to create a sustainable food system we must reject the science of materialism and embrace the common sense of people of faith.

People of faith also have the uniquely human capacity to love and to be loved. Love is the belief, without proof, in the basic goodness of a thing. We typically think of love as existing between two humans, but a person can love an animal or even a mechanical object, a car or a dress, if they believe in the inherent goodness of the thing. Love between two people is special because the love of am inanimate thing cannot be returned. Love is based more on emotion than on reason. Love affairs blind the lovers, at least temporarily, to each other's faults. But even mature love requires no compelling evidence to support it and does not easily accept evidence against it. True love is a matter of faith.

Our belief in the goodness of life – our love of life – likewise is a matter of faith. We know that life is good. Otherwise, it would not necessarily be good that we live rather than die or that anyone else or anything else live rather than die, and thus, it would not necessarily be good that life on earth continue or end. We know that no individual life lasts forever; all living things eventually die. But we know also that when the purpose of a life has been fulfilled, the goodness of that life has been fulfilled, and with no further purpose, death is but a good end to life. But, we accept by faith that the continuation of life on earth is good, even after our individual life has ended.

Our love of life is not limited in scope to those we love personally or even to other people. To love life is to love the whole of life, because we are all part of the same web of life – the same creation. We are all made and remade of the same molecules, the same matter, the same energy; we are all related and interconnected by the life processes, at the most basic level. The purposes of all living things are interrelated with the purposes of other living things; and part of the purpose of all life is to conceive and to nurture new life.

The love of life – of family, friends, people we don't know, of all life – is a fundamental principle of sustainability. Without a love of life, there is no sense of ecological, social, or economic responsibility for those who will live on earth at some distant time in the future. Without love of life, the purpose of permanence, of sustainability, makes no sense. To create a sustainable food system, we must find the courage to reflect our love for others and our love of life in all of our thoughts and actions.

The final principle of sustainability is hope. In defining hope, I defer to a quote from Vaclav Havel – philosopher, reformer, and former president of the Czech Republic.

Hope is not the same as joy when things are going well, or willingness to invest in enterprises that are obviously headed for early success, but rather an ability to work for something to succeed. Hope is definitely not the same thing as optimism. It's not the conviction that something will turn out well, but the certainty that something makes sense, regardless of how it turns out. It is this hope, above all, that gives us strength to live and to continually try new things, even in conditions that seem hopeless. Life is too precious to permit its devaluation by living pointlessly, emptily, without meaning, without love and, finally, without hope.[13]

The key ingredients in a sustainable food system are purpose, principles, and people. The purpose of sustainability is the purpose of permanence, of both productivity and regeneration. The purpose of permanence must permeate our thoughts, our words, and our actions as we help create a new sustainable food system. The principles of ecological, social, and economic integrity – holism, diversity, and interdependence; trust, kindness, and courage; value, productivity, and sovereignty must guide our path to permanence. As we work toward a new sustainable food system, these principles must guide our relationships with the earth and our relationship with each other in everything we think, say, or do.

The new sustainable food system will be made up a wide diversity of distinctively different farms and farmers, and different kinds of food processors, distributors, retailers, and food systems workers. It will be a diverse network of regional and local community-based food systems held together by relationships of integrity within communities and linked with other community-based systems by relationships of integrity. The principles of ecological, social, and economic integrity will ensure the *rightness* of relationships – will ensure its sustainability.

The people who create this new sustainable food system will be people of faith, love, and hope. They will be people who believe that life has purpose – who understand that it matters what they think, say, and do. They will be people who believe in basic goodness of life – who love other people, who love life, and are committed to sustaining the usefulness and goodness of life on earth, for the benefit of all generations.

The people who create this new sustainable food system will be people of hope. Even if they know the odds are against them, even if they know the road will be difficult and fraught with difficulties and disappointments, they will know that the purpose and principles of sustainability make sense, regardless of what they have been able to achieve. In this, they will find hope. They will know they must continue to try new things, even when the situation otherwise would seem hopeless. They will know that something good is possible. In this, these people of purpose and principle will find hope.

We here tonight are numbered among those people of faith, love, and hope. Regardless of how much we may or may not be able to accomplish in our lifetime, we know that our lives simply would not make sense if we had no purpose to pursue and no principles to guide us. Our lives are simply too precious to live without faith, without love, and finally, without hope.

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] David and Marcia Pimentel, *Food, Energy, and Society* (Niwot, CO: University Press of Colorado), 1996.
[3] Pimentel, *Food, Energy, and Society*.
[4] Eric Schlosser, *Fast Food Nation*, (New York: Houghton Mifflin Company, 2001).
[5] Robert Putnam, *Bowling Along: The Collapse and Revival of American Community* (New York: Simon and Schuster, 2000).
[6] For a more in depth discussion of living systems, see Ikerd, *Sustainable Capitalism*, Chapter 5.
[7] *The Internet Encyclopedia of Philosophy*, "Laws of Nature," <http://www.iep.utm.edu/l/lawofnat.htm#H1>.
[8] William Hamilton, *Essays in Edinburgh Review*, (Edinburgh: Edinburgh Review, 1829), 32.
[9] *Wikipedia*, "Natural Law," <http://en.wikipedia.org/wiki/Natural_law>
[10] Rushworth M. Kidder, *Moral Courage* (New York: William Morrow, HarperCollins Publishers, 2005), 43.
[11] Kidder, *Moral Courage*.
[12] Hugh Elliott, "Materialism," in *Readings in Philosophy*, eds. John Herman Randall, Jr., Jestus Buchler, and Evelyn Shirk (New York Harper and Row, Publishers, Inc., 1972), 307.
[13] Vaclav Havel.1990. *Disturbing the Peace* (New York: Random House inc.), chapter 5.