

## Crops

# How could climate change affect corn planting dates?



## Field Notes

By Bill Pardee

**S**PRINGS seem to be getting earlier and warmer. This year, even my daffodils thought spring was springing in mid-February — in Ithaca, N.Y.

Long-term records show that grapes, apples and lilacs are flowering earlier, averaging four to eight days sooner than 50 years ago. (See March issue, page 8.) Growing seasons are getting longer at the rate of about one day a decade. While the change is not dramatic from year to year, its importance builds over time. And some scientists feel it may speed up.

Meanwhile, yearly variations from the average also may be increasing. For example, last May was one of the coldest on record, as was the spring of 2003. The summer of 2005 was the second-hottest on record while the summer of 2003 was one of the coldest.

So how should you play this in planning for this year? Bill Cox, Cornell Extension corn researcher, believes you should plant corn early, but not because of climate change.

Cox's planting date studies over many years consistently show that early planting brings

## Key Points

- Spring is arriving a week or more earlier than 50 years ago.
- With the increasing weather extremes, timeliness pays.
- New seed technology improves yields of earlier planting.



higher yields, as long as soils are dry enough for planting.

Even central New York usually has a "planting window" of good weather the last week in April or the first week in May. While it may shift a bit from year to year, it's nearly always there.

Regardless of whether you're farming in western Massachusetts or southern Maryland, or a little later farther north, the same early planting window exists — much earlier in the DelMarva's case. Corn planted during these windows will almost always beat later-planted corn.

**Be geared up, ready to go!** Being equipped to get planting done in a timely fashion pays

even more due to those yearly variations. The later you wait, the more likely you'll be rained out of the field.

Despite its reputation, April tends to have fewer showers and less rain than May. And, May averages less than June. Better to have May showers bring your crop up than keep you from planting.

You can't afford to miss the first window. If you do, you could be out of the field for another two weeks. In early May, you're losing serious yield for every day of delay.

Shift these dates 10 to 14 days earlier in southeast Pennsylvania and points south. Shift them a week earlier if you're in the Hudson Valley and northern Pennsylvania. Shift them a week later in Northern New York and New England.

## Key planting pointers

Here are some key pointers when planting:

■ Get seed into the moist zone. In general, set your planter to place seeds 1.5 inches deep if you're planting in April and 2 inches in May. If there's good reason to plant corn in June, place seeds 2.5 inches deep.

■ For silage, aim for harvest populations of 30,000 to 32,000 plants on fertile well-drained soils, and less on poorly drained or droughty soils.

■ Overplant by 15% in April,

10% in May and 5% in June to allow for emergence losses.

■ To plant early, confirm with your seed-corn dealer about best choices available. Be sure to use hybrids proven to start quickly in cold soils.

■ Long-season hybrids yield best if planted in late April or early May. They raise the highest silage yields, as long as they reach good silage maturity (midmilkline) by chopping time.

■ After May 15, shift to shorter-season hybrids for grain to reduce fall drying costs.

■ Soils are slower to warm in no-till and zone-till systems. April-planted stands may look ragged, but should still come through with top yields.

■ Modern corn genetics and seed treatments vastly improve the successes of earlier planting. Today's seeds can sit in cold ground for many days without succumbing to rots. They also tend to fare better, even in drought.

Several Midwestern states report rootworm problems in early-planted corn. Give special attention to rootworm control by genetics (Herculex or YieldGard hybrids), seed treatments (Poncho 1250) or soil insecticides (Lorsban, Counter, Force, Cruiser).

*Pardee, a retired Cornell Extension agronomist, has written for American Agriculturist for more than 36 years.*

## Investigate pros, cons of twin rows

By BILL PARDEE

**T**WIN-ROW planting is attracting much attention, particularly in the Corn Belt. Before you rush out and buy a twin-row planter, though, (just kidding), thoroughly investigate the costs and alternatives.

Twin rows are planted 7.5 inches apart on 30-inch centers. Cornell's Bill Cox tested them in on-farm silage trials, comparing them to narrow rows (15-inch spacing) and conventional rows (30-inch spacings).

Twin-row plantings beat 30-inch rows by 3.6% higher yield. But narrow rows beat twins by 3% and 30 inches by 6.6%.

