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Sustainability in the Balance: Issues in Sustainable Agriculture

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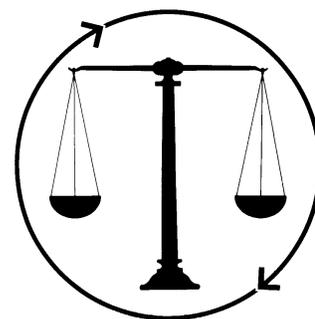
WHAT DO WE WANT TO SUSTAIN?

DEVELOPING A COMPREHENSIVE VISION OF SUSTAINABLE AGRICULTURE

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*Agroecology Program and the Focused Research Activity
in Agroecology and Sustainable Agriculture*

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Introduction

Only a few years ago sustainable agriculture was considered peripheral to conventional agriculture and its institutional framework. Today, however, sustainability programs and efforts have been initiated all over the world and sustainability has become a major theme of many groups, including local and national agricultural research institutions, farmer associations, policy makers, and nongovernmental citizens organizations. This institutionalization is manifest in a number of ways – new books and journals devoted to sustainability; sustainable agriculture research and education programs in many agricultural universities and governmental agencies; organic food laws and certification programs; legislative initiatives that mandate various changes toward sustainability; increased popular consciousness about food safety; and higher sales of organic produce.

Yet we shouldn't let this widespread progress convince us that it is time to close off discussion on the meaning of sustainable agriculture. Too many key questions remain at the core of the sustainability debate. The most fundamental of these is, "Who and what do we want to sustain?"¹ Those within the sustainability movement answer this and related questions differently, based on their various positions in the food and agriculture system. Currently, there are many diverse goals and ideas included in the term "sustainable agriculture."²

This diversity presents an opportunity. As a relatively new concept, sustainable agriculture does not yet reflect a coherent vision of what is possible and preferable in agricultural production and distribution. This emerging discourse on sustainable agriculture thus represents a chance for a fundamental paradigm shift in the way we think about food and agriculture and an opening to develop a comprehensive vision of sustainability. It is important to continue to discuss sustainability's meaning in this context because, "In adopting certain categories for social inquiry we also adopt a certain view of the social world, of its problem areas and of its fixed points, of the actions it makes available and ways in which their results are constrained."³ Thus, the language of sustainable agriculture has a direct effect on our form of practical response and action in sustainable agriculture. How we conceptualize sustainability today will determine the extent to which sustainable agriculture will differ from conventional agriculture in the future.

In this paper we consider ways to broaden how we conceive of sustainable agriculture. We begin by exploring dominant sustainable agriculture viewpoints in the U.S., looking at:

- problems addressed;
- causes for problems identified;
- vision of sustainable agriculture; and
- recommended sustainability strategies.

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We find there is contention over which sorts of problems can legitimately be called sustainability problems, and there are differing viewpoints on the causes of nonsustainable agriculture. There are disagreements over the vision of sustainable agriculture, primarily over who should be the beneficiaries of sustainability. And there is debate over which strategies and practices will be most effective for developing sustainable agriculture. After discussing these viewpoints we offer our ideas on how we can begin to reformulate sustainable agriculture.

Scope of Sustainability Problems

Sustainable agriculture arose as a critique of and an alternative to conventional agriculture. A focus on agricultural sustainability first emerged in the U.S. during the energy crisis of the 1970s as people began to recognize the petroleum dependence of industrialized agriculture. The movement grew in response to the farm crisis of the 1980s and an increasing awareness of agriculturally related environmental problems. The primary problems cited in dominant discourse on sustainable agriculture relate to these crises. “Notable among these problems are the contamination of the environment by pesticides, plant nutrients, and sediments; loss of soil and degradation of soil quality; vulnerability to shortages of nonrenewable resources, such as fossil energy; and most recently the low farm income resulting from depressed commodity prices in the face of high production costs.”⁴ Some would add concerns about pesticides’ effects on consumer and worker health and on wildlife as problems leading to demands for agricultural sustainability.⁵ In sustainable agricultural science, the main problem addressed is that of the environment and conservation’s role in maintaining profits: “There is a growing awareness about the need to adopt more sustainable and integrated systems of agricultural production that depend less on chemical and other energy-based inputs. Such systems can often maintain yields, lower the cost of inputs, increase farm profits, and reduce ecological problems.”⁶

