Two-State Tour Shows Crop Research Information

ATLANTA, Ga. — "Those maximum yields in research are okay, but the real test is how well the technology can be put to use in a field on my farm." That comment from a North Carolina grower echoes the thoughts of thousands of farmers across the country. Farmers need information and systems that will match the agronomic and economic needs of today.

More than 100 agriculture leaders, agribusiness executives, university administrators, and innovators recently participated in a two-state tour organized to show how maximum yield research information is being implemented on farms. The event was sponsored by the Foundation for Agronomic Research (FAR) in cooperation with North Carolina State University (NC State) and Virginia Polytechnic Institute and State University (Virginia Tech).

"The implementation phase, including field-scale demonstrations, represents an essential link from maximum yield research to maximum economic yields (MEY) for farmers. Focus on low unit cost of production is key. The interdisciplinary research and extension teams at NC State and Virginia Tech are leaders in transfer of research technology into farm production systems," said Dr. R.E. Wagner, President of FAR and of the Potash & Phosphate Institute (PPI).

In North Carolina, the "FAR in Action" tour concentrated on maximum economic yield corn studies. Dr. John Anderson, NC State extension agronomist, described the evolution from maximum yield research (beginning in 1980) to on-farm efforts now.

"Our efforts have centered on irrigated corn production. Pest control was an early concern. Then it became clear that ample water application is needed at critical crop growth stages. We saw the need for crop monitoring so that the additional inputs used in pursuit of high yields would not be wasted by management error," Dr. Anderson explained.

In 1985, an on-farm demonstration field produced a two-acre average of 214 bushels per acre, the highest recorded irrigated corn yield in North Carolina for the year. The comparable commercial corn yielded 171 bushels per acre. The FAR tour visited demonstration fields on the J.F. Scott Farm near Kenly, and the Hassel Thigpen farm in the Tar River Valley.

In Virginia, the FAR tour learned about work by the Virginia Tech Wheat Research group, headed by Dr. Mark M. Alley, Research Agronomist, and Dr. Dan Brann, Extension Agronomist. The team is composed of agronomists, plant pathologists, an entomologist, a plant breeder, and weed scientist, all working toward the goal of managing resources to produce wheat at the least cost per bushel. This approach, which requires more management time in crop scouting and critical decision-making in the use of inputs, is referred to as Intensive Wheat Mangement.

Research plots in eastern Virginia which used intensive management practices produced non-irrigated winter wheat yields of 105, 123, 103, and 101 bushels per acre from 1982 through 1985, respectively. These yields, which exceed the state average by nearly threefold, clearly demonstrate that a package of practices is needed to boost yields and lower unit costs.

The research and demonstration work in Virginia focuses on development and subsequent implementation, on a field-scale basis, of management practices that will increase wheat production efficiency.

The FAR tour visited historic Westover Plantation, on the James River, where standard management and maximum economic yield management were compared. Fungicide, insecticide, herbicide, growth regulator, fertilizer, and variety needs were demonstrated. Equipment for narrow rows, tramlines, and precision application of chemicals and fertilizer was on display.

Dr. W.E. Lavery, President of Virginia Tech, addressed the tour group while in Virginia. Dr. Lavery stressed the importance of developments in agriculture to enable U.S. farmers to be low cost producers of quality products to compete in international markets.

Mr. Waddy Garrett, President of Alliance Fertilizer, Mechanicsville, Virginia, described how the maximum economic yield concept has helped his company better serve farmer-customers. He outlined a list of twenty components for a successful program. "This program can increase the profits of farmers who know how to use it. And that means the supplier of inputs also benefits," Mr. Garrett noted.

Dr. Roy L. Flannery, a pioneer in maximum yield research, also appeared on the program with Dr. W.K. Griffith, Eastern Director of PPI, discussing implementation of maximum economic yield systems for soybeans in New Jersey. After achieving consistently high soybean yields in five years of research, Dr. Flannery is now concentrating on implementation of the technology in field-scale plots.

Christophe A.G. Tulou, (center), Legislative Director for Delaware Congressman Thomas R. Carper, meets with William T. Sammons, Jr. (left), Marketing Manager for the Delaware Department of Agriculture, and W. Robert Smallwood, International Trade Marketing Specialist, Delaware Department of Agriculture at the Ag Export 86 Symposium in Washington, DC recently. Delaware was one of 22 states to participate in the symposium sponsored by the President's Commission on Agricultural Trade and Foreign Policy.