

## **The Real Economics of Sustainability<sup>1</sup> Implications for Campus Grounds Managers**

John Ikerd<sup>2</sup>

I appreciate the opportunity to meet with this distinguished group of professional grounds managers. Most of my speaking opportunities are with groups who are interested in sustainable agriculture. While different in many respects, grounds managers and farmers are alike in that both are “caretakers of the earth.” Both are responsible for the health and sustainability of the natural ecosystems upon which the long-run sustainability of humanity ultimately depends. I am not an expert in grounds management or even in the biophysical aspect of farming. I am an agricultural economist. I am far better versed in economic threats to the sustainability of human life on earth than in specific means and methods of caring for the earth that ultimately supports human life. As an economist, I have come to the conclusion that the greatest threat to sustainability is the current global obsession with income, wealth, and economic growth.

We Americans, for example, seem to be willing to sacrifice almost anything in the pursuit of ever-greater incomes and wealth, including the overall well-being of society and the future of humanity. The first questions we seem to ask, and the only answers we seem willing to accept, are those that relate to economic costs and benefits. Everything seems to boil down to a matter of economics. If something is quick, convenient, and cheap, we want it. If we have to invest a good bit of time, effort, and money to get it, we aren't all that interested. I see this tendency in so-called modern farming, and I suspect it is true in grounds management as well. How much is it going to cost, how much work is involved, and how long will it take? All else is secondary.

Furthermore, I suspect grounds management, like virtually everything else we do, is dominated by the industrial approach to decision making; Specialization, standardization, and consolidation of control. These are the means of choice for saving time, effort, and money. When each person specializes in doing fewer things, they can do things quicker and easier, meaning more efficiently. However, the specialized activities have to be standardized so they will fit together to produce something of value, as with the various stages of assembly-line production. These standardized functions can be routinized and mechanized, reducing costs of labor and management. Specialization and standardization also simplify management processes, allowing consolidation of control and the “economies of scale” or efficiencies of large-scale operations.

We see this industrial approach to management in the corporate world; we see it in government; we see it in our communities; we see it in farming, and I am confident you see it in professional grounds management. We specialize, standardize, and centralize management functions to increase economic efficiency. However, while industrialization increases short-run

---

<sup>1</sup> Prepared for presentation at the *School of Grounds Management & GEI+Expo*, sponsored by the Professional Grounds Management Society, Louisville, KY. October 24, 2013.

<sup>2</sup> John Ikerd is Professor Emeritus, University of Missouri, Columbia, MO – USA; Author of, *The Essentials of Economic Sustainability and Sustainable Capitalism*, <http://www.kpbooks.com>, *A Return to Common Sense*, <http://Amazon.com>, *Small Farms are Real Farms*, Acres USA, <http://www.acresusa.com/other/contact.htm>, *Crisis and Opportunity: Sustainability in American Agriculture*, University of Nebraska Press <http://nebraskapress.unl.edu>; and *A Revolution of the Middle and the Pursuit of Happiness*, <http://sites.google.com/site/revolutionofthemiddle/>; Email: [JEIkerd@gmail.com](mailto:JEIkerd@gmail.com); Website: <http://faculty.missouri.edu/ikerdj/> or <http://www.johnikerd.com>.

economic efficiency, it threatens long-run ecological, social, and even economic, sustainability. Sustainability is a matter first of changing ways of thinking and then changing management policies or practices to reflect the new better ways of thinking needed for long-run sustainability.

Sustainability is the ability to meet the needs of the present without diminishing opportunities for the future. *The Professional Grounds Management Society* (PGMS) has clearly expressed its commitment to supporting sustainable approaches to professional grounds management. Its stated long-term goal: “PGMS will be recognized by the green industry, customers and stakeholders as the authority and the ‘go to’ resource on sustainability issues and grounds management.”<sup>vi</sup> I understand that the PGMS includes members representing commercial enterprises, such as golf courses and landscaping businesses, as well those representing public institutions. I will focus my specific remarks on sustainable grounds management for public institutions, specifically on college campuses. Having retired from a 30-years career at four different major state universities, I have some first-hand knowledge in this arena.