While all sustainability advocates address the importance of preserving the environment and natural resources, social issues are less often cited as sustainability problems. For example, although many (but by no means all) sustainability advocates are

concerned with preserving family farms, the larger issue of systemic economic concentration in food and agriculture (including processors, distributors, manufacturers, and retailers) is rarely addressed. While the dominant discourse on sustainable agriculture raises important problems, there is a tendency to overlook issues such as hunger, poverty, gender subordination, and racial oppression – problems that also contribute to a lack of sustainability in food and agricultural systems. In general, we find that problems identified in dominant U.S. sustainability perspectives are usually framed without questioning the current economic and social structure within food and agriculture systems.

Causes of Nonsustainability

Although the United Nations Food and Agriculture Organization (FAO) explicitly recognizes the link between socioeconomic and agroecological problems,⁷ the causes of nonsustainable agriculture are often not discussed in scientific texts on sustainability. Family farm and food safety advocates do, however, provide explanations of the problems they identify. Wes Jackson, for example, criticizes corporate agriculture for the concomitant destruction of the environment and the family farm and blames the lack of an ecological approach for an agriculture characterized by soil loss, fossil fuel dependence, and heavy chemical use.⁸ Another advocate of family farms, Marty Strange, suggests that “the most serious environmental problems in agriculture are those caused by technologies that make large-scale farming possible, and that sever the rewards of farming from the rewards of stewardship and husbandry.”⁹ In the same tradition, Wendell Berry decries the industrialization and mechanization of corporate agriculture and asserts that the current U.S. agricultural system is unsustainable because of the continual attempt to get the highest possible production with the smallest number of workers.¹⁰ Particularly important for Berry is the erosion of cultural values associated with family farming, such as hard work, respect for place, respect for nature, and commitment to home and community. Food safety advocates cite the failure of government to adequately regulate pesticides¹¹ and lack of consumer awareness as primary causes of food contamination.

We wonder, though, if these causes cited for nonsustainability, such as corporate agriculture, inadequate government regulation, and loss of respect for nature, do not *themselves* need to be explained. Why has corporate agriculture superseded family farming? Why isn't an ecological approach standard in agricultural research? Why are environmental regulations insufficient or poorly enforced? In our view, there is a need to examine the relationship between the logic of current political economic structures and the causes of agricultural nonsustainability to find the answers to such questions. What role, for example, does the current mode of agricultural production, based on maximizing short-term profits and foreign exchange, play in causing agricultural problems? We must also examine the connection between nonsustainability and present power and decision-making structures at levels ranging from the individual farm to national policies. Who makes decisions in food and agriculture and who do they represent? Answering these types of questions will help us clarify the root causes of sustainability problems in agriculture.

Dominant Visions for Sustainable Agriculture

The general vision of scientists and activists for sustainable agriculture is one which reduces environmental degradation, preserves or restores the family farm, and removes contaminants from human consumption. For example, the goals of the California-based Committee for Sustainable Agriculture are: "To achieve a safe food supply and a cleaner environment . . . [so that] . . . family farms and rural communities may thrive, toxic byproducts be eliminated, and agricultural employees and consumers may be reassured about this major sector of their lives."¹² This vision is usually considered achievable within our current socioeconomic systems. For example, in the National Research Council's report on alternative agriculture, "alternative" refers to *biological* and *technological* alternatives, but does not address alternative *social* or *economic* arrangements.¹³ The authors state that, "Successful alternative farmers do what all good managers do – they apply management skills and information to reduce costs, improve efficiency, and maintain production levels." For organic food producers and distributors the vision is larger market

shares and profits necessary in order to participate in the agricultural industry under current economic conditions. Thus we find that the visions currently prominent in sustainability discourse are primarily concerned with techniques to achieve resource conservation, food safety, and profitability rather than including broader social visions. One sustainable agriculture leader stated, "The fundamental social responsibility of organic agriculture is improving the health of the soil. . . ."¹⁴

