

# Management and fertility studies unearthed

UNIVERSITY PARK - Days August 23 to 25 at the Research into management and fertility practices for forages and corn will be among the wagon tour features during Ag Progress

## Informative exhibits featured

UNIVERSITY PARK - Exhibits on a wide range of agriculture - related topics will be featured at the 1977 Ag Progress Days.

According to Harry A. Carey, Extension exhibits specialist, the departments of agricultural economics and rural sociology at Penn State will have a display in action that uses a computer terminal to demonstrate the use of linear programming in making farm management decisions.

Another popular Penn State exhibit will include live specimens of common weeds that are a problem to both farmers and homeowners in Pennsylvania. Visitors to the exhibit tent will be able to get assistance from experts on how to control these weed pests.

Also among the exhibits will be information on honeybees, forestry, solar energy for greenhouses, soil

and forage testing programs, sewage sludge usage, products made from corn, and agricultural careers, says Carey.

Government and farm-related agencies will sponsor displays including the Pennsylvania Dairy Princess, Apple Queen, Agricultural Soil Conservation Service, Crop Reporting Service, Farm Equipment Dealers Association, Nut Growers Association, Turfgrass Council, Game Commission, Bureau of Forestry, Future Farmers of America, Young Farmers' Association and the Horticultural Association.

Food will be available on the grounds of Ag Progress Days and there will be a small charge for parking to help defray expenses. The Rock Springs Agricultural Research Center is located nine miles west of State College on Route 45.

possibilities and productivity of various forage species and varieties, according to Dr. William C. Stringer, forage crop management researcher. Shown will be experiments with legumes and cool-season grasses. In general, these studies are managed to simulate hay harvesting or rotational grazing.

Stringer said tall fescue and Reed canarygrass have yielded best among the cool season grasses, followed by orchardgrass - with smooth bromegrass and timothy giving the lowest yields. However, timothy is usually the most digestible.

"Our goal is to take results from small plots such as you will see at Rock Springs, and at other locations over the state, and incorporate them into management systems on a large scale.

"The experiments have agronomists, animal and dairy scientists, economists, and engineers working together to determine the feasibility of proposed management systems. By using good management

systems, farmers can increase meat and milk production from their land," he affirmed.

Visitors to Ag-Progress Days will see plots evaluating the effects of lime and phosphorus on yield and nutrient composition of no-tillage corn and alfalfa. Plots tilled with both a moldboard plow and a disk harrow, versus plots with minimum tillage from a disk harrow, will be compared for grain yields and nutrients in tissues.

Heading up these experiments is Dr. Jon K. Hall. Last year, said Dr. Hall, corn yields in the studies varied significantly with tillage treatment but not with application rates of

lime and phosphorus. In 1976 study, no-tillage and minimum tillage corn yielded 6 to 10 more bushels per acre than corn planted conventionally.

Other research at Ag Progress Days will show studies of nitrogen sources on no-tillage corn. Surface application of four sources of nitrogen is being compared - urea, nitrogen solution, ammonium nitrate, and ammonium sulfate. A fifth source, anhydrous ammonia, is injected into the soil. Dr. Richard H. Fox and associates are testing the extent of nitrogen lost as ammonia gas from the five nitrogen sources.

Visitors August 23 to 25 will see plots where nitrogen was applied to no-tillage corn at zero, 45, 90, and 180 pounds per acre. Dr. Fox indicated that rains falling soon after the fertilizer is applied reduce greatly the chance for losing nitrogen gases.

Nitrogen sources for no-tillage corn in 1975 and 1976 were compared for 20, 65, 110, and 200 pounds of total nitrogen per acre. There were no yield differences among nitrogen sources either year because of rain that fell within two days after nitrogen was applied both years. Maximum yields were obtained with 110 and 200 pounds of nitrogen per acre both years.

Ag Progress Days is the largest outdoor agricultural event of its type in the East.

## Plowing contests slated

UNIVERSITY PARK - Pennsylvania's best plowmen will compete for awards in two contests held as part of the 1977 Agricultural Progress Days at The Pennsylvania State University's Rock Springs Agricultural Research Center.

"On August 23, about 25 contestants will compete in the State Plowing Contest. All have been declared winners in county eliminations," said N. Henry Wooding, Penn State Extension agricultural engineer.

The State Plowing Contest will feature three divisions: contour; large plow, level land; and small plow, level land. Plowing will start at 10 a.m. Contest awards will be

presented at 3:30 p.m. the same day.

The following day, August 24, all plowmen who have won state titles, this year and in the past, will compete in a special contest to determine who will represent Pennsylvania in the U.S. Plowing Matches scheduled for September 14-15 in Illinois.

"This State Plowing Champions Contest will get underway at 10:30 a.m.," Wooding points out. "Plowmen will compete in small plow and large plow divisions only and awards will be presented at 3 p.m. at the field days."

The matches are under the direction of the State Plowing Contest Committee.

The Ag Progress Days site is located nine miles west of State College on Route 45.

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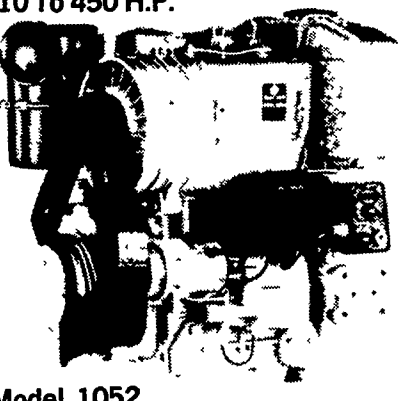
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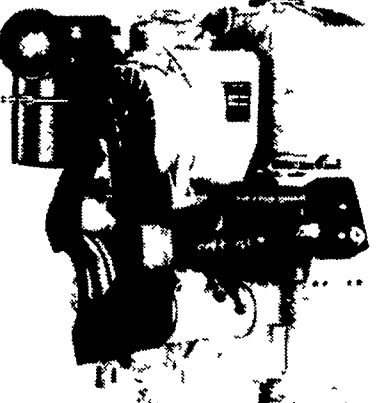
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