

Reshaping the Bottom Line: On-Farm Strategies for a Sustainable Agriculture is a 50-page booklet describing Midwestern management strategies including effective use of nitrogen, building organic matter in soils, controlling weeds and insects, improving pastures, and growing alternative crops. Copies are \$8 postpaid from the Land Stewardship Project, P.O. Box 412, Lewiston, MN 55952.

Resourceful Farming: A Primer for Family Farmers is a 120-page report on the on-farm research of Nebraska's Small Farm Resources Project. Topics include soil building, alternative crops, biological controls, and more. Each section describes the practices used on the farms and gives further sources for information. Copies are \$7 from the Center for Rural Affairs, P.O. Box 736, Hartington, NE 68739.

California Small Family Farmers, a 148-page + appendix report conducted by the Jeff Chandler Associates on behalf of the California Energy Commission, points to a positive future for such small farms. "We determined that the number could grow if the farms are managed properly, emphasize marketing, and have access to financing and technological improvements," says Chandler. Copies are \$12 plus \$2 handling from Jeff Chandler Associates, 1114 - 21st Street, Sacramento, CA 95814.

Farm Chemicals in Groundwater: Strategies for Nonprofits examines 5 statewide organizations that are successfully dealing with the problem of farm chemical contamination of ground water. The report features the California Institute for Rural Studies and California Action Network, the Center for Rural Affairs, the Iowa Natural Heritage Foundation, the Practical Farmers of Iowa, and the Texas Center for Policy Studies. Copies are \$8 from Loni Kemp, the Minnesota Project, Southeast Office, Box 4, Preston, MN 55965.

Agroecology: The Scientific Basis of Alternative Agriculture, by Miguel Altieri, discusses the theoretical basis of agricultural ecology, the design of alternative agriculture production systems, ecological management of pests, disease, and weeds, and the process of

changing to a more sustainable agriculture. The book is \$21 from Westview Press, 5500 Central Avenue, Boulder, CO 80301.

USDA Bibliographies on the following topics are available. To request, give the title and Q.B. number, along with a self-addressed label. Send to Reference Branch, Room 111, National Agricultural Library, Beltsville, MD 20705.

Paulownia: Potential Tree-Crop, 1970-87 (Q.B. 88-11). Has 121 citations in many languages.

Potential New Crops: Crambe, 1970-87 (Q.B. 88-12). Has 166 citations in

all languages.

Breeding Crops for Insect Pest Resistance, 1979-87 (Q.B. 88-21). Has 307 citations in English only.

Agriculture: A Look to the Future, 1979-87 (Q.B. 88-22). Has 182 citations in many languages.

Herbicides: Ecological Effects, 1982-87 (Q.B. 88-24). Has 186 citations in English only.

Alternative Crops, 1970-98 (Q.B. 88-25). Has 230 citations in many languages.

Poultry Wastes: Uses and Management, 1979-87 (Q.B. 88-26). Has 200 citations in English only.



LETTERS

Favors journal's approach

I'm writing to thank you for another fine issue of the *American Journal of Alternative Agriculture*. As with previous issues, the Summer 1987 edition was loaded with useful information. I especially appreciate the Journal's willingness to take on not only important research topics, but issues involving public policy as well. It has become increasingly obvious that wide-spread adoption of sustainable farming methods depends on improving public policies as well as research approaches. In that regard I found both Malcolm H. Fleming's article on removing barriers against low-input farm management and William Lockeretz's commentary on the proper role for on-farm research informative and thought provoking. Both articles offer bold solutions to policy and research problems and deserve to be read and considered by everyone concerned about the course of American agriculture.

The Land Stewardship Project and the Center for Rural Affairs recently co-sponsored a meeting where 30 representatives from non-profit groups and government agencies involved in low-input agriculture in the Midwest met to discuss proposed changes to state and federal policies that would encourage adoption of sustainable

farming practices. I mailed a copy of Mr. Fleming's article to all the participants before the meeting. As I had hoped, it did a great job of providing background and raising issues for discussion at the meeting. Thanks again.

