

# Many topics at Pa. Vegetable Conference

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Preliminary evaluation of the computer spraying program has shown that it has some advantages over the alternate method of spraying every 7 to 10 days, according to MacNab.

"Our modified computer spray program is working very well and is encouraging," MacNab said.

"It has resulted in an average of two less sprays per season (with resultant production cost savings) and defoliation rates due to early blight were kept just as low as under the regular spraying program."

MacNab explained that research will continue into the computer spraying program before any widespread application can be considered.

The grower-sponsored research is being conducted at Cornell and Rutgers, in addition to Penn State.

Other crops involved in the research include sweet corn, sweet peppers and snap beans. In addition, a study at Penn State is investigating factors that affect vegetable consumption to determine consumer target groups at which promotion of vegetables might be directed.

Among findings coming out of some of these other studies are

—The bottom line of herbicide use in vegetables is determining the active ingredient price of the chemical being used and most important its cost per acre. Soil type also has a great effect on herbicide rate use.

—Selection of the proper type and consistency of lime is very important in vegetable production, such as tomatoes and sweet corn. For fertilizer, NPK has shown the best results for tomatoes and NP for sweet corn.

In vegetable consumption studies, a prime target group appears to be young, single women just beginning their careers. Higher consumption in this group may require changes in fresh marketing, such as smaller packages, better trimming and encouraging raw consumption.

The research program, administered by the Pa. Department of Agriculture, is handled by an advisory group of 12 fresh and processing growers. Projects are selected on the basis of grower preferences and the acreage and value of crops involved. Selection of the coming year's projects, involving some \$30,000 in funding, will be made about mid-month.

Tomatoes also came in for a different kind of news at the conference when the champion growers were honored at the annual awards luncheon on Tuesday. Participating in the awards program were Vaughn Staller, Furman plant manager; Rocco V. Pughese, executive director, Pa. Food Processors Association; and Michael D. Orzolek, of Penn State's Horticulture Extension.

Winners in the various categories of competition:

—Clyde Burnham, of Northeast, Erie County, in the Machine Harvest category of 100 or more acres, with a yield of 2,629 tons from 108 acres for an average of 24.3 tons an acre.

—William and Brian Beckman, of Harborcreek, Erie County, in Machine Harvest of 75 to 99 acres, with a yield of 2,458 tons from 91.3 acres for an average of 26.9 tons an acre.

Robert W. Schwartz, R1 Lykens, Dauphin County, in Machine Harvest of 50 to 74 acres, with a yield of 1,431 tons from 72 acres for an average of 19.6 tons per acre.

Hannah Schwartz, R1 Lykens, Dauphin County, in Machine Harvest of 20 to 49 acres, with a yield of 928 tons from 35 acres for an average of 26.5 tons an acre.

Chaapel Farms, of R2 Milton, Montour County, in the Hand

## Champion tomato growers honored



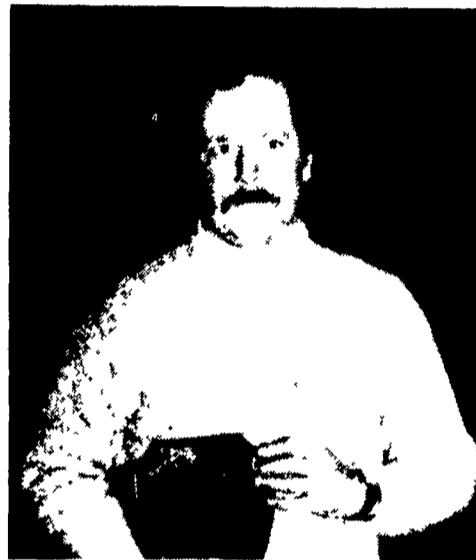
Father and son, the Robert Schwartz's, of R1 Lykens, Dauphin County.



Brian and William Beckman, of Harborcreek, Erie County.



Clyde Burnham, of Northeast, Erie County.



Bob Chaapel, of R2 Milton, Montour County.



John Everitt, Furman Fieldman, representing Lester Hursh, R1 Mt. Joy, Lancaster County.

Harvest of 50 or more acres, with a yield of 1,527 tons from 62 acres for an average of 24.6 tons per acre.

