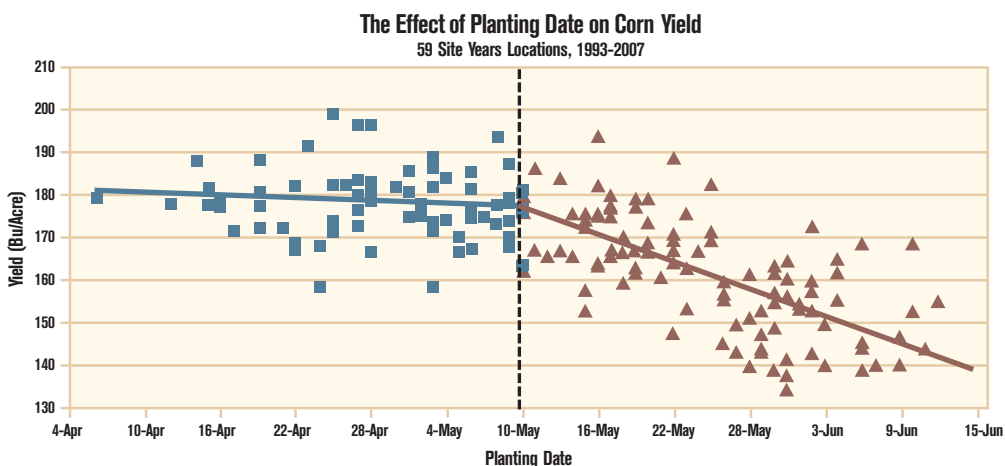


## Planting Date Research

Since the early 1990's, Syngenta Agronomy Research annually conducts corn planting date studies at multiple Corn Belt locations to determine the effect of planting date on corn yield as influenced by hybrid selection. The graph below summarizes those studies. The following information is intended to help make the best management decisions in years when planting is delayed or when replanting might be required.

- Planting date has minor influence on yield before May 10th.
- Expect an average loss of 1 bushel/acre/day for every day planting is delayed after May 10th.
- Yield potential of existing stand compared to replanted crop as well as frost date, grain moisture, grain drying and replanting costs should all be considered before making replant decisions.
- Yield loss due to delayed planting can be minimized through careful hybrid selection.



### 1 Replant Considerations: Productivity of Existing Stand

- Evaluate yield potential of existing stand compared to replanted stand:
  - Yield potential of the replanted stand must exceed that of the existing stand enough to offset replant expenses (see table below).
  - Replanting into existing partial stands will reduce replant yield potential.
- Use the table below to compare yield potential of an existing reduced stand to that of a later planted crop with a more desirable population.
- Large gaps in stand reduce yield potential even more than indicated in chart below; subtract another 5-6% from stand counts used for determining yield potential if you have gaps of 1-3 feet, subtract another 10-13% if gaps of 4-6 feet are present.



### 2 Replant Considerations: Productivity of Replanted Stand

- A replanted crop is still vulnerable to abnormal weather, soil-borne disease or insects as a result of late planting; carefully consider yield potential of marginal stands before making decisions.
- Second generation corn borer are attracted to late-planted corn; utilize hybrids containing the Agrisure® CB/LL trait in replant situations to minimize losses.

**Percent Yield Potential of Corn by Emerged Stand and Planting Date**

Established Stand	Planting Date				
	May 1 or Earlier	May 10	May 20	May 30	June 10
32,000	100	96	85	77	69
28,000	97	93	82	75	67
22,000	90	86	77	69	62
16,000	82	79	70	63	57
10,000	70	67	60	54	48

\* Results best indicate performance in yield environments of 150 bu/A or more with uniform plant spacing

### 3 Replant Considerations: Selecting the Replant Hybrid

Once the decision to replant to corn has been made, selecting the maturity of the new hybrid is important. Choose a hybrid that can reach maturity prior to first frost. Although the growing season has been shortened in replant situations, hybrids compensate for planting date and will reach black-layer within fewer Crop Heat Units than if planted earlier. There may not be a need to switch to earlier-maturing hybrids since the increased yield potential of a fuller season hybrid typically outweighs costs of drying grain. Refer to graph below to compare economics of different maturities and planting dates.

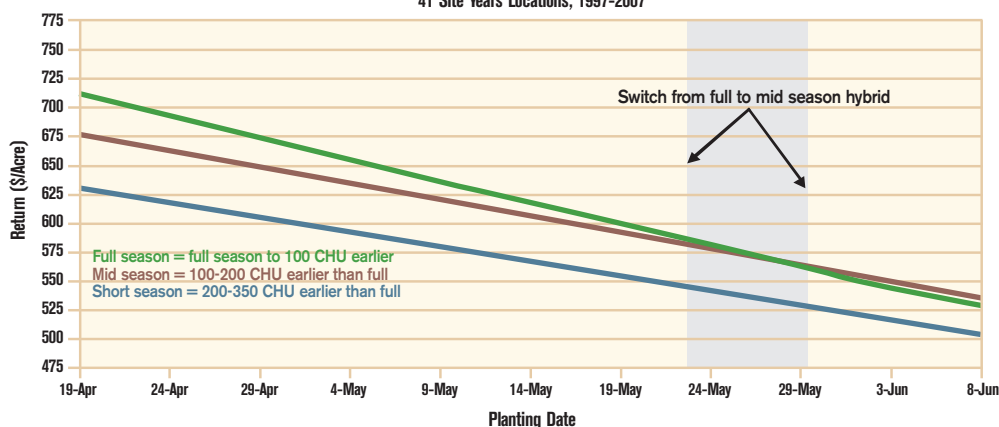
Gross Return of different maturity groups (Relative Maturities) is expressed in the following graph. Lines represent return (\$/A) results summarized over multiple years and locations.

### Final Recommendations

Based on drying costs, expected yield, and corn prices, Syngenta Agronomy Research suggests:

- Plant full-season hybrids adapted for a given area until the last week in May.
- Change to a mid-season hybrid (100-200 CHU earlier) the last week in May.
- Never switch to hybrids 200-350 CHU earlier than adapted full-season hybrid unless drying grain is not an option.

Effect of Planting Date on Gross Return in Dollars/Acre by Corn Maturity Group  
41 Site Years Locations, 1997-2007



Response to Late Planting Chart					
Hybrid Series	CHU	Rating	Hybrid Series	CHU	Rating
N15A	2575	++++	N34F	2950	+++
N16M	2600	++++	N41C	3000	++++
N23F	2700	++++	N40T	3000	++
N23K	2700	++++	N45A	3100	+++
N25N	2750	+++	N51T	3175	+++
N27B	2800	++++	N53W	3200	++
N29A	2850	++++	N64Z	3350	++

### Hybrid Series Response to Late Planting\*

Rating Symbol	Explanation
++++	Above average performance for delayed planting or replant.
+++	Average performance for delayed planting or replant.
++	Hybrid may not perform consistently for delayed planting or replant.
+	Hybrid not recommended for delayed planting or replant.

\* Late planting ratings reveal how hybrids perform in replant and/or delayed planting situations. They are based on yield of that hybrid planted during an optimal timing compared to the same hybrid at a mid-late June planting date.

Ratings apply to all hybrids with similar genetics.



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