Twin rows allow you to squeeze through with equipment for postemergence weed control and side-dressing. Both are tough to do in narrow rows.

## High equipment costs

However, the equipment costs are high. A twin-row Great Plains Precision Drill costs about \$83,000, versus \$62,000 for a 12-row Kinze planter for narrow rows. The Precision Drill also requires a 215-horsepower tractor; the Kinze, 170 hp.

You can harvest twin rows with a conventional chopper head. Narrow rows require a rotary harvesting head, adding \$18,000 to harvester costs.

A partial budget analysis suggests you could boost profits with twin rows if you approach 650 acres of silage corn, averaging 26 tons per acre. The more acres you harvest beyond that, the greater the profit gain.

Now comes the "slammer." You'll profit twice as much by shifting to narrow (15-inch) spacing since the yield gain is greater. That includes the rotary chopping head's extra cost, assuming it's needed. Many silage producers already have rotary chopper heads.

There was no difference in feeding quality between the systems. But narrow rows had about 1% greater dry matter content than twin and conventional rows did.

Do twin-row planters have a place on New York farms? Maybe. Maybe not.

Southview (dairy) Farm in Wyoming County has a Precision Drill and planted twin rows last year. Stay tuned; we'll tell you more.

## Crop Notes

### Match hybrids and N rates

**M**ATCHING nitrogen rates to hybrid potential isn't a new idea, but it's worth a lot more money this year with anhydrous and 28% solution nearly double year-ago prices.

What is new is that seed companies have much better assessments of hybrid N response. Make sure you're putting the most N on hybrids with greatest yield potential, says Chris Jeffries, president of Ohio-based Seed Consultants Inc. In some hybrids, extra N doesn't pay, he adds.

Here's one example, based on Seed Consultants' evaluations in Ohio and Indiana over seven years: SC1114 returned \$24 per acre for an extra 28 pounds of N, while SC1122 returned only \$2 an acre.

Hybrids from the same genetic family tend to respond to N in similar ways, says Jeffries. Genetic families that

flower early for their maturity have shorter grain fill and require less N. Although they tend to resist stress well, they're limited on upper-end yield. Genetic families with longer grain fill are larger N users and are most responsive to higher N rates. For some hybrids, it pays to add 100 more pounds of N, but with most, you can cut back 50 to 60 pounds.

Too little N can lower yields, decrease grain quality and increase stalk lodging, he cautions. Matching is the key and "is a tool to control input costs and cut expenditures."

### Hay growers get heads up

**S**INCE animal feeds fall under the Food and Drug Administration's definition of food, large and small commercial hay markets will be required to keep trace-back records, starting June 6 for commercial hay growers with 11 or more full-time employees and

Dec. 9 for smaller commercial operators.

Those records include: field each load comes from, truck(s) hauling it, and names and contact information of the driver and people who loaded and unloaded. The buyer's name and address, and arrival date, also must be recorded.

FDA's biosecurity rules also cover feed manufacturers, grain elevators, alfalfa processors and other entities that process or store farm products. Fortunately, most farms are exempt.

### Major soybean change begins

**I**N case you missed the news: In early December, Kellogg Co. announced its intention to switch from regular soybean oil to low-linolenic soybean oil. Reason: to eliminate trans-fatty acids in many of its food products.

Make a mental note of it, because it's the first major market change that's bringing an ex-

treme makeover of soybean plant makeup.

The Kellogg deal was struck via the action of Qualiso, a soybean-industry market-development collaboration. Kellogg will use Monsanto's LL Vistive oil and Nutrium oil from the Bunge/DuPont Biotech Alliance.

Close to 1 million acres are expected to be planted this year, projects John Becherer, Qualiso's CEO.

By late 2006, nearly 400 million pounds of low-lin soybean oil could be available to the food industry. More than 5 billion pounds are needed to replace partially hydrogenated soybean oils now used in this country.

Pioneer officials were asked whether soybean meal content might be impacted. Russ Sanders, director of quality traits, says: "Because of meal value's importance in the total-value proposition, we've worked to assure that LL soybeans meet the protein specifications of normal soybean meal."