



Corn Replant Considerations

When corn stand loss occurs, replanting should be considered if the resulting yield increase will more than cover the cost.



Factors to consider in replant decision-making:

- Plant density of the current stand
- Uniformity and health of the current stand
- Date of original planting and potential replanting
- Costs associated with replanting
- Crop insurance provisions



Start by assessing the density and health of the current stand

- In situations such as flooding damage, only a portion of the field may need to be considered for replant
- Frost or hail can damage a wide area. In this case plant density and health should be assessed across the entire field

Replant Yield Potential

- The expected yield from the current stand should be compared to expected replant yield
- The table below shows yield potential for a range of planting dates and final plant populations.*

Planting Date	Plant Population (1000 plants/acre)						
	10	15	20	25	30	35	40
----- % of maximum yield -----							
April 25	57	70	81	91	97	100	100
April 30	57	70	80	90	96	99	99
May 5	57	69	79	89	94	97	96
May 10	56	68	77	86	92	94	93
May 15	54	66	75	84	89	91	90
May 20	52	64	73	81	86	88	87
May 25	51	63	71	79	84	86	84
May 30	49	61	69	77	82	83	81
June 4	45	56	64	72	76	77	75
June 9	40	51	59	66	70	71	69
June 14	36	47	54	61	64	65	63
June 19	32	42	49	56	59	59	57



Replanted areas in a field that experienced severe flooding damage in 2008

Profitability of Replant

Even if replanting will increase yield, the yield increase must be sufficient to pay for all of the costs associated with replant such as:

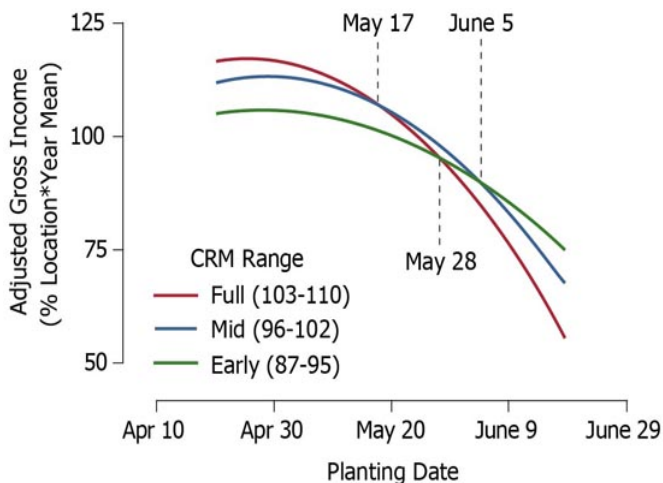
- Extra herbicide or tillage costs
- Planting costs
- Increased grain drying costs

Also consider these factors when making a replant decision:

- Probability of an autumn freeze prior to physiological maturity of replanted corn
- Increased susceptibility of late-planted corn to summer drought or disease and insect pests such as gray leaf spot and European corn borer

Hybrid Maturity for Replant

- The chart below shows the relative profitability of full-season, mid-maturity, and early maturity hybrids in 29 north-central Corn Belt environments over 17 years of Pioneer research.
- Results indicate that a grower may consider using a mid-maturity hybrid if replanting after May 17 and an early maturity hybrid if replanting after June 5.



Replanting to soybeans may be preferable after mid-June, but this will depend on soil-applied corn herbicides that were used

References

Carter, P.R., E.D. Nafziger, and J.G. Lauer. Uneven Emergence in Corn. North Central Regional Extension Publication No. 344

Hicks, D.R., S.L. Naeve, J.M. Bennett, and N.B. Bennett. The Corn Growers Field Guide for Evaluating Crop Damage and Replant Options. Univ. of Minnesota.

Lauer, J.G. 1997. Corn Replant/Late-Plant Decisions in Wisconsin (A3353). Univ. of Wisconsin-Extension.

* Replant yield data was interpolated from University of Illinois population response data (E. Nafziger, E. Adee, and L. Paul) and University of Minnesota planting date response data (Hicks et al.).