Several Seed Maturities Provide Yield Security

DeKALB, IL. — After the 1988 drought, many farmers are considering management practices for next year that will reduce the impact of severe weather stress. Before finalizing your cropping plans, a seed company agronomist offers some perspective of past drought years and tips to spread your risk from weather.

According to Herb Brown, Dekalb-Pfizer Genetics agronomist, an important point to consider is that no drought is the same--each has a unique characteristic. In 1980, the drought began in late June with temperatures averaging 6 to 13 degrees above normal. In 1985, a cold and wet spring delayed soybean planting into June. Then hot and dry weather reduced yields of shallow-rooted corn and short soybeans. This year's drought began in late April and continued through mid July before any relief.

"The fact is, when a drought begins and its duration determines the level of impact on crop performance," said Brown. "A well-timed rain or moderating temperatures when corn or soybeans are flowering can significantly improve crop yields."

Whether you farm in a drought prone area or a typically high yielding environment, you can spread your risk by planting several hybrids of different maturities. The maturity difference doesn't need to be large, planting four or more hybrids that vary only by five to seven days in relative maturity will lessen the impact of stress-filled years like 1988.

The Dekalb-Pfizer Field Comparison Trial (FACT) plot data illustrates the overall increased yield response from planting hybrids with different relative maturities. Yield results from Northern and Central Illinois, Indiana and Ohio were compared over six years.

"While one 100-day hybrid did not yield more than the 115-dsay hybrid tested in any year, three other hybrids of similar maturity had significantly higher yields in different years, (hybrid B in 1987, hybrid C in 1988, hybrid D in 1986, 1987 and 1988)," explained Brown.

The agronomist pointed out that the majority of agricultural meteorologists caution that weather forecasts beyond three to five days quickly lose reliability. "Therefore, attempting to choose 'race-horse' or 'work-horse' (drought tolerant) hybrids based on season-long forecasts is not recommended," Brown continued. "However, if you know that you have drought-prone soil types on your farm, selecting drought tolerant hybrids is likely to improve your overall average yield. And, to hedge against high temperatures or drought stress during pollination, three to four hybrids of different maturities on high potential fields is recommended."

Hybrid	Relative Maturity	1983	1984	1985	1986	1987	1988	1984-87
			% of hybrid E					
A	100-day	84.6%	89.6%	87.6%	89 5%	85.1%	77.3%	88.2%
B	110-day	98.7%	96.3%	95.6%	96.0%	102.9%	94.8%	96.1%
C	112-day	-	91.6%	91.0%	93.3%	96.5%	103.3%	93.3%
D	113-day	-	92.6%	97.3%	101.6%	100.4%	104.2%	99.2%
E	115-day	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: DEKALB-PFIZER GENETICS FACT plot summaries from Northern and Central Illinois, Indiana and Ohio.

Pennsylvania Potato Crop Down 22 Percent

HARRISBURG — Pennsylvania's 1988 potato production is estimated at 3,690,000 cwt., a 22 percent decrease from 1987 production, according to the Pennsylvania Agricultural Statistics Service.

PASS estimated the harvested acreage at 20,500, down nearly 5 percent from last year. Average yield was 180 cwt. per acre, 40 cwt. below last year and 60 cwt. under the 1986 yield.

Total stocks of potatoes stored in Pennsylvania on Dec. 1 were 2,700,000 cwt., 12 percent less than a year ago. Of the total, 41 percent, or 1,110,000 cwt., was stored in processor's facilities.

Stocks are defined as the quantity, sold and unsold, remaining in storage for all purposes and includes shrinkage, waste and other losses that occur after the date of each report.

Sales of fall potatoes for all purposes account for about 90 percent of the total fall production. The remainder represents shrinkage, loss and home use.

Nationally, fall production is estimated at 307 million cwt., down 10 percent from last year and 3 percent short of 1986 output. Harvested area was 1.06 million acres, 2 percent less than 1987 but 2 percent higher than 1986.

The average yield nationally was 290 cwt. per acre, 8 percent below last year and 6 percent under two years ago. U.S. potato stocks on Dec. 1 were estimated 199 million cwt., down 12 percent from last year and 5 percent below 1986 storage.

Stocks account for 66 percent of fall production this year, compared with 67 percent a year ago. Storage consists of 82 percent russet, 16 percent white and 2 percent red potatoes.

Processing totaled 45.4 million cwt. in the eight major processing states, a 5 percent drop from last year but a gain from the 43.1 million cwt. processed in 1986.