Those focused on the global context, however, present a broader vision of agricultural sustainability. One version of a universal definition for sustainable agriculture is "an agriculture that can evolve indefinitely toward greater human utility, greater efficiency of resource use, and a balance with the environment that is favorable both to humans and to most other species."¹⁵ The FAO of the United Nations states that "sustainable agriculture should involve the successful management of resources for agriculture to satisfy changing human needs while maintaining or enhancing the quality of the environment and conserving natural resources."⁷

Clearly, in envisioning a sustainable agriculture it makes all of the difference whether the goal is to sustain the current world economic order, an individual nation's agricultural economy, a middle-class American's life, a farm family's right to retain ownership of their land and other means of production, or an Ethiopian woman's life. Unless we clearly specify who or what we want to sustain, sustainability advocates risk prescribing future visions that do not consider social inequities and therefore reproduce domination based on class, gender, and race. But how do workers, women, and people of color fit into dominant sustainable agriculture visions?

Workers and the Poor

Dominant sustainability discourses generally do not analyze the different interests and classes that participate in the food and agriculture system. An example can be found in the first challenge set forth in the Asilomar Declaration for Sustainable Agriculture*, which is to "promote and sustain healthy rural communities."¹² Justification for the promotion of

*This document was produced through an intensive meeting which brought together a variety of U.S. sustainability experts to distill the goals of and strategize for sustainable agriculture.

rural communities is: "Healthy rural communities are attractive and equitable for farmers, farm workers, and their families. The continuation of traditional values and farming wisdom depends on a stable, multi-generational population." Thus, although the Asilomar Declaration recognizes corporate land ownership as problematic, it does not address the different interests of farmers and farm workers in general. It recognizes no inherent problem with an economy based upon land owners who hire landless laborers, and advocates maintaining the existing structure of land tenure. This statement also implies that current rural values, which include the patriarchal family and Christian religious beliefs, are ideals we should advocate and preserve.

Similar perspectives are reflected by the National Research Council and the U.S. federal sustainable agriculture research program, Sustainable Agriculture Research and Education (SARE) (formerly Low Input Sustainable Agriculture [LISA]). For example, where the National Research Council discusses labor on alternative farms, labor is viewed only as a cost of production. There is no discussion of who the workers are, their working conditions, or their wages. In the same vein, SARE addresses socioeconomic issues primarily in terms of the economic viability of farms, and largely avoids discussion of antagonisms between corporate agriculture, family farms, and farm labor. Those focused on food safety, however, show greater interest in the welfare of the farm worker when they point out that pesticide use in agriculture poses a greater risk to field workers than it does to consumers.

Still, where food issues are discussed in the context of sustainability, they usually focus on safety and pay little attention to accessibility. Yet Bill Liebhardt, director of the University of California's Sustainable Agriculture Research and Education Program, points out that we must ". . . eliminate the very idea of hunger in a state where agriculture is still the largest industry."¹⁶ This is true in the larger scope as well: worldwide at least 500 million people (20 million of whom live in the U.S.) do not have regular access to sufficient food.¹⁷ Kate Clancy, a professor long active in sustainable agriculture, asks, "Is agriculture sustainable if it doesn't encompass issues of social justice like hunger?"¹⁸ Yet visions that include factors central to workers and the poor, such as who should have a

right to eat or access to land, are not presented in dominant sustainability discourse.

Women

In most cases, traditional gender roles are assumed in discussions of sustainable agriculture, whether women are included or simply overlooked. Populist visions of sustainable agriculture see the family farm as the ideal organizational structure for sustainable agriculture, but generally do not discuss gender roles within the farm family. An exception is Berry, who explicitly discusses differences between men and women on farms and suggests that both women and men suffer when nurturing is the sole purview of women.¹⁹ However, he advocates a return to traditional values associated with the home without questioning the patriarchal privilege that underlies many of these values.

