short-term needs of specific client groups and saw their task primarily as supporting technical development. No matter that the problem was once that their clients were "corporate farmers," or "big rich farmers who exploit farm workers and are driving the family farmer out of business," or "agribusiness interests," whereas now it is the more deserving "sustainable farmers." The point is the same: research has something to offer beyond meeting the immediate, short-term technical needs of any one group.

When researchers welcome farmer involvement in research, they are reversing an unhealthy exclusivity that has condemned some research areas to remain sterile and meaningless. But beyond some point, they are abnegating their professional responsibility. To have one group call all the shots clearly is not the key to a socially desirable research system. It is wrong for researchers to claim an exclusive right to do so, and it is just as wrong to confer this right on farmers, whether "sustainable" or any other kind. Farmers and researchers have different purposes, different kinds of experience, and different relationships to agriculture. Neither can do the job alone, but if they are allowed to complement each other, both can make an important contribution to promoting true agricultural sustainability.

Acknowledgment. This paper was prepared with support from the Jessie Smith Noyes Foundation. However, the opinions expressed are not necessarily those of the Foundation.

References

- Buttel, F. H., and L. Busch. 1988. The public agricultural research system at the crossroads. Agric. Hist. 62(2):303-324.
- Danbom, D. 1986. Publicly sponsored agricultural research in the United States from an historical perspective. In Kenneth Dahlberg (ed.). New Directions for Agriculture and Agricultural Research. Rowman and Allanheld, Totowa, New Jersey. pp. 107-131.
- Edwards, C. A. 1987. The concept of integrated systems in lower input/sustainable agriculture. Am. J. Alternative Agric. 2(4):148-152.
- Edwards, C. A., R. Lal, P. Madden, R. H. Miller, and N. G. Creamer (eds.). Undated. International Conference on Sustainable Agriculture Systems, Columbus, Ohio, September 19-23, 1988, Workshop suggestions on policies and strategies. Rodale Institute, Emmaus, Pennsylvania.

- Francis, C. A., R. R. Harwood, and James F. Parr. 1986. The potential for regenerative agriculture in the developing world. Am. J. Alternative Agric. 1(2):65-73.
- Francis, C. A., and J. W. King. 1988. Cropping systems based on farm-derived, renewable resources. Agric. Systems 27:67-75.
- Hadwiger, D. F. 1982. The Politics of Agricultural Research. University of Nebraska Press, Lincoln. Nebraska.
- Kirkendall, R. S. 1986. The agricultural colleges: Between tradition and modernization. Agric. Hist. 60(2):3-21.
- Krome, M. 1988. Sustainable research standards can guide CALS. Newsletter 5(3):3.
 Wisconsin Rural Development Center, Black Earth, Wisconsin.
- Lockeretz, W. 1987. Establishing the proper role for on-farm research. Am. J. Alternative Agric. 2(3):132-136.
- Lowrance, R., P. F. Hendrix, and E. P. Odum. 1986. A hierarchical approach to sustainable agriculture. Am. J. Alternative Agric. 1(4):169-173.
- National Research Council. 1989. Alternative Agriculture. National Academy Press, Washington, DC.
- 13. Paarlberg, D. 1980. Farm and Food Policy:

- Issues of the 1980s. University of Nebraska Press, Lincoln, Nebraska.
- Rosenberg, C. E. 1964. The Adams Act: Politics and the cause of scientific research. Agric. Hist. 38(1):3-12.
- Rosenberg, C. E. 1971. Science, technology, and economic growth: The case of the agricultural experiment station scientist, 1875-1914.
 Agric. Hist. 45(1):1-20.
- 16. Schweikhardt, D. B., and J. T. Bonnen. 1986. Policy conflicts in agricultural research: Historical perspective and today's challenges. In L. Busch and W. B. Lacy (eds.). The Agricultural Scientific Enterprise: A System in Transition. Westview Press, Boulder, Colorado. pp. 13-27.
- Stinner, B. R., and G. J. House. 1987. Role of ecology in lower-input, sustainable agriculture: An introduction. Am. J. Alternative Agric. 2(4):146-147.
- Stinner, B. R., and G. J. House. 1989. The search for sustainable agroecosystems. J. Soil and Water Conserv. 44(2):111-116.
- USDA. 1988. Low-input/sustainable agriculture: Research and education program (pamphlet). Cooperative State Research Service and Extension Service, U.S. Department of Agriculture, Washington, DC.



INSTITUTE NEWS

IAA's new Occasional Paper Series examines on-farm research

"On-Farm Research Techniques," the first in the IAA's new Occasional Paper Series, is a report from a workshop organized last November to discuss how on-farm research can contribute to minimizing farming-related environmental and social problems. As interest in research on alternative agricultural systems has increased, disparate ideas have emerged about what on-farm research can accomplish, when it is appropriate, and how to do it properly. In addition to reviewing research techniques, this paper examines such important issues as farmers' research versus researchers' research. on-farm activities that complement research, appropriate choices of farms to be studied, collaborations among many groups of people with diverse interests, and barriers to acceptance of on-farm research.

The report was prepared by Molly D. Anderson and William Lockeretz of the School of Nutrition at Tufts University, Medford, MA. Copies are available for \$6 from IAA, 9200 Edmonston Road, #117, Greenbelt, MD 20770; (301) 441-8777.

