

Future research benefits won't come easy

By JERRY WEBB
University of Delaware
NEWARK, Del.

American consumers are beginning to have to be willing to spend more money on basic agricultural research if they expect to keep eating inexpensive food. That's the feeling of a lot of agricultural scientists around the country. They say the basic need is to speed the rate at which new knowledge is being generated so that agricultural growth can keep pace with population gains.

Granted, these agricultural researchers have their own bias. They believe in agricultural research and they think more of it should be done. Maybe there's a thread of self-preservation in their plan, but they make a fairly strong point in favor of more research.

Agriculture has made great strides over the last half century. Most of this was accomplished through the discovery of new

agricultural knowledge and the application of that knowledge. During that period, the researchers say new agricultural knowledge was being generated faster than it was being used. So, in the 1950's and 60's there was a vast technological reservoir available for use. As a result, farm production increased by leaps and bounds between 1950 and 1970. Consider these facts. Corn yields, which had fluctuated around 20 bushels per acre for a century or more, shot up to more than 80 bushels per acre on the average. Milk yields increased by half; red meat yields in hogs rose 11 percent. Feed efficiency in broilers increased 18 percent.

But the agricultural researchers feel strongly that the reservoir is running dry, that during the 1970's increased production has come from expanded acreage rather than increased yields. And with an increasing population and a shrinking land base, that option won't solve America's food problems forever.

The researchers believe the easy work has been done, that in the future agricultural breakthroughs will require more time, more effort and more money. But sadly the trend has been in the other direction. In recent years there's been a decline in the resources devoted to agricultural research. Inflation has caused an erosion of facilities and financial support and there's been an

actual reduction in agricultural research manpower. Along with that reduction has come the added burden of meeting the environmental and regulatory concerns surrounding agriculture.

One group of agricultural scientists has documented its loss of capacity this way. Between 1970 and 1977 the state agricultural experiment stations throughout the country had a net loss of 193 scientists. In addition, 350 scientists, or the positions of that many scientists, had to be reassigned to meet new and urgent environmental, regulatory and food safety concerns involving agriculture. This means that the equivalent of 543 agricultural scientists across the nation are not doing the research that they used to be doing. Important research in genetics, physiology, nutrition, fertility—research that may soon be desperately needed to meet increased food demands. Research that is time-consuming, expensive, but very necessary.

Agricultural researchers look back at the development of hybrid corn and what it has meant to our food-producing capacity and they warn that such a dramatic development won't be forthcoming. We may wish for that kind of magic, but it just isn't there. The research accomplishments of the future will be hard to come by, relatively expensive and yet totally

necessary. They say consumer activists, political leaders, and humanists throughout the country must realize the importance of basic agricultural research

and the urgency with which it must be pursued.

Right now there seems to be time to proceed in an orderly fashion toward a stepped-up agricultural

research effort. But when an expanding population and a shrinking land base crash into one another there may not be time to mount a basic food production research effort.

P.H.I.A. claims bad roads boost driving expenses by 41 per cent

HARRISBURG - As another cold Winter approaches, we will all feel hundreds of jarring reminders of PennDOT's empty wallet, says the Pennsylvania Highway Information Association.

Hazardous road conditions in Pennsylvania are a major cause for an average of 72,000 accidents each year. These conditions are boosting the costs of operating our cars by some 41 per cent and embarrassing Pennsylvania before the rest of the nation. Meanwhile, our highway program has come to a standstill, P.H.I.A. claims.

A year ago, The Road Information Program in Washington issued a research report saying that if 25,000 miles of Pennsylvania's 45,000 mile network of roads are not resurfaced during the next four years, they will become so deteriorated that they will have to be rebuilt from the ground up, at four and one-half times the cost of resurfacing - or a difference of \$11.2 billion. Due to the lack of money, we've used up one of those four years doing little about the problem, P.H.I.A. continues.

Legislation was introduced in the General Assembly last June to attempt to deal with the complex issue of funding road renewal and bridge repair needs. It included an indepth management study and overhaul of PennDOT; an annual year-end "report-card" comparing PennDOT's accomplishments with its promises; and a 3½ cents per gallon gas tax increase (which would have provided some \$210 million in additional revenues).

Maybe this legislation would have solved our highway problem, and maybe it would not. But the proposals died when the Legislature adjourned, having never even come out of committee to reach the

House floor for debate, says P.H.I.A.

With the number of pressing matters on the Legislative calendar, all vying for limited time for discussion and action, we, the citizens of Pennsylvania, share the blame for inaction because we failed to give our legislators a clear mandate for action, spokesmen at the Association say.

Since the Legislature failed to act on this urgent matter, which affects nearly seven million Pennsylvania drivers, we will enter

another winter of potholes and broken pavement - and broken shock absorbers, weakened springs and torn-up tires, P.H.I.A. predicts.

When the 1979 General Assembly convenes in January, Pennsylvanians must make it clear to them that they expect Pennsylvania's road crisis to be dealt with promptly, and that they will settle for nothing less than a complete and responsible solution, spokesmen at the Harrisburg-based organization conclude.

Energy use in Pennsylvania approaches President's goals

UNIVERSITY PARK - Pennsylvania's use of different energy sources is quite a bit closer to President Carter's goals for increased use of coal and nuclear energy than the national average, according to Dr. John R. Daugherty of The Pennsylvania State University.

