Planting rates affect corn yields

LANCASTER — Soil, climate, litural practices and hybrid determine how thick corn should be planted, but the arithmetic for top corn yields is simple, says Wayne Fowler, director of agronomic education, DeKalb AgResearch, Inc., DeKalb, Ill.

It takes 21,000 half-pound ears to produce 150 bushel per acre corn; it takes 28,000 to produce 200 bushel per acre corn.

"You've got to have the plants to get yield," Fowler says.

Yield potential is limited by the interaction of moisture availability, soil fertility and length of season, so realistic yield goals represent downward adjustments from maximum yield potential based on experience with insects, weeds, disease and other yield-limiting factors.

"Several years of studies at DeKalb's experiment farm, Dayton, Iowa, show the company's hybrids consistently produce Tigher yields under high plant populations," Fowler explains. This has proven to be true regardless of fertilization rate. "Although excessive populations put undue stress on plants, evidence indicates that more yield goals are missed by planting too httle rather than too much seed."

Narrow rows and high population rates, when used in combination with adequate fertility levels, earlier planting, and weed and insect control, are responsible for part of the upward corn yield spiral of recent years. Improved hybrids have contributed significantly.

There appears to be no good reason for a corn-soybean grower to plant any of his crop in rows wider than 30 inches, according to DeKalb's seed experts.

Narrow rows provide a full canopy earlier in the season and reduce evaporation and air movement which saves water. The canopy also shades weeds sooner which improves weed control.

In one three-year test conducted by DeKalb researchers, a harvest stand of 28,000 plants per acre in either 20 or 30-inch rows gave optimum yields with seven of the company's most popular hybrids. The hybrids were tested at harvest populations of 21,000, 28,000 and 35,000 plants per acre in 20, 30 and 40-inch row spacings. In all cases, the lowest yields were made in 40-inch rows at the 21,000 population. Highest yields came from the 20 and 30-inch rows, with little difference between them.

Fowler points out that these tests were conducted on excellent soil and in an excellent corn-growing area fertilized to produce 150 bushel per acre corn. At the 28,000 population, the average yield of the seven hybrids tested was 149 bushels per acre in 20-inch rows; 148 in 30's. At these same populations, the 40-inch rows yielded 10 bushels less corn per acre.

Fowler suggests these tips to help you get the desired stand:

• Be sure to drop enough seed. Not every seed will emerge, so set your planter to drop 10 to 15% more seed than the desired stand.

• When planting early, drop seed drop you Pa. egg production up 2 percent

the approximately 2,000 more kernels ids per acre thán you would normally.

Reason: Earlier planting results in smaller plants with less total leaf area per acre. So, for optimum yields, you can put down more seed per acre.

• Finally, calibrate your planter for each seed lot and for seedbed conditions. Then use the correct seed plate or planter setting and proper speed to get the seed drop you want.

HARRISBURG — March 1981 egg production in Pennsylvania totaled 377 million, according to the Pennsylvania Crop Reporting Service.

The March production was two percent above the 369 million eggs produced in March 1980.

The March average of 16.8 million layers was two percent above a year ago. Egg production per 100 layers was 2246 compared with 2240 in March 1980. The nation's laying flocks produced 5.98 billion eggs during March, 1981, less than one percent below the 6 billion produced a year ago. The number of layers for

March averaged 287 million, slightly above the 286 million last year. Egg production per 100 layers during the month was 2081 compared with 2079 a year ago.



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