The fact that family farms are based on patriarchal relations is not regarded as a problem by the sustainable agriculture movement, yet on the majority of family farms men control land, capital, and women's labor.²⁰ While farm women are resisting their roles as "farm wives" and insisting on wider decision-making roles and access to land, in most sustainability discourse, women's demands for change have not been incorporated. Often farmers continue to be referred to using masculine pronouns, which fails to acknowledge women's roles in agricultural production, except as they support the male farmer. In the food safety movement women are often targeted specifically for the part they can play in developing this aspect of agricultural sustainability. In this way traditional gender roles are not questioned, since women are appealed to in their capacity as food purchasers and child care providers and men are excluded. In general, dominant visions for agricultural sustainability do not correct the problem of gender inequities.

People of Color

Race and ethnicity issues are rarely mentioned in sustainability discourse. To some extent, this results from the absence of people of color from decision-making positions in Western agriculture. People of color have been integral to the functioning of American agriculture, but in subordinate roles. African-Americans, Hispanics, and Asian-Americans have

historically and currently provide much of the labor in U.S. agriculture, but are much less likely than European-Americans to be farm owners. Even in California, an extremely ethnically diverse state, only 9.2 percent of farm operators are ethnic minorities; this proportion is inverted among farmworkers, 75 percent of whom are ethnic minorities.²¹ Farmworkers have received few of the benefits of profitable and abundant agriculture; compared to farm owners, they have much lower incomes, live under worse conditions, have less control over the production process, are more often exposed to pesticides, and have higher incidences of health problems related to pesticide use.

It is significant that the impetus for low-input agriculture was generated in part by the level of public distress about farmers losing their land during the 1980s, when the crisis affected mostly European-American farmers and affluent customers. In contrast, little concern has been raised in sustainability discourse about the nearly complete separation of African-American farmers from their land. In 1920 one in seven U.S. farms was black-operated, but in this century the number of farms owned by blacks has declined 94 percent.²² In addition, the call for a return to traditional rural values fails to challenge racist attitudes historically prevalent in much of the rural U.S. The dominant vision of sustainability in the U.S. does not address racial inequalities prevalent in agriculture.

Strategies for Achieving Sustainability

Strategies suggested for achieving sustainability are, of course, intimately linked with the problems perceived, causes attributed, and visions projected. For the Committee for Sustainable Agriculture, sustainable agriculture can be achieved “. . . through dissemination of information about farming, food processing and marketing techniques that conserve and replenish soil resources, and decrease the use of toxic and synthetic chemicals. By working toward these ecologically benign technologies [sustainability will result].”¹²

This statement describes the major strategies employed in the effort toward sustainable agriculture – providing more information to farmers and consumers through better communication, gathering

more knowledge about agroecological processes, and developing better technology. Less often, but occasionally mentioned are establishing policy reforms to increase pesticide regulations or limit corporate farming, developing bioregional communities to localize food production and consumption, and reinvigorating traditional values. While some of these we consider antithetical to sustainability (e.g., some rural values) or unrealistic (e.g., bioregionalism), others are no doubt essential components in the move to sustainable agriculture. We argue not with their inclusion in a package of strategies for sustainability, but with the emphasis placed upon them to the exclusion of other strategies.

