



## Replanting Corn and Yield Loss

### When Should Replant Be Considered?

The replant decision is a tough call. Things to consider in this decision include:

1. **Productive Plant Population:** You will need to determine the productive plant population in several areas of the field to help estimate the potential yield of the field if left as is.
2. **Stand Uniformity:** If the productive plant population is not uniformly distributed within the row, additional yield loss will likely occur.
3. **Original Planting Date:** The original planting date plus the remaining productive plant population will be used to estimate the yield potential of the field.
4. **Likely Replanting Date & Target Plant Population:** These will be used to estimate the yield potential of the replanted field.
5. **Likely Replanting Costs:** The cost of replanting a damaged field often makes or breaks a replanting decision. Usual costs include seed, fuel (tillage and planting), additional pesticides, and additional dryer fuel.
6. **Expected 'Normal' Yields:** Estimates of the yield potentials of the damaged field and the replanted field are based on a percentage of 'normal' yield for the field in question. Unless you are excellent at predicting yields for the coming year, consider using a five-year average.
7. **Expected Market Price for Corn:** The dollar gain or loss by replanting obviously depends greatly on what you expect to receive for the grain this fall. The volatility of the grain market this year makes it especially difficult to plug in a value for determining a replant decision. Use your best guess.

### Plant Population?

Row length equal to 1/1000 acre for various row widths.

Row width	Row length equal to 1/1000 acre
20"	26' 1"
28"	18' 8"
30"	17' 5"
36"	14' 6"
38"	13' 10"
40"	13' 1"

To figure the plant population, use the chart at left:

- Using the chart, find the row width of your planter
- Using the chart, determine how many feet it takes to make 1/1000<sup>th</sup> of an acre (example: 30" = 17' 5")
- At multiple locations throughout the field, count the number of remaining plants in 1/1000<sup>th</sup> of an acre lengths
- Average your 1/1000<sup>th</sup> of an acre counts
- Multiply the average of your counts times 1000 for the average population in the field



## Stand Uniformity?

Corn plant skips or gaps in the field cause yield loss. Longer skips usually reduces yield more due to fewer plants, uneven plant placement or possible weed competition. The following chart lists the plant spacing at different row widths and plant populations.

- Corn plant spacing (inches) at four different plant populations and row widths

Row width (inches)	Plant population			
	18,000	22,000	26,000	30,000
30	11.6	9.5	8.0	7.0
36	9.7	7.9	6.7	5.8
38	9.2	7.5	6.3	5.5
40	8.7	7.1	6.0	5.2

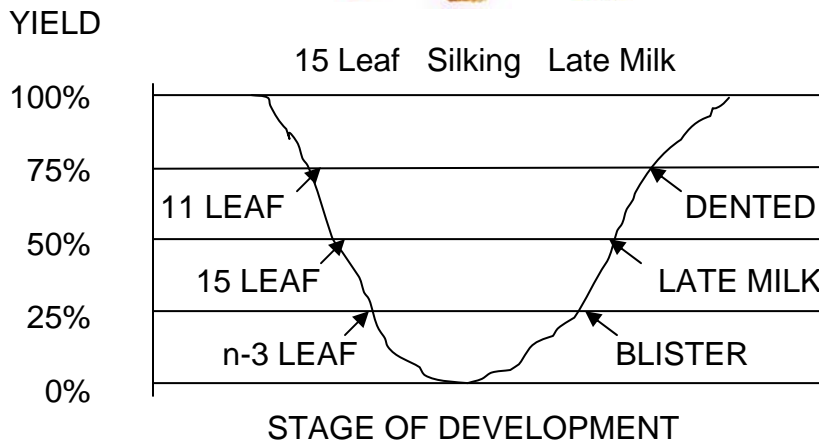
## Original Planting Date & Stand Compared To A Later Plant/Replant Date & Stand.

- Corn yield expressed as a percent of the optimum stand and date.

Plant Date	April 20 To May 5	May 20	June 1	June 10
Established Stand*	% Yield			
26,000 to 30,000	100	90	81	67
22,000	96	86	78	64
18,000	91	82	74	61
14,000	80	72	65	54
10,000	65	59	53	44

\* Assumes reasonably uniform stands. Source: G.O. Benson, Iowa State University

## If Corn Plants Are 100% Defoliated At Different Growth Stages, What Is My Potential Yield Loss?



CREDITS:  
Iowa State University  
Purdue University  
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