—Lester W. Hursh, of R1 Mount Joy, Lancaster County, in the Hand Harvest of 5 to 14 acres, with a yield of 191.8 tons from 6.5 acres for an average of 29.5 tons an acre.

The three-day conference at Hershey also included a large trade show, which attracted a record number of 136 exhibitors.

And stretched across the three days were other numerous

production topics, ranging from what new varieties are available for planting this year to the effects of ozone damage, which is multiplied just a little more each time we may use a spray can.

And among the topics on Wednesday morning were minor vegetable crops for Pennsylvania,

including such things as garlic, rhubarb and something that was making big news last year — Jerusalem artichokes.

The gist of recommendations from the Penn Staters was to go slow and small on such crops, making certain of markets.

And come to think of it two of the

crops, rhubarb and the artichokes have something in common.

Last year's experience of some artichoke growers, particularly in Lancaster County, should leave about as bad a taste in the mouth as I used to have when I bit into a raw stalk of rhubarb as a kid.

## Peach vote

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approved and the selection of specific projects by next year.

"We are hoping to get the research under way for 1985 so that another season of study would not be lost," explained Strite.

"There's a real research need in this area and we want to get it started."

The peach and nectarine research would be the second such program of grower-sponsored horticultural studies. Apple growers have funded research for quite a few years in Pennsylvania. In such programs, the research is supported entirely by the grower assessments and any contributions, while the PDA only administers the program.

In other matters at the Hort Assn. business session:

—George Hekman, of Leesport, Berks County, assumed the presidency of the association.

—And, the Association passed a resolution to support efforts of PACMA to get equal treatment concerning the unfair competition being caused by imported apple juice concentrate. Being requested is a token tariff on the imports and inspection to make certain they meet the same quality standards of domestic producers.

**BY JUDY HULL**  
BIGLERVILLE — Below zero temperatures experienced recently throughout the state have fruitgrowers and researchers concerned about the adverse effect on fruit trees, primarily peach trees. The extremely low temperatures coupled with the drought stress many trees experienced this past summer make for prime conditions for winter injury.

Although fruit growers have always had to deal with the effects of the weather on their trees, in recent years a decline in the lifespan of peach trees statewide has caused researchers to take a closer look at possible causes. The decline has been studied by Penn State University research and extension personnel for the past two and one-half years under the Peach Integrated Crop Management (PICM) Project. The study has helped identify those factors that contribute to a tree's shortened lifespan. It has determined that in a significant number of cases, winter injury probably was the primary cause for the high mortality figure.

Pennsylvania ranks among the top four states in peach production nationally. The annual value of the crop is estimated to be \$11 to \$19

million. Adams County is one of the five leading peach producing counties in the state with a total crop value of \$3 to \$4 million annually.

### Life span slips

According to George M. Greene, pomologist at the Penn State Fruit Research Laboratory in Biglerville, the average life span of a peach tree has slipped to about 10 to 12 years.

"The health of a peach tree is influenced by many factors including how it is pruned, where it is planted, rootstock, variety, orchard nutrition, soil conditions, drought stress, parasitic nematodes, and disease or insect stress," Greene said. All of these factors, he added, help determine whether a tree will be able to survive if exposed to harsh winter temperatures.

Fruit trees experience a three-stage process of hardening to prepare for winter survival, according to Greene. The first stage begins in August or September when the days begin to get shorter. If a tree is healthy at that point, he explained, the hardening process successfully begins. He added, however, excessive tree vigor can interfere with the first stage.

**Second stage**  
The second stage occurs with the onset of frosty nights. To successfully advance to this stage, the trees must still have their leaves and a supply of carbohydrates or sugars to store for energy and future growth.

With the drought conditions of this past summer, Greene said it is possible that the carbohydrates needed to sustain the trees during this winter are present in lower amounts than normal since the trees did not have the soil and water conditions needed to produce the sugars. If this is the case, the second stage of hardiness will be affected and the tree will be significantly weakened.

The third stage takes place when the tree's tissues are frozen. "The trees can continue to gain hardiness at a few degrees each day if the tissues in the trees stay frozen until it reaches its maximum hardiness depending upon its species and variety," he said.

**Continuous cold**  
Because of this three-staged process, it is better for a tree to experience continuous cold temperatures. "The hardiness a tree has acquired in the third stage is lost as soon as the tissue thaws,"

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## Winter damage is shortening life span of Pa. peach trees