

Forrest Troyer: a true pioneer

By JOSH FLINT

IN 1977, 10% of the corn sold in the U.S. was Pioneer 3780. The hybrid was developed by A. Forrest Troyer, who recently won the University of Minnesota's Siehl Prize for Excellence in Agriculture.

Troyer obtained a bachelor's from Purdue University in 1954 and a master's from the University of Illinois in 1956. After completing his doctorate at the University of Minnesota in 1964, Troyer made several key developments in the seed corn business. His first breeding breakthrough came with Pioneer 3780, a fast-drying hybrid.

According to Troyer, frost would damage the Minnesota corn crop one out of four years. To solve the problem, Troyer began by looking at how moisture leaves the ear. Once he ascertained moisture left via the pericarp, he began selecting for hybrids with a short, loose, narrow husk to aid evaporation. His efforts resulted in the commercialization of Pioneer 3780 in 1972.

In 1974, frost destroyed many Minnesota farmers' corn crop. However, Troyer says the growers who planted 3780 were able to harvest sooner. Once word got around, 3780 became a top-selling hybrid in 1977. In addition, it remained popular well into the 1980s. At the time, the average hybrid's market life was, at most, seven years.

Pioneer 3780 even caught on in central Illinois. Troyer says many corn breeders were surprised by this, since frost was typically not an issue.

"Illinois corn breeders would ask me why farmers were growing this early corn," Troyer recalls. "If a blackboard was handy, I'd put a big dollar sign on it. The growers were harvesting ahead of market."



KERNELS ON A COB: Forrest and Joyce Troyer have been married for 57 years. Forrest recently won the University of Minnesota's Siehl Prize for his efforts in corn breeding. He plans to donate the award's \$50,000 cash prize back to the university. The two currently reside in DeKalb.

Key Points

- Corn breeder Forrest Troyer won U of Minn's Siehl Prize.
- Much of his work focused on faster-drying hybrids.
- Troyer introduced wide-area testing, high plant-density plots.

They'd get old-corn prices for new corn."

Cutting-edge testing

When Troyer began working for Pioneer in the 1960s, hybrids were tested intensively in a single area. If the hybrid was successful, the test area was slowly expanded.

"A hybrid could be three to four years old in Iowa before it got to Indiana for testing," Troyer explains.

In 1966, Troyer spearheaded the start of wide-area testing, meaning a hybrid would be tested across various states and regions early on. This helped speed along a hybrid's development considerably. It also showed the company's seed salesmen that sometimes a different hybrid is not necessarily needed for each county, Troyer adds.

In addition to wide-area testing, Troyer began to experiment with high plant populations in the early 1960s. At a time when most farmers were planting 12,000 to 16,000 seeds per acre, Troyer was experimenting with final stands of 30,000 plants per acre. He eventually bumped his experiments up to 60,000 plants per acre for inbred development and selection.

Troyer quickly realized that high plant population plots told researchers a lot about how the hybrid reacted under adverse growing conditions. More specifically, it helped him pinpoint strong silkers by looking at which plants still produced silks, even when water absorption was reduced by thick planting. The plots also helped breeders select for better stalk quality.

Development of Bt

As a plant breeder, Troyer remembers laughing when scientists began trying to insert traits into hybrids. In fact, he says plant breeders made a lot of jokes at Bt's expense. One such joke: Bt is a lot like the fiancé who promises his bride-to-be, "Don't worry honey. When it happens, it's going to be great."

Now Troyer says, "They've definitely got even with us."

Despite farmers' reliance on traits, Troyer says a hybrid's genetics are still the most important piece of the puzzle. "I think you've got to keep improving the engine," he explains. "Four-wheel drive is nice, but you really need more power."

Inside Illinois Ag Briefs

Top essay by Magsamen

Kaitlin Magsamen, White Heath, won Growmark's 2009 Illinois essay contest for FFA members. This year's theme was "Homegrown Fuels: Good for American Agriculture." Magsamen is a Monticello High School student and a Monticello FFA member. Her FFA adviser is Bryce Hoffman. Magsamen will receive a \$500 scholarship from Growmark at the Illinois FFA State Convention, held in Springfield during June. The Monticello FFA chapter will also receive a \$300 award in honor of her accomplishment to help future students. Four state runners-up will each receive a \$125 scholarship. The runners-up are: Savannah Bradford, Leroy FFA; Jamie Kruegel, Vandalia FFA; Thomas Marten, Lincolnwood FFA; and Amelia Martens, Orion FFA. This is the 16th year for the program — sponsored by Growmark and FS member cooperatives, in conjunction with state FFA leaders — to help students develop their writing skills, learn about current ag issues and understand the role of co-ops.

Source: Growmark

Lambert leaves ICGA

After more than 20 years with the Illinois Corn Growers Association, communications director Mark Lambert is moving on to a newly created position with the National Corn Growers Association in St. Louis. Lambert's last day was May 8. He has spent more than three decades engaged in agriculture and ag issues. He spent 12 years as a journalist and columnist for the *Peoria Journal Star* and *Illinois Agri-News*. For the past 20 years at ICGA, Lambert has provided a full range of public relations, media relations, advertising and marketing support services for corn organizations. He also created exhibits, speeches and educational materials for schools and the general public.

Source: ICGA

Hoosier rebel memories

FORREST Troyer was born in 1929 in La Fontaine, Ind. He grew up on a 200-acre grain and hog farm. Just 20 miles down the road, his future wife, Joyce, grew up in the neighboring county.

Joyce was raised in Fairmount, Ind. Before meeting Forrest, Joyce dated a famous rebel: James Dean. Forrest jokes, "During her junior year of high school, Joyce won homecoming queen and James Dean was her date. Ever since then, her life has been downhill."

Joyce disagrees, adding that she and Forrest have raised three daughters and one son. They've been married for 57 years.

After all these years, the couple still enjoys discussing their memories of James Dean. Forrest, who calls him Jim, remembers he was "a farm boy who could pole vault," something Forrest had never seen before.

And the rebellious mantra? Not the Dean they knew. Both say he was down-to-earth and kind.

Volume 181 ■ Number 6

Contents:

| | |
|-----------------------------|----|
| Inside Illinois Ag | 1 |
| Prairie Views..... | 8 |
| Crops | 12 |
| Natural Resources | 22 |
| Farm Management..... | 25 |
| Technology..... | 27 |
| Livestock | 30 |
| Prairie Life | 31 |
| Hay/Forage..... | 35 |
| Classified/Marketplace..... | 37 |
| Marketing | 48 |

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