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Sustainable Agriculture — For Whom?

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Contents

A Restorationist's Credo 7
A Restorationist's Manifesto 8

Sustainable agriculture is doing well at restoring ecological sanity to food production... yet there are important questions which it leaves unanswered. The following paper asserts that for agriculture to be truly sustainable, it must be sustaining for the natural world around it. This means that the issues of human population size, and the location, extent, and type of agriculture must all be dealt with in the broader context of wild species and the Damaged Lands.

Agriculture developed to help humans survive. Now, if all species of life on Earth (including people) are to survive the present environmental crisis, the lessons of sustainable agriculture must be applied beyond the borders of our cultivated fields.

Agriculture tells us about growing things, how to replenish the vitality of the soil, and how to seed it with plants that will flourish. We need to take these nurturing skills and apply them to the Damaged Lands. Who knows better than farmers how the fabric of life on Earth has been broken, poisoned, and washed away? And who will know better how to patch those wounds?

The growing body of experience with sustainable agriculture provides us with an excellent model for meeting the food needs of people in ways which enrich soil and are not directly exploitative of the surrounding environment. Yet there is an unanswered question in the sustainable agriculture point of view; What is the proper relationship between cultivated lands and remaining wild species? The context in which sustainable agriculture occurred in the past was much different from our present planetary situation. This change in contexts has importance for agriculture itself, but even more, it is vitally important for wild species and natural ecosystems.

Main questions arise regarding: 1) the quantity of land devoted to human sustenance; 2) the location of this land in relation to existing ecosystems; and 3) the choice of species for cultivation.

In the distant past, cultivated lands were islands in a sea of dominant wilderness, like the isolated patches of slash and burn (swidden) agriculture that are maintained on a rotational basis by tribal peoples. Today, the mechanized farms of the major food-producing

nations dominate thousands of square miles of contiguous farmlands with one or two crops. For reasons such as pest control and lessened susceptibility to disease epidemics, sustainable agricultural proponents would break up these huge blocks of monoculture into small-farm units divided by wild or semi-wild strips of vegetation in hedgerows and shelter-belts, or even wilderness belts winding through the countryside to continuous hands.

While the ideal of wilderness would be revered in this compelling vision, we need a better understanding than this vision can now offer of how the survival of native species would be served or impeded by agriculture. An example of where we need a better understanding the relation between native species and food production is in the Great Plains, where we have the choice of seeding the land with varieties of perennial grains which Wes Jackson and his colleagues at the Land Institute are working to develop; or assisting the return of native grasses, native herbivores (Bison), and native carnivores (Wolves, Lakota). Should lands presently under cultivation be regarded as forever lost to wilderness?

How much is our view of 'meeting the expectations of the land' colored by our human-centered biases? It would seem that the most basic 'expectation' must be the survival of all species originally present. If increased soil fertility and crop vigor are achieved at the expense of native species, then the expectations of the land (as a whole) are not being met... only the expectations of the farmer's soil and crops.

However, if we speak of 'all-species gardening' instead of sustainable agriculture, a new picture of our relationship with Earth can emerge, one that recognizes inherent value of all beings. We need to show concern not only for our crops, but for all native species as well. This means that before choosing a piece of ground to nurture for our sustenance, we must first look at the full context in which our intervention will take place.

Just as we make our system of agriculture internally balanced to ensure our ability to sustain it, so we must also ensure that our gar-

A Restorationist's Manifesto

The role of sustainable agriculture must be first to repair the Damaged Lands — the wounds wrought by industrial agriculture need to be covered, vast acres replanted into native grasses, herbs, shrubs and trees. The overgrazed pasture lands need also to be replanted, and the clearcut forests need to be restocked with the original full distribution of native species. It will be best to leave some places entirely alone.

As these attempts at complete restoration are carried out, human population must be reduced. In time, intensive gardening methods will be developed to occupy whatever space each ecosystem can afford to divert toward human needs. Hopefully, ways will be found to benefit all life in a bioregion by the longterm presence of nurturing humans — but the repair work must come first.

dens, farms, orchards, or pastures exist in balance with the 'external' world of Nature surrounding them.

Whose habitat are we occupying? Will our imported plants poison local wildlife? Will our activities prevent migrating birds from using the neighboring wetlands? The external effects of even the best sustainable agriculture practices reveal their inadequacy from a deep ecological point of view. In fact, the difficulty of answering such questions has led many to conclude that only a hunter/gatherer existence is justifiable — living totally within the natural world, not apart from it in any way.