Food prices don't reflect true costs, speaker tells IAA symposium

The true costs of the U.S. food system are not reflected in the price of food, keynote speaker David Orr told participants at the March 5th IAA symposium held in Washington, DC. Orr, a political scientist from Oberlin College in Oberlin, Ohio, cited the difference between price and cost by explaining that "cost is not measurable. It includes things we ignore, things we don't realize are important until they are gone."

There are several immeasurable costs of food, he said: environmental

costs; the loss of rural communities; the cost of democracy and the need for a class of landowners; the cost of political instability; the cost of human health; and the cost of attachment to the land's future.

"We have not been well served by economics, which tells us only prices are real and that technology can overcome the limits of nature," Orr said in explaining why the true costs of food are not reflected in prices. "The land grant system has not been as open or hospitable to alternative agriculture as it should be. And there has been massive political failure."

In order to align cost and price, Orr recommended policies such as rewarding the production of food, ending the subsidization of overproduction, and adopting an accounting system that includes the price of natural capital. "Policies must make the distinction between growth and development, between obesity of economy and prosperity," he said. He also called for a national policy to rebuild rural America and to encourage regional self-reliance.

Health risks not reflected in cost of food

Health risks and food-borne diseases are additional costs that are not reflected in the price of food, economist Carol Kramer told the IAA symposium. Those costs are food safety problems, nutritional problems, and occupational safety and health problems, said Kramer, an economist with Resources for the Future in Washington, DC. The costs to society of food-borne disease are "inestimable" and are the result of incorrect information, information that is withheld from the consumer, and an imperfect market, she said.

Agricultural systems are part of natural systems

"We must think of agricultural systems as part of larger natural systems and ecosystems," according to wetlands biologist Dan Willard of Indiana University in Bloomington, Indiana. Addressing the IAA symposium, Willard described three case studies in the Soviet Union, California, and South Florida in which agricultural water projects had severely disrupted neigh-

boring wetland ecosystems at the same time they did not help agriculture as much as promised.

The papers from the symposium will be published in a forthcoming issue of the American Journal of Alternative Agriculture.

DeWitt elected President of IAA Board

Dr. Jerald DeWitt, Associate Director of Extension at Iowa State University, was reelected to a second term as IAA President at the Board's March meeting in Washington, DC. Jim Bender, a farmer from Nebraska, was named Vice President; Dr. Katherine Clancy, of Syracuse University, was named Treasurer; and the Honorable Robert O. Blake, Washington, DC, was named Secretary.

The Board reviewed Institute longrange and strategic programmatic and institutional plans and activities. The Institute's 1992 symposium will focus on the potential contributions of alternative farming systems to the viability of small rural communities. The Board also decided to hold its biannual meeting in Ames, Iowa, in early September in connection with the Dick and Sharon Thompson Annual Farm Field Day.

New Board members seated at the meeting include: Paul Johnson, a farmer from Decorah, Iowa; Dr. Anne K. Vidaver, Chairperson, Department of Plant Pathology, University of Nebraska at Lincoln; and Dr. Eugene W. Adams, Professor Emeritus, Tuskegee Institute, Tuskegee, Alabama.

IAA President's Council named

Dr. Jerald DeWitt, IAA President, has announced the members of the President's Council for 1991. Members are: Charles Benbrook of Dickerson, MD; Norman Berg, Soil and Water Conservation Society; Bob Bergland, National Rural Electric Cooperative Association; U.S. Rep. George E. Brown, Jr., of California; Lester

Brown, Worldwatch Institute; Ron Ellermeier, farmer from Nebraska; John C. Gordon, Yale University School of Forestry and Environmental Studies: Robert Gray, Resource Consultants; Ralph Grossi, American Farmland Trust; R. Jim Hildreth, Farm Foundation; Dana Jackson, The Land Institute; Dennis R. Keeney, Leopold Center, Iowa State University; Fred Kirschenmann, Kirschenmann Family Farms, North Dakota; U.S. Sen. Patrick J. Leahy of Vermont; Dan Martin, MacArthur Foundation; William Marshall, Pioneer Hi-Bred International; Ned S. Raun, Winrock International; Ronald L. Rosmann, farmer from Iowa: R. Neil Sampson, American Forestry Association; Richard J. Sauer, National 4-H Council; Edward Sills, Pleasant Grove Farms, California; Karl N. Stauber, Northwest Area Foundation; David G. Topel, Iowa State University; and Stephen Viederman, Jessie Smith Noyes Foundation. The Council was formed last year to provide guidance and support for Institute activities in promoting a more sustainable agricultural system in the United States and abroad.

EPA investigating pesticide research lab

The Environmental Protection Agency announced last month that it is investigating allegations that a Texas testing lab deliberately understated the residues of at least 17 pesticides used on fruits and vegetables. Research at Craven Laboratories, Inc., paid for by pesticide manufacturers, has been used by EPA to determine the pesticide levels allowed in fresh and processed foods. EPA is trying to determine how many pesticides on the American market were registered on the basis of studies conducted by Craven Laboratories. Despite the alleged fraud, EPA officials say that preliminary findings indicate no risk to the public health.