

Sustainability requires broad cultural effort

In a previous letter (Amer. J. Alt. Agric. 4:1, 43, 1989) I reviewed some concerns regarding the present state of the public and scientific discussion of agricultural sustainability (or rather agrosustainability). In the intervening months I have continued to notice the myopia of technical investigators in this field. Sustainability cannot be achieved through scientific efforts alone; it must be built through broad cultural efforts. Sustainability requires that each system is uniquely coevolved with highly aware and evenly equanimitable stewards. That is, sustainable systems arise in conjunction with the cultural evolution of the human community.

Another idea that I call "the ecological uncertainty principle" is instrumentally important to attaining sustainability. In short, no measurement of ecosystems can be made without altering them. As well, the management of ecosystems always involves unintended, and frequently harmful, though occasionally helpful, influences on those functioning systems. So, in managing ecological systems (the role of agriculture), we must be ever wary and ever flexible, ready to adjust to the unexpected and the unforeseen. This means managers have to learn to "fly by the seat of their pants," not "by instruments." Those scientists and technicians who think they can create agrosustainable systems by some kind of interchangeableparts, mass-production approach will probably be sorely disappointed.

I believe that the road to agrosustainability (or, for that matter, cultural sustainability) will be built and followed well by people who create accurate "inner ecologies," that is, ecologies of mind (Gregory Bateson, *Steps to an Ecology of Mind*, 1978) and who adopt as their guidelines not scientific paradigms but rather artistic and spiritual metaphors of the world. I believe this because the efforts of agriculturalists and their societies since the advent of the Industrial Revolution and even before have largely resulted in destructive and self-limiting methodologies. During the latter ages of human history, the faiths in science and technology have allowed purely economic and anthropocentric views to predominate. Those views reinforced the biases that convinced many people that natural resources and natural processes were limitless and invulnerable. Hopefully, most (or at least enough) of us have now begun to see these as fallacies and will begin to learn to know better.

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FmHA "buy back" loans linked to high-input farming

Some farmers with productive lands make a good living through effective management, high output of crops with a favorable market, and federal subsidies. But some who borrow to purchase land at a price exceeding its value for agriculture cannot repay their loans. So it was at a neighboring farm, recently auctioned. The "owner" had 350 acres, about one-third of it bottomland, loans on land and equipment of over \$400,000, and interest payments of about \$25,000 per year. FmHA bought the farm for \$130,000, or \$371.43/acre. This is the first step in a process that favors high-input agriculture.

The 1987 Agricultural Farm and Credit Bill provides that a farm foreclosed and purchased by FmHA must be offered first to the former owner as "lease back" or "buy back." If buy

LETTERS TO THE EDITOR INVITED

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back, the purchase price would be the capitalized value as a farm, based on a return of 8 1/2 percent on the investment - \$130,000 is near the price that FmHA would calculate currently in the case of the farm near mine. If the former owner doesn't have money, FmHA may provide a credit (loan). If offered by FmHA and accepted by the former owner, he is then obligated to pay interest at 8 1/2 percent and to pay back the principal over a term that can be as long as 40 years. These payments mean that there can be net income only when the land under discussion returns more than about \$15,000 per year (\$43 per acre per year). Consider the choices involved in managing the land to insure this income.

Low-intensity usage of rangeland involves cows that graze native grasses in summer and some tame pasture plus a supplement in winter. The cows produce calves for sale each year. If spouse and children share the work of watching and tending bovines, there could be time for garden and orchard with additional income, and the husband and/or wife can work off the farm as well. Such an operation on a small farm

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