As with sustainable agriculture and sustainability in general, there probably as many different perspectives on sustainable grounds management as there are grounds managers. The University of Delaware defines “sustainable landscapes as those that create an attractive environment in balance with the local climate and require minimal resource inputs such as fertilizer, pesticides, fossil fuel consumption and supplied water.”<sup>vii</sup> The Association for Advancement of Sustainability in Higher Education (AASHE) states: “Aesthetically appealing and welcoming campus grounds can be planned, planted, and maintained in any region while minimizing the use of toxic chemicals, protecting wildlife habitat, and conserving water and resources.”<sup>viii</sup> As in many other definitions of sustainability, we see an emphasis on minimizing use of pesticides, fertilizers, and irrigation water, all of which are costly economically as well as threatening ecologically to the natural environment.

Macalester College in Minneapolis, MN takes a more holistic approach: “Sustainability as related to landscapes is based on the natural dynamics of ecosystems. It incorporates the efficiency and complexity of nature into human landscapes. Nature has it figured out—a complex of closed loops (cycles) have evolved that recycle resources and conserve energy.” Among these are the energy cycle, carbon cycle, the nitrogen cycle and the hydrologic cycle, and there are many others. “The art of establishing and maintaining sustainable landscapes is to make efficient use of these natural cycles on campus while at the same time meeting cultural expectations of ‘campus’ aesthetic.”<sup>ix</sup>

According to Eastern Connecticut State University's *CT Green Schools* program: “The management of campus grounds is an opportunity for sustainable development on the campus. A campus can help sustain the integrity of the local ecosystem through proper land management practices.”<sup>x</sup> Campuses contribute to communities, communities contribute to societies, and societies contribute to the sustainability of life on earth.

The *CT Green Schools* program suggests that grounds managers: *Redefine Campus Beauty*: Traditional definitions of what makes a beautiful campus, such as manicured lawns, need to be redefined to consistent with a more sustainable lifestyle. *Reduce Lawn Areas*: Where possible; plant trees and gardens with indigenous species which require less water and less maintenance.

Forests and groves also are more effective carbon sheds while requiring less care. *Protect Wetlands, Wildlife, and Watershed*: Your campus must be designed to protect wildlife, wetlands and the watersheds by avoiding the use synthetic fertilizers, pesticides, and other agro-chemicals. *Protect Trees*: Make sure there are a sufficient number of trees on your campus to beautify it, sequester carbon, and provide shade. *Plant Native Species*: These species require less chemical fertilizers and irrigation and do not interfere with local ecosystems thus promoting biodiversity. *Allow Natural Walkways to Evolve*: Pave paths after they are already laid out by foot traffic, rather than paving walkways in advance, to minimize wasted materials and labor. Sustainable grounds management is not a simple matter of reducing the use of agrochemicals and water.

Everyone attending this conference could probably add some important sustainability initiatives to this list. As an economist, I want to focus the rest of my remarks on the fact that all of these and other campus sustainability initiatives have economic costs as well as potential benefits. Furthermore, we can't allow the economic costs and benefits take priority over the ecological and social costs and benefits if we are to manage grounds for sustainability. As stated previously, sustainability is about meeting the needs of the present without diminishing opportunities for the future. Thus, colleges and universities that are serious about sustainability must manage their campus grounds so as to protect the health and overall well-being of their students, employees, and members of college communities while maintaining the ecological integrity of their campus grounds, their parts of the earth, for the benefit of future generations.

A general perception persists that if something is more sustainable it must also be less costly or otherwise more economically efficient. This suggests that if colleges were better informed about the economic returns of investments in grounds management, they would naturally choose more sustainability alternatives because sustainable grounds management is less costly or more economical. After all, virtually every major corporation in the U.S. has a “socially responsible” or sustainability program that is based on this premise. This misperception is even prevalent and persistent among many prominent advocates of sustainability. They believe the economic incentives are adequate to ensure sustainability, or at least would be adequate if people were better informed about the economic costs and benefits of their decisions.

Such beliefs have some basis in truth. First, there are situations where costs of sustainable practices are in fact less, as in elimination of over-application of fertilizers, pesticides, or water. Many “recommended” rates of application of pesticides and fertilizers are excessive and wasteful as well as threatening to the natural environment and public health. The same is true of routine irrigation and “recreational mowing” of campus lawns. Switching from exotic to native plant species for ground cover and landscaping, for example, can also reduce costs of pest management, fertilization, and maintenance. So in many cases there are opportunities to reduce grounds maintenance costs by linking sustainable practices with “better grounds management.” This is the “low-hanging fruit” of sustainability that is quick and easy to pick.

