

"How're You Going to Keep Them Down on the Farm?"



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I'M CONTINUALLY surprised to find out how often people rediscover known facts. With an increasing awareness of food price increases and with starvation and malnutrition in many of the world's developing countries, some of our instant ecologists have set out to do something about solving these problems. They have "discovered" that nutritious and tasteful food can be produced with tender, loving care, using animal manures as fertilizers, and controlling weed and insect pests by hand picking the offending culprits. Primitive societies "discovered" these facts centuries ago, and they spent most of their waking hours in these pursuits.

The agricultural sciences were born when mankind wished to know more about the mysteries of plant and animal growth, and to reduce the time required to produce enough food. It takes only a little experience with the process of food production to realize that food is produced only by applying energy and combining natural resources. In primitive cultures the sources of energy for food production were man himself, his beasts of burden, and the sun.

The profligate use of energy by advanced societies, however, has brought a realization by a few people that *conservation* of energy is required. Modern agriculture uses only five percent of all the energy consumed in the United States; this five percent has released 95 percent of our population from the necessity of producing their own food and fiber—not an unfavorable efficiency ratio.

One of the latest entries into food production research is the "New Alchemy Institute" whose goals are really not to discover a *new* agriculture, but rather to return people to a primitive agricultural concept. The journal *Science*, and one of its writers, Nicholas Wade, in a continuing effort to call the agricultural sciences to task for helping to develop a highly productive and industrialized food producing system, have recently described the "New Alchemy Institute's" goals as developing "a radically different mode of food production," dependent on renewable sources of power such as the sun and wind, instead of fossil fuels; on natural biological cycles, not on biocides and chemical fertilizers (as if animal ma-

nures were something other than chemical); to be based on a diversity of crops and varieties, not genetically vulnerable monocultures (so they could be harvested by hand no doubt); selecting plants for their taste and nutrition, not for trucking and packaging qualities; requiring little capital investment; and encouraging people to come back to the land.

Americans have enjoyed an abundance of quality food products at a declining relative cost over the past several decades. Our production capacity has enabled us to share this abundance through international aid programs that have had a profound impact on scores of nations. Our agricultural productivity is a potent force in U.S. international trade, and our farm exports, totalling \$21.3 billion last year, are a crucial factor in maintaining our balance of payments. Directly or indirectly it accounts for almost 24 percent of this country's gross business activity.

These contributions to our wellbeing did not come about through do-it-yourself methods of food production. They are possible only because of a large-scale interdependent complex of production, processing and distribution functions shaped by science and technology. It is an odd time to talk of turning back the clock when there is some question of how or whether the world's most efficient food and fiber system can meet expanding needs—when increased food production is more closely related than ever before to national purpose.

When people turn off their radios and television sets; abandon their cities, second homes and recreational pursuits; ground their airplanes; cut their telephone lines; plow up their highways; dismantle their automobiles; move into caves or tents made of animal hides; we will be ready for the "discoveries" that such endeavors as the "New Alchemy Institute" will make. All of the "New Alchemy" goals are not necessarily bad—but I suggest that much of the effort now directed toward "discovering a *new* agriculture" would better be expended on changing people's value systems which seem to be summarized by a line from that famous World War I song—"How're you going to keep them down on the farm, after they've seen Paroo?"