



UNIVERSITY OF WISCONSIN AGRONOMY, SOYBEAN RESEARCH, UNIVERSITY OF WISCONSIN-EXTENSION

Considerations for Switching Soybean Maturity Groups for Delayed Plantings

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Delayed corn planting coupled with frequent rainfall events and poor planting conditions have postponed soybean planting across many parts of WI. Since we are rapidly approaching the hybrid maturity switch date for corn in southern WI (May 20th, given 2014 costs and prices) three common questions have arisen regarding soybean plantings. These are:

1. When during the planting season should a producer switch to an earlier maturing soybean variety?

In southern Wisconsin, full season soybean varieties (>1.8RM) out yielded earlier maturing varieties (<1.8RM) by 15 bu per acre at early May planting dates compared to only 2 to 5 bu per acre at late May planting dates. In northern Wisconsin, late maturing varieties (1.7 to 1.9RM) also out yielded early maturing varieties (<1.7RM), however the difference was not as great. **Switching to an earlier maturing variety when planting after the first week of June will reduce the chance of damage from an early fall frost** (Fig. 1.). Unfortunately growers will realize a yield penalty if they choose to move to an earlier maturity groups and lowered seeding rates (Table 1.). It is also important to note that if you do choose to switch to an earlier maturity group soybean, do not use a variety that is more than 0.5 RM earlier than you normally would plant.

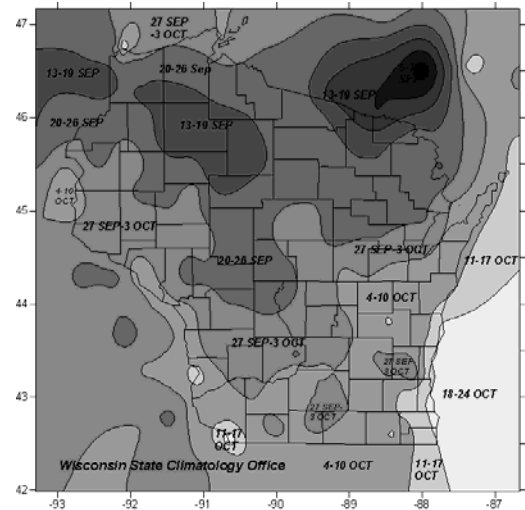


Figure 1. Median frost date for WI.

2. When is the latest soybeans can be planted in Wisconsin and still expect a grain yield?

Research from the 1990's in southern Wisconsin indicates that in two out of three years, grain can be harvested from soybeans planted as late as June 26, although the yields are usually minimal and not generally economically feasible. The frequency of harvesting grain from soybeans planted this late can be increased by using early maturing varieties (<1.8RM) in southern Wisconsin, and <1.0RM in northern production areas. A planting date of June 20 in southern Wisconsin and June 15 in northern Wisconsin, using early maturing varieties, was considered to be the latest practical date. However today's grain prices coupled with opportunities for late-season discounted treated soybean seed may entice growers to push the planting date window in 2014.

3. What should my target plant population be in my late planted soybeans?

To maximize yield potential in late planted soybean, growers should target a stand of 180,000 plants per acre in row spacing's ≤ 20 inches. Wider row spacings and reduced plant stands will lead to reduced yield potential due to decreased canopy development. Planting too few seeds can also lead to a lower physical pod set and harvest issues. To achieve 180,000 plants per acre a grower may have to plant up to 200,000 seeds per acre (assuming 90% germ).

Table 1. Expected relative soybean yield at four replanting dates compared to predicted yields for a range of plant populations resulting from an optimum planting date of May 1-20 for full season maturity or short season maturity varieties.

Early plant population ppa x 1,000	Initial planting (May 1-20)	Replanting date								
		June 1		June 10		June 20		July 1		
-----% of maximum yield-----										
200	100	86	89	90	75	75	68	67	61	60
180	98	85	88	87	75	72	66	64	63	60
160	97	84	87	84	73	70	64	61	63	58
140	95	83	85	81	72	67	62	57	62	56
120	93	81	82	78	70	65	59	53	60	52
100	91	80	80	76	67	63	57	49	56	47
80	88	79	77	73	64	61	54	44	51	40
60	86	78	73	70	61	60	51	39	44	33
40	83	77	69	67	57	59	47	34	35	25

* Figures in bold italics are for shorter season maturities.