Second, and in a broader sense, it would be more economical in the “long run” to protect, renew, and regenerate healthy natural ecosystems than to allow them to become depleted, degraded, or destroyed. Everything of use to us, including everything of economic value, is ultimately derived from nature. There is no place to get anything other than from the natural resources of the earth. Once we move beyond self-sufficiency, we become dependent also on

society to help us transform the things of nature into things that have economic value. It also takes resources from the earth to sustain the people who sustain the economy. Thus, the resources of the earth – meaning soil, air, water, energy – ultimately must sustain the economy as well as society and humanity. The fundamental problem is that economic value is inherently short-run in that it gives a priority to the present over the future.

The promise of receiving a smaller economic return next week or next month is often far more valuable than the promise of receiving a larger return deferred until next year or next decade. This is why many people willingly pay interest when they borrow money and others expect interest when they loan money. This is why investors give priority to investments that promise quicker returns over those for which returns will be deferred further into the future. At an interest rate of 7%, for example, a given amount of money ten-years in the future is worth only half as much as the same amount of money today... because money invested at a compounded interest rate of 7% will double in value in ten-years. With respect to the economics of investing for “long run” economic sustainability, a given economic benefit or cost expected 100-years in the future has less than 1/1000<sup>th</sup> as much economic value as the same amount of money received today.

Obviously, economic investments made to ensure economic productivity of nature and society for the benefit of future generations cannot compete successfully with investments promising positive economic returns next week, next year, or even next decade. In addition, with increasing budget pressures, many university administrators are beginning to think more like corporate executives, in fact, in some cases may be former corporate executives. At a typical corporate rate of return of 15%, values of investments double every five years, which discounts expected future costs and returns even more severely. This is why many corporate and campus planning horizons extend only five-to-seven years into the future. Anything beyond that is of little economic consequence. Sustainability is fundamentally incompatible with this short-run corporate economic mentality.

Products and services have economic value only if they are scarce, meaning there is not enough available for everyone to have all they want without giving up something else. Many resources essential to life, such as air and water, have little or no economic value because they are not scarce. Admittedly, as the resources of nature – minerals, water, air, energy – become depleted or degraded, they become *scarcer* and thus more economically valuable. As a result, the amount of “low hanging fruit” will increase over time and scarcity increases the economic value environmental protection and resource conservation. However, things of nature often become “ecologically and socially scarce” long before they become economically scarce. The best current example perhaps is global climate change. By the time protecting the global climate becomes a “good economic decision” it may well be too late to reverse the ecological process. Likewise, if we wait for the degradation of civil society through economic inequity to become economically valuable, by that time society may lack the collective civil capacity to restore itself.

Consequently, to ensure sustainability on college campuses, in communities, or in society in general, we must be willing to make investments that are purely social or ethical in nature, this means investments that will return nothing of economic value – only social and ethical value. There is simply nothing of economic value to be gained in doing anything for the sole benefit of

someone else or for society as a whole and certainly not for the benefit of future generations. Sustainability is about intergenerational equity: Meeting the needs of both present and future generations. The needs of future generations can never be given anything approaching equal consideration when decisions are based solely, or even primarily, on economics. If we are to create sustainable campuses, communities, and economies we must make social and ethical investments for the good of society and nature. This is the *economic reality* of sustainability.

So what does the “real economics of sustainability” mean for grounds management? First sustainable grounds management is not just a matter of reducing costs through strategies such as reducing costly inputs, conserving water, or switching to native plants. A sustainable college campus is still a “managed landscape,” in much the way as a sustainable farm is a “managed agro-ecosystem.” Sustainable management does not mean letting nature take its course or letting campus ecosystems return to the wild any more than sustainable farming means returning to hunting and gathering. Sustainable campuses are still meant to serve functions that are of specific benefit to the students, employees, and communities they serve, which will require more labor and management to offset the reduction in commercial inputs. Sustainability is more a matter of substituting labor and management for inputs and infrastructure rather than eliminating ground maintenance functions.

I suspect most grounds management programs on college campuses are not sustainable because they give economic efficiency priority over ecological and social integrity. Even if they function under campus mission statements that commit them to higher social and ethical values, most probably still minimize the economic costs of carrying out “non-academic” functions, such as food service and grounds management. As a result, they end up adopting the industrial approach to grounds management. Healthy natural ecosystems are holistic, diverse, and interdependent rather than specialized, standardized, and hierarchically controlled. Sustainable grounds management must respect the nature of healthy natural ecosystems while still meeting the needs of the human communities that depend on these managed ecosystems for their well-being.