For example, a primary emphasis has been placed on developing profitable alternative production techniques and systems through science. This is seen both in Western agriculture and in development programs for impoverished countries. Historically in the U.S., agricultural science has been called upon to resolve major socioeconomic and ecological crises in agriculture, such as with the scientifically based land-grant colleges, the Cooperative Extension Service and the Soil Conservation Service. In these instances, science has sanctioned the highly capitalized, chemical-intensive agricultural system in the U.S. and is being uncritically called upon to sanction low-input systems as well. It is clear, however, that neither science nor new technologies can by themselves solve larger food and agriculture problems, as witnessed by the problems associated with the scientifically based Green Revolution. In addition to the universal sustainability issue of how agricultural products are produced, one scientist proposes that we also address the questions of *what* and *for whom* agricultural products are produced.²³

Yet dominant sustainability discourses tend to rely on technology as the solution – that if the right technologies were developed, sustainability would result. For example, the Asilomar Declaration for Sustainable Agriculture states that, “Given scientifically validated techniques, farmers will adopt sustainable agriculture practices.”¹² In this perspective, an agricultural production system that is both profitable and environmentally sound will be achieved as less environmentally damaging technologies are developed and substituted for existing chemical technologies. This does not examine the overarching structural

forces that have contributed to the adoption of resource-intensive farming practices.

Technologies and social relations are inseparably linked, both in terms of their inspiration and their consequences. In agricultural research universities we do not have the Baconian model of the atomistic scientist pursuing “pure knowledge.” Instead, research is often driven by economics and politics; entrepreneurs demand marketable technologies and these are in turn produced. The development of chemical vs. cultural pest management techniques, for example, is not accidental. If agricultural requirements can be responded to profitably, they will be.²⁴ But maximizing profits depends upon repeated sales of inputs, not products that can be reproduced by the farmers or are self-reproducing under proper environmental conditions.

How Can We Begin To Reformulate Sustainable Agriculture?

In sum, from sustainability perspectives that currently dominate discussions we glean a vision of sustainable agriculture that:

- narrowly frames sustainability problems;
- is not searching for primary causes of nonsustainability;
- envisions a future agricultural system that maintains the social status quo; and
- plans to create a sustainable agricultural system through better technology and more effective communication.

In our view, this vision’s perspective is too partial and fragmented. If we do not go farther in challenging the structures and assumptions that have led to sustainability problems, we place ourselves at the risk of reproducing these problems and generating only very marginal improvements. Achieving a truly sustainable food and agricultural system requires a broader vision and new strategies for both analysis and implementation.

Developing this system will require concentrated thinking, innovative actions, and a deep commitment on the part of many people. As a start, we suggest several ways in which we can begin down the path toward a sustainable agricultural system.

Base sustainability upon meeting basic needs.

In fundamental terms, sustainable agriculture is a struggle over life and death. Third World poor people’s movements see this quite clearly, but this perspective is not obvious in the West. Our concept of sustainable agriculture, therefore, is based, first and foremost, upon fulfilling basic human needs. We consider these needs to be consumptive (food, water, fuel); protective (clothing, shelter); and regenerative (dignity, self-determination, freedom from exploitation). It is not just a question of *intergenerational* equity, so often discussed, but also of *intragenerational* equity. That is, these conditions should be met both for generations to come and for those who are here *now*. Thus, sustainable agriculture would maintain the resource base and provide the means for everyone to secure adequate amounts of nutritious, safe food and fiber. This in turn is predicated upon the development of non-exploitive relations in terms of race, class, gender, species, and nation. Characteristics such as these must be built into standard visions for sustainability if it is to be a meaningful departure from conventional agriculture.

Use appropriate units of analysis in studying how to develop agricultural sustainability.

The existing global division of labor and global market by definition create a global economy and society. Therefore only a global unit of analysis can offer the beginning of a framework for explanation and solution. We need to conceptualize agriculture in a way that includes not only the production process itself, but all of the related backward and forward linkages, i.e., the whole of the food and agricultural system. That is, there is a need to move beyond the nearly singular focus on production to include the relations among production, distribution, consumption, and exchange. In this way we can move beyond the present farm-centric focus for sustainability efforts and consider the entire food and agricultural system as the unit of analysis, from which point specific components are studied as appropriate. Since achieving sustainability means addressing the basic premises, social and political structures, and processes at the root of agriculture’s nonsustainable aspects, researchers need to examine structural problems and possibilities for sustainability.

Develop comprehensive strategies.

