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Food production in a changing world

Agriculture in America has benefited from research and development of new farming production systems over the past century. Through that progress, agriculture has become increasingly successful, able to feed and clothe the nation with a diminishing share of its labor force and resources. Some view the progress as having reached a plateau.

Yet agriculture today continues to evolve on many fronts. In the area of pest control, for example, some of the most successful pesticides remain valuable agricultural assets. But growers are also finding that some others have practical limits or even negative effects as pests develop resistance to synthetic chemicals. And the question of health and environmental risks from synthetic chemicals has grown to become a widespread concern in society, leading to governmental efforts to restrict or ban the use of some important chemicals.

For more than a century, the University of California has been active in identification and analysis of farm problems. For several decades, University researchers have been identifying the impacts of many agricultural chemicals and practices. They have conducted extensive analysis and experiments on new approaches for ensuring long-term sustainability of agriculture, seeking methods that also will maintain the industry's economic viability. Today those approaches are often lumped together under the convenient term "sustainable agriculture." The term means many things to many people.

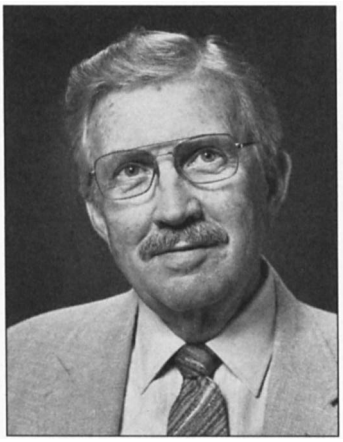
To me, sustainable agriculture is a necessary goal, the production of healthy food and fiber by methods that are economically viable and environmentally sound. Sustainable production systems involve balancing, to the maximum extent possible, on-farm and off-farm inputs to maintain long-term viability of agriculture and natural resources, considering both ecological and economic criteria. Sustainable practices frequently help growers find ways of reducing their chemical inputs.

The University's Sustainable Agriculture Program is the focal point for those efforts. It serves as a clearing house for information, manages competitive research and education grants for sustainable projects, and helps other division programs organize themselves to address sustainable issues. It is the visible tip of a larger effort. Much of the University's lab and field research moves on parallel and complementary paths, whether it carries the name "sustainable agriculture" or not. Our multidisciplinary approach to agriculture's problems seeks to find solutions that will both ensure the long-term health of the environment and help farmers retain their financial health. Among our important research activities to enhance sustainability, for example, is that directed to the development of new biological answers to predator problems.

At the same time, I believe we need to strengthen our efforts in two fundamental areas. First, it is critical that we fill in the broad gaps in our overall knowledge. In the areas of soil, water, insects, plants, and their interaction, our impressive body of knowledge still pales by comparison to what we know we don't know! We need to improve our research in those diverse fields. Second, as we develop information, we must integrate that knowledge into a practical systems context that makes it useful to production agriculture as quickly as possible.

The University seeks practical solutions to pressures that production needs and society are placing on agriculture. We recognize that sustainable agricultural practices must be economically viable as well as ecologically sound, and we place a very high priority on meeting that twin challenge.

If either half of the equation is missing, chances of achieving a sustainable agriculture will not be successful. For it is true in agriculture, as in most other endeavors, that economics still rules the bottom line. By working together, the University and farmers can meet the challenge successfully and make our agricultural system truly sustainable over the long run.



Dr. James B. Kendrick, Jr., former Vice President of Agriculture and Natural Resources of the University of California, died on February 15, 1989. He was 68 years old. Dr. Kendrick, an internationally known and respected agriculturist and administrator, retired on September 30, 1986, after nearly 40 years with the University. He had served as Vice President for 18 years, longer than any other Vice President in UC history. His leadership and his dedication to California agriculture and the University of California will be long remembered.