Following three years of analyzing the energy situation, Dr. Daugherty said coal makes up 45 per cent of the energy used in the Commonwealth, considerably ahead of the President's national goal of 29 per cent energy from coal by the year 1985. Presently, coal supplies only 18 per cent of the nation's energy.

As for nuclear power, Pennsylvania now received 4 per cent of its energy from this source, compared to 1 per cent nationally. President Carter's goal for power from nuclear energy is 8 per cent by 1985.

Dr. Daugherty indicated the President's goals call for energy produced from natural gas and oil to decline relative to other energy sources. Over the last five years, the sources of U.S. energy have been shifting, with an increased use of oil,

coal, and nuclear energy and a relatively decreased use of natural gas and hydroelectric power.

Associated with the College of Agriculture at Penn State, Dr. Daugherty is a teacher-administrator in the environmental resource management program.

"In the future, because of the President's emphasis and projected increases in costs of energy, alternative sources such as geothermal and solar energy may begin to appear on supply charts," Dr. Daugherty predicted.

And he claimed that waste heat from nuclear power plants and other types of facilities is used in several locations for space and water heating, called district heating, or as industrial steam or hot water. He believes these examples of centralized heating - using one industry's waste heat as another industry's heat source (called cogeneration) - may lead to more widespread use of such total energy systems.

No shift for USDA

Office of Management and Budget's (OMB) Harrison Wellford has announced that his office will "not be recommending" any shift of food programs from FDA to USDA. He admitted that an early option paper from one of his reorganization projects had recommended the transfer of FDA's Bureau of Foods to USDA, but he stated that this approach had definitely been abandoned.

The move to switch FDA's food responsibilities as well as nutrition activities of HEW to USDA reportedly has gotten strong support from Esther Peterson and her deputy, Rod Leonard. However, Wellford suggested that it would probably wind up recommending better ways of coordinating food programs between FDA and USDA.

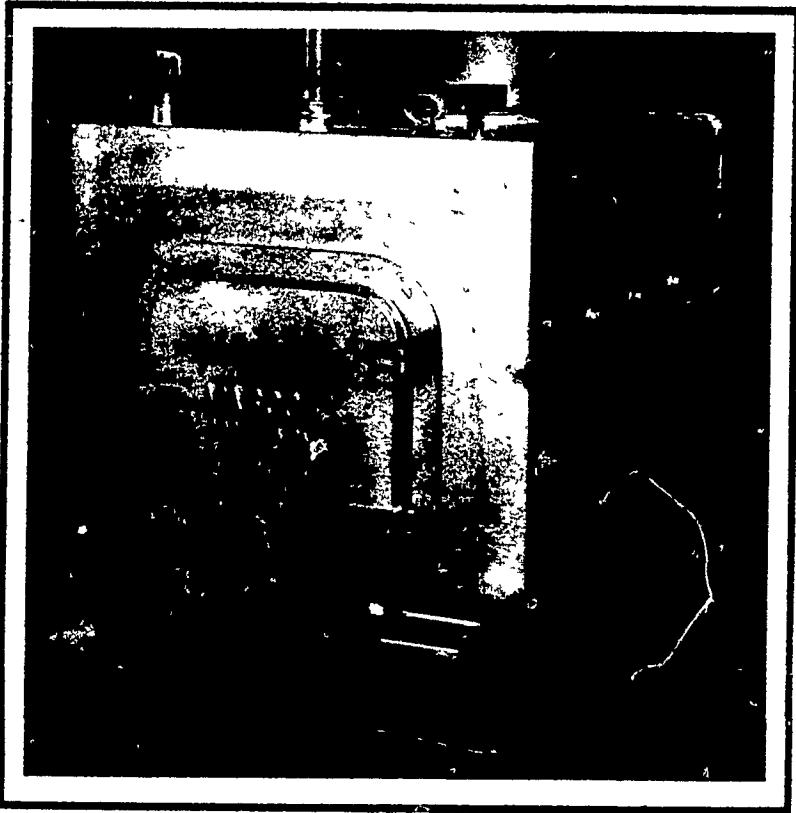
GARBER OIL CO.



Fuel Chief HEATING OIL

OIL HEATING EQUIPMENT
AIR CONDITIONING
MOUNT JOY, PA
Ph. 653-1821

WOOD FIRED HOT WATER BOILER



CAN BE CONNECTED TO YOUR EXISTING HOT WATER BOILER

FEATURES:

- Fire Brick Lined
- 12 Gallon Water Capacity
- Designed To Heat The Average Size Home
- 24 Volt Automatic Draft Control (110 Volt Available)
- One Quarter Inch Boiler Plate Steel Construction
- Cast Iron Door And Frame

HIESTAND DISTRIBUTORS

Your One-Stop Wood Burning Center
1830 S. State St., East Petersburg, PA
Phone: 717-569-7397

CREUTZBURG, INC.

QUALITY LIVESTOCK SUPPLIES

- ★ OPEN DAILY - 8:00 TO 5:00 ★
- SATURDAY - 8:00 TO 12:00
- OWNER: HARRY E. LANDIS
- ALL PRODUCTS AVAILABLE BY MAIL

Send For FREE Catalog

CREUTZBURG, INC.

Lincoln Highway East, Box 7, Paradise, Pa. 17562
(717) 768-7181

NAME _____
STREET _____
CITY _____
STATE _____ ZIP _____