Ron Kroese

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Farming systems symposium

I am writing regarding the on-farm research Commentary by William Lockeretz in the Summer, 1987 edition. While I agree with most of what Dr. Lockeretz says, the article conveys the idea that little is known or being done about on-farm research. He recommends the formation of a working group of on-farm researchers with periodic meetings where there will be an opportunity to exchange "on the ground" experience. I recommend that he and others interested in discussions about on-farm research plan to attend the eighth annual International Farming Systems Symposium which will be held at the University of Arkansas in Fayetteville, Arkansas, October 9 to 12, 1988. This is a gathering of researchers and extensionists from around the United States and much of

the world. It is an excellent forum for anyone interested in methods, problems and potentials of on-farm research. Contact Dr. Tom Westing, Associate Dean, International Agricultural Programs, University of Arkansas, College of Agriculture and Home Economics, 300 Hotz Hall, Fayetteville, Arkansas 72701.

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Cultural pest control

We are doing a study to make available the best information on cultural controls of field and horticultural insect pests, for farmers and horticulturists who want to reduce their dependence on pesticides. This will be based on practical experience of farmers and published information.

If you have successfully used cultural methods for control of any insect pests (planting design, rotation, management practices such as cultivation, fertilization or management of adjacent environments, etc.), please write to us as soon as possible giving all the details. Our final report will be completed by Fall 1988, and the results will be published soon after.

This is your opportunity to be part of the solution.

Please send information to: Renee Lapointe/Micheline Levesque, Ecological Agriculture Projects, Box 191, Macdonald College, 21,111 Lakeshore, Ste. Anne de Bellevue, QC, Canada H9X 1C0, telephone (514) 398-7771.

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On-farm research

We were pleased to see the article about on-farm research in the last issue of AJAA. We, too, feel that this type

of research can play an important part in the wider acceptance by farmers of sustainable ag practices, both as demonstration plots and by gaining new knowledge of regenerative systems. There are a few additional points we would like to add to this discussion based on our experience working in this area.

Dr. Lockeretz, in his treatment of on-farm research, limits his discussion to why researchers should consider conducting such investigations. Although we welcome their involvement, we feel that probably the greatest potential for on-farm research making an impact in agriculture is for farmers to get involved in developing and testing their own ideas. Many farmers have excellent ideas of innovative crop and livestock production practices which, if given the ability to conduct a valid test, could contribute greatly to agricultural science.

This is the philosophy of the on-farm research projects the organizations we represent have developed in the last few years. Cooperating farmers in both the Rodale Institute and Practical Farmers of Iowa programs are free to choose their research agendas (with technical help from paid staff) based on their experience, soil type, climate, ag enterprise, equipment available, etc. Out of these efforts we hope will come new ideas in using cover crops, safe weed control, and lower input costs.

We are trying to make the whole effort of doing good research accessible to farmers. Cooperators in our programs take soil and tissue samples and collect such data as percent ground-cover, weed infestations, earthworm counts, etc., depending on the trial. We are also in the process of testing a yield monitor which is attached to the combine for easily recording grain yields. The experimental design used is simple, yet statistically valid. It calls for few treatments (preferably two) laid out across the length of the field in side by side strips, the width of which is determined by the equipment on hand. The treatments are replicated at least 6 times and randomized within each replicate. Yield determinations are made by conventionally harvesting the

entire plot. This system allows for doing an analysis of variance to determine significance. A surprising number of farmers are willing to learn to do the statistics or have software programs to run the numbers. All of these efforts are for the purpose of making on-farm research a powerful tool in the hands of those progressive farmers who consider new ideas and are willing to test them.

One of Dr. Lockeretz's contentions is that basic research should also be carried out on-farm. We think that this is a contradiction in terms and cannot think of an example (except for items 1-3 listed in his paper which are specific to soil type or large plots which may not be available on a research station) where it would be to a researcher's advantage to do this type of work on-farm. On-farm research by definition is highly applied. The effectiveness of treatments is based on factors such as labor and equipment considerations, economic feasibility, fitting into practical rotations, etc. Basic ag research is concerned not with these items, but rather how things work biologically or chemically.

Lastly, in our efforts to aid farmers in conducting their own research, we are in the process of putting an instructional guide together. Our hope is that extensionists, researchers, and vo-ag teachers, as well as farmers, can use the guide in conducting practical and statistically valid research on the farm. Copies will be available from the Rodale Institute by Fall of 1988.

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Letters on topics likely to be of interest to AJAA readers are welcome. Since our space is limited, we reserve the right not to publish all letters or, at times, to publish only excerpts from them. To take part in this exchange of ideas and news, write to the Editor.