## Money-saving book available for greenhouse operators

LANCASTER - Greenhouse Energy Conservation published May 1980 by Penn State's Office of Industrial Research and Innovation reports the latest developments in heat-saving techniques and practical applications of them.

Written for the greenhouse operator, the manual describes heat-saving materials and processes now in research and commercial installation.

Windbreaks, siting, thermal blankets, double poly coverings, double panel houses, Lapseal, solar and associated heat storage systems, power plant waste heat use, infrared heating, and soil heating possibilities are some of the conservation options explored.

Each section includes thorough discussions of payback times, expected fuel savings, energy efficiencies, and other economic data. Growers report their experiences and describe potential problems and solutions Commercial products are listed in the text and suppliers in an appendix

The authors are John W White, professor of floriculture at Penn State, and Robert A. Aldrich, professor and head of agricultural engineering at the University of Connecticut. They write from more than 40 years of teaching, research, and work experience with greenhouse operators.

"Greenhouse Energy Conservation' is an advice and data book on present fuel saving techniques and equipment," says White, "as well as a primer on promosing experimental systems such as soil heating and solar "

He said he feels operators in colder climates must innovate and make conservation decisions on a case-by-case basis To help them, he and Aldrich have compiled eight tables such as Comparative Costs and Savings of Glazing Materials and Heating Costs per Acre for Various Flower Crops

They also included sections on

cold-tolerant crops, cultural conservation techniques, and tips to boost efficiency of present equipment and operations Hobbyists have not been forgotten; a section on greenhouses attached to homes was provided.

Aldrich's research specialty is greenhouse structure; White is an expert on thermal blankets and has designed a commercial insylvania grower \$20,000 in one

He directs projects on eutectic salt and rock bed heat storage, on air and water solar heating, and double panel plastic and glass houses. White thinks soil heating combined with individual bed blankets looks promising "Why heat the entire house?" he says.

"Greenhouse Energy Constallation that saved a Penn- servation" is printed in an easy-to-

read 32 page, three column format. Twenty-seven illustrations, many of commercial installations, were reproduced, and the text written in non-technical language.

The manual is priced at \$250; discount rates for bulk orders are available on request Order from Industrial Research and Innovation, 225 Pond Laboratory, University Park, PA 16802.

## Chester-Delaware Co-ops hold one-day institute

UNIONVILLE — The Chester-Delaware Council of the Pennsylvania Association of Farm Cooperatives recently held its Annual One-Day Institute for 4-H and FFA at the Stone Bain in Unionville

The 18 participants had been chosen by their Club or Chapter

leaders to spend the day learning about the principals of cooperatives and the actual cooperatives in their area.

Eight students were selected to attend the PAFC Annual Summer Institute which will be held July 2 through July 15 at Shippensburg State College, Chambersburg

Chosen to attend the Summer Institute are Eileen Fairbairn, West Chester; Steve March, Glenmoore; Loren Ruth, Spring City; Leslie Schofield, Pottstown; Kathryn Soltys, Spring City; Valerie Weaver, Nottingham; Wiliam Wylie, Nottingham; and Nancy Yarnall, Oxford.

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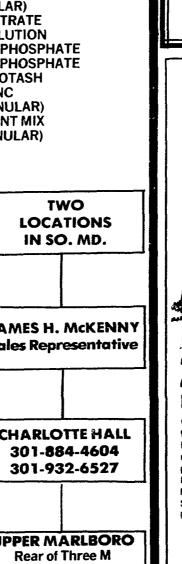
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Terry King, Nottingham; and

Mike Peters, Cochranville, were chosen as alternates.

Denise M Bertrand, Appraisal Analyst with the Southeast Farm Credit Association and Secretary Youth Leader of the Chester-Delaware Co-op Council organized the One-Day Institute





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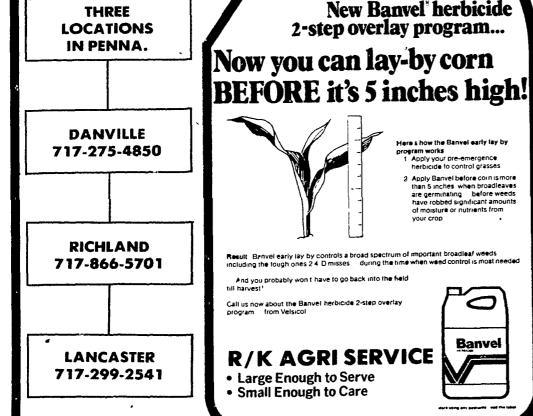
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