Meeting the expectations of the land must begin with the bottom line of all-species survival. In fact, the present ecological crisis may provide the only justification for any form of agriculture. So much land has been scarred, deforested, desertified, and poisoned, that only the ancient processes of evolution operating on the scale of geologic time can heal the wounds — unless the humble, respectful people intervene now to salve the wounds and contain the toxins.

With all-species gardening as our guiding model, we can look at the whole Earth as our context, with each local ecosystem as a specific focus or grounding. As we move from the narrow, human-centered goal of sustainability to the broader concern for all species, then we can see where the most urgent needs of Nature's gardens are. If we need to reseed an eroding hillside with native grasses to help ensure a butterfly's survival, then we may be justified in appropriating some of the bottomlands below that hill for our food garden.

Here are some of the questions we should be asking: 1) Where are the lands from which humans and advanced technology must simply withdraw, leaving these lands to heal themselves in the care of native peoples? 2) Where are the places that need immediate, high technology reclamation to stop spread of toxins and genetic mutagens? 3) Where are the places that would benefit from the planting of native plants... and where do we feel confident that we can perform this task correctly?

Sustainable agriculture has a vital role to play in this process. Only recently has restoration ecology come into its own as a profession; native plant nurseries are finally beginning to provide the needed growing stock for future work. Yet the idealism of restoration ecology needs to be leavened with the practicalities of accomplishment: how are the field workers to be fed?

The rotating corral/garden/grassland agriculture of the Tarahumaras provides us with a good model for combining restoration work and human sustenance. Damaged Lands could be first lightly grazed and manured; then gardened with primarily leguminous or soil enriching crops, to prepare the ground to answer the needs of the area's original plant occupants at their highest successional stage. The restoration workers could then move on to other Damaged Lands, in time finding a spot suitable for permanent habitation. After all the abuses of this century, it is necessary for people to once again earn their place in Nature.

To turn the tide, our interdependency with Nature, and our obligation to her, must be known. As stewards of the earth, caretakers of the soil, sustainable agriculture people are the natural ones to extend their concerns to the nurturing of all life. Wendell Berry's definition needs only to be expanded to read: 'A sustainable agriculture does not deplete the soils or people, *wild species or the planet*', In summary, the phrase 'for the benefit of all species' needs to be included in any definition of sustainable agriculture.

The old hierarchies at the roots of war are in disarray. We see that the machines that were to save us now enslave us; while our real life-supporting friends, the plants and animals, suffer widespread oppression. Clearly, the true priorities of life must be reestablished: 'Earth first, humans second, and machines last'.

A final example: Where I live in southern Oregon, as elsewhere along the Pacific Coast, food production depends on irrigation throughout the rainless summer months. Unfortunately, this practice harms the fish (salmon and steelhead trout) — water withdrawals for irrigation lower summer stream flows and raise stream temper-

atures above tolerable limits. Out of respect for all species, food crops should be grown in the mild Oregon winters, when rain is abundant and the fields dry-farmed or left fallow in the summer drought. As far as I know, such a proposal has yet to be made in the Pacific Northwest, yet a friend of mine has begun this practice in the Central Valley of California for simple economic reasons (a large market for fresh produce in the winter).

As Donald Worster suggests in his essay, "Thinking Like a River", the whole mode of human habitation in the West needs to realign with minimal disturbance of the natural water cycle. Turning around our priorities to put wild species first will require massive changes in our ways of life. Fortunately for our bioregion, the vision of streams again filled with the miracle of returning salmon provides a strong incentive to learn how we can best go about its restoration.

A Restorationist's Credo

In these days of despair, we need a focus that makes us feel there is joy in life, and that we deserve to be living. Of all the tasks before us, healing the Earth is the most demanding, necessary, challenging and fulfilling. Unlike many causes, it involves working for something clearly bigger than us... yet demands that we bow down to no hierarchy, accept no one else's judgement of success.

We need a noble purpose. We need to be stricken with awe at the damage we have done to Earth, then penitent of these ways, and fix things... Only by belonging to something larger than ourselves can we feel whole again as people... As old symbols and isms fade away, only one thing remains bigger than us, supporting us, plain for all to see — the whole Earth. Only that which makes no distinctions between us can unite us.