Structural transformations of the food and agricultural system, not only new technologies or marginal policy reforms, are necessary to achieve sustainability. This is because the causes of nonsustainability include the social and economic problems, not only a lack of proper technology or insufficient information. The environmental crisis cannot be understood outside of this context, since the structure of agricultural production, exchange, and consumption – the concentration of land, resources, unequal terms of trade, etc. – has contributed to the degradation of environmental quality. Ending social inequality and poverty – at a global level – is therefore a precondition for solving environmental and social problems in agriculture. Without the resolution of social equity issues, the structures of domination that led to environmental degradation in the first place will be reproduced.

Recognize the basis and effect of particular interests and seek common interests.

The abandoning of particular interests at some level is crucial for achieving sustainability. Sustainability groups, whether focused on food safety, family farms, agricultural science, or other concerns are, of necessity, involved in day-to-day struggles for sustainability within their own spheres. For example, organic farmers are concerned about their family's health and their net income, consumers want safe food at an affordable price, and family farm activists want to preserve their traditional rural way of life. These interests in turn lead each group to define its own criteria for a sustainable agriculture. In the process of these daily struggles, the interests of the most disadvantaged groups in society fall through the cracks and the poor, women, and people of color remain invisible and continue to be exploited. We must become aware of the broader contradictions among sustainability groups and struggle to find common ground.

Broaden representation in key decision-making systems.

Individual perspectives, based on background and experiences, play a crucial role in what people see as problems and solutions. Yet agricultural policy makers, farm group leaders, development planners, and researchers and educators are overwhelmingly male

and European American. In the scientific community, for example, women and people of color, and therefore their viewpoints, have been virtually absent. Of U.S. agricultural researchers, 99 percent are Caucasian and 96 percent are male.²⁵ While women and people of color have contributed enormously to agriculture, they have historically been excluded from access to land, capital, and decision-making processes in the food and agricultural system. Even the new World Sustainable Agriculture Association does not appear to include women as directors, staff, or spokespeople.²⁶ It is essential that we increase the participation of underrepresented groups in order to develop a broader range of possibilities for transforming the global food system. An agricultural system cannot be sustainable unless it rests upon equitable access to resources and power.

Recognize that we have an active role to play in producing sustainability.

People produce their concepts and possibilities. Each of us – whatever role we play in food and agriculture – needs to examine aspects of our daily life that can be forces for or against sustainability. Thus, an understanding of the global food system must not dissuade us from taking action, but inform our actions in influencing international and national policies as well as initiating grassroots, local efforts for sustainability. Sustainable agriculture remains a contested concept – it can lead to a food and agricultural system that serves the privileged few or one that transforms existing social relations and ecological conditions in the global food and agricultural system. We must all recognize that we make decisions every day to use our abilities, positions, and resources to either keep things the same or transform them.

Conclusion

Sustainable agriculture constitutes an important, progressive alternative to conventional agriculture. But while the sustainability movement has raised important issues that have begun to change some aspects of agriculture, it needs a broader perspective in order to avoid reproducing many of the problems of conventional agriculture. What we find missing from the current discussion is an attempt to improve food and

agricultural systems for all people, regardless of class, race, gender, or national origin. Advocating the preservation of family farms, for example, can mean retaining the uneven race, gender, and class divisions that have historically existed in agriculture. The call for communities based on the Western nuclear family economy does not expand the sustainability vision to project how farm workers, people of color, women, and Third World people could benefit from an alternative form of agriculture. Similarly, advocating food safety, certainly a worthwhile objective, tends to exclude issues of corporate control of the food system, ability to pay for high-quality food, or most importantly, access to food at all for many people. And biological and physical agricultural science, while important in providing agronomic and technical alternatives for agricultural problems, are not equipped to deal with deep causes and corresponding solutions to agricultural sustainability problems. To proceed with achieving agricultural sustainability, discourse and action must include an analysis that exposes the root causes of nonsustainability, a comprehensive vision of sustainable agriculture, and appropriate strategies for its achievement.

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