Industrial management systems gain their efficiencies by allowing fewer, lower-skilled workers and fewer managers produce more goods or provide more services. Thus, moving to sustainable grounds management systems ultimately will require more, higher-skilled workers and more knowledgeable grounds managers. As with sustainable farming, the level of knowledge of natural ecosystems required to work in harmony with nature – working with carbon cycles, nitrogen cycles and hydrologic cycles – is far greater than the routine training required to master methods of trying to conquer nature with pesticides, fertilizers, and irrigation. In addition, thoughtful, caring, workers and managers will be needed to make the personal and ethical investments necessary to create and sustain a sustainable grounds management system.

Ultimately, sustainable grounds management will require that college administrators, financial supporters, grounds managers, and grounds workers all realign their priorities, giving priority to their ethical responsibilities to those of the future and social responsibility to their students and communities over things that are simply quick, convenient, and cheap. We must all be willing to make essential investments of time, energy, and money in things that have no economic value but still are essential to the well-being of society and the future of humanity.

Certainly, we must continue to function efficiently meet our basic economic needs. But, we simply cannot afford to continue giving priority to the economy over society and humanity. This is the economic reality of sustainability.

That said, sustainability is not a sacrifice but instead is an opportunity. Once our basic material needs are met – food, clothing, shelter, health care, – we know that the quality of our life depends far more on the quality of our relationships – friends, family, community, society – than on the quantity of income or wealth. Our happiness also depends on our having a sense of purpose and meaning in life. Without purpose and meaning, there is no sense of rightness or goodness in what we do. Once our basic economic needs are met, the pursuit of happiness, well-being, or quality of life is about developing the social and ethical dimensions of life, rather than striving for more income or wealth. Sustainability gives us permission to be “fully human.”

As professional grounds managers you eventually will need to answer the question of whether you want to promote your sustainable grounds management program by meeting some set minimum sustainability standards of sustainability at the lowest economic cost, or instead by insisting that your grounds management program have ethical and social integrity. It may be easier to stay within your budget or justify a pay raise if you do the former, but you may have a far better quality of life if you do the latter. Would you really rather earn a few more dollars in your paycheck than earn the respect and admiration of your fellow workers, the students on your campus, and the community and society of which you are an integral part? Would you really rather have a bit more money at retirement or be able to look back on a life of purpose and meaning, know that you did your part in creating a better society and better future for humanity? Wouldn't you rather be able to tell your children that you are helping take care of the earth to help ensure a better future for them, their children, and their children's children?

Certainly, we have to work for a living and live within our economic means, which depends on the value of our contributions to the economy. But, we don't have to give economic well-being priority over the social and ethical dimensions of our quality of life. We need balance and harmony among ethical, social, and economic dimensions of life. It's time to awaken to a new economic reality: It is not a sacrifice to share with other people or to care for the earth. These things make our lives better. For most of us, the social and ethical values of sharing and caring will far outweigh any short run economic sacrifice. The real economics of sustainability is not about doing things that are quick, convenient, and cheap; it's about doing things that are worth the time, effort, and money.

## End Notes

---

<sup>i</sup> Professional Grounds Management Society, “Project Evergreen,” <http://projectevergreen.com/sustainability/PGMS-Sustainability-Platform/>

<sup>ii</sup> A Sustainable University of Delaware, “Sustainable Landscaping,” [http://www.udel.edu/sustainability/doing/doing\\_action\\_landscaping.html](http://www.udel.edu/sustainability/doing/doing_action_landscaping.html)

<sup>iii</sup> Association for the Advancement of Sustainability in Higher Education, “Resources for Sustainable Campus Ground Management,” <http://www.aashe.org/resources/grounds/>.

<sup>iv</sup> Macalester College, Sustainable Landscape Master Plan, “What is a sustainable landscape?,” <http://www.macalester.edu/sustainability/initiatives/sustainablelandscapeplan.pdf>

<sup>v</sup> CT Green Schools, “Campus Grounds and Land Use,” [http://www.easternct.edu/sustainenergy/green\\_schools/colleges\\_n\\_uni/12\\_steps/cu\\_step\\_10.html](http://www.easternct.edu/sustainenergy/green_schools/colleges_n_uni/12_steps/cu_step_10.html)