

Organic farming "... is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed additives. To the maximum extent feasible organic farming systems rely upon crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes, mechanical cultivation, mineral bearing rocks and aspects of biological pest control to maintain soil productivity and tilth, to supply plant nutrients, and to control insects, weeds and other pests."

The literature reviewed for this report includes accounts of practices fitting both the strict and less strict definitions of alternative agriculture.

Advocates of alternative agriculture, e.g. the Rodale organization and the people supporting the Journal of Alternative Agriculture, argue that the system has significant environmental and other advantages over conventional agriculture, i.e. the system now followed by most crop and animal producers in the United States. Why should the American society concern itself with this line of argument? The reason is that most of the benefits claimed for alternative agriculture, e.g. reduced damages to soil and water quality, will not be adequately reflected in the economic calculations of farmers. Consequently, if these benefits are real, the market system which fundamentally drives American agriculture will undervalue alternative agriculture relative to conventional agriculture, and American society will be poorer as a result. The argument for alternative agriculture thus raises a public policy issue, specifically for the U. S. Department of Agriculture (USDA). If in fact alternative agriculture has the advantages its advocates claim for it, the USDA should encourage more widespread adoption of the system, the amount of the encouragement depending on the strength of the advantages relative to those of the existing system.

In this report we draw on the literature described in the references and in the annotated bibliography to assess the economic and environmental characteristics of alternative agriculture relative to conventional