



FEFO 09-10
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EVALUATING ECONOMIC ALTERNATIVES FOR LATE PLANTING

Adverse planting conditions this spring have again resulted in late plantings across much of Illinois. While a great deal of progress has been made in the past week, there are still fields that have not been planted. In this paper, cropping decisions given late planting are discussed.

The Alternatives

Farmers who have not planted on fields scheduled for corn have three options:

1. Plant corn. Under this option, corn yields are expected to be lower than corn had been planted timely. In addition, insurance guarantees will be lower if an APH, CRC, or RA insurance policy has been purchased and the final planting date has been reached (June 5 for most of Illinois, May 31st for the seven southern most counties in Illinois).
2. Plant soybeans. Expected yields likely have not been reduced as much as corn. In addition, insurance guarantees for APH, CRC, and RA insurance policies will not be reduced until the final planting date has been reached for soybeans (June 15th for northern Illinois and June 20th for southern Illinois).
3. Take a prevented planting payment. Farmers who have APH, CRC, and RA policies can take a prevented planting payment for corn once the final planting date has been reached. In most cases, the prevented planting payment is 60 percent of the guarantee offered by the insurance policy. Farmers should consult with their insurance agents, as there are rules to follow to insure prevented planting payments.

The above decisions will have crop insurance implications. Again, farmers should discuss these alternatives with their crop insurance agents. Further resources available on *farmdoc* include papers entitled "Late Planting and Crop Insurance", "Crop Insurance: Prevented Planting, Final Planting Dates, and the Late Planting Period", "Crop Insurance/Cropping Decisions when No Crop Has Been Planted and a Farm-level Crop Insurance has been Purchased", and "Crop Insurance/Cropping Decisions for Corn with Questionable Stands and a Farm-Level Insurance Policy has been Purchased". (Please see *FEFO 09-09* to download these resources)

Evaluating the Alternatives

A FAST tool (Microsoft Excel spreadsheet) has been developed to aid in evaluating the above three alternatives (see Figure 1). This spreadsheet is named 'Late Planting Evaluator'. (Please see the .html version of *FEFO 09-10* to download the FAST tool)

In this model, the expected returns from 1) planting corn, 2) planting soybeans, and 3) taking a prevented planting payment are evaluated. Users need to input expected yields, expected prices, insurance policies, and costs yet to be incurred. Budgets with cost levels are included as defaults.

The "correct" decision will vary with each situation. Some items that will have a large impact on expected returns from the alternatives include:

1. Costs yet to be incurred. Some farmers have incurred most of the costs for corn. For example, some farmers have applied nitrogen, therefore that cost will exist whether corn, soybeans, or prevented planting is chosen. In this case, the budgets in Figure 1 should include \$0 for nitrogen. Other farmers have not applied nitrogen. In this case, the cost of nitrogen should be included for corn. The example in Figure 1 assumes that nitrogen has been applied. Including a cost for nitrogen likely shifts expected returns in favor of corn production.

2. Crop policy chosen. Farmers who have purchase APH, CRC, and RA can take prevented planting. Prevented planting payments are higher for higher coverage levels. Therefore, farmers choosing higher coverage levels likely will find prevented planting more attractive.
3. Yield expectations. Expected yields given late planting will have a large impact on the economics of the alternatives. To aid in forming yield expectations, the Microsoft Excel spreadsheet includes a section that estimates expected yields based on research conducted by Emerson Nafziger, Department of Crop Sciences, University of Illinois (see Figure 2). Defaults give yield declines for three regions of Illinois based on county choice in Figure 1. Users need to enter expected yields on May 1. Moreover, users can override these yield losses if desired. As planting delays continue, corn yields decline faster than soybeans. Hence, later delays favor soybean planting.

Summary

Budgeting will aid in making late planting decisions. The 'Late Planting Evaluator' FAST tool will aid in making these decisions. (Please see the .html version of *FEFO 09-10* to download the FAST tool).

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Figure 1. Prevented Planting Options After the Final Planting Date

County: **Madison**

Option	\$ per Acre
Plant corn	\$351
Plant soybeans	\$283
Take prevented planting payment ¹	\$305

	Plant corn	Plant soybeans	Prevented planting
Insurance policy			
Type	CRC	CRC	
APH yield	160	49	Prevented Crop corn
Base price	\$4.04	\$8.80	
Date planted	Before 6/6	Before 6/21	
Coverage level	80%	80%	
Guarantee	\$582	\$416	
Revenue per acre			
Yield (bu. per acre)	141	41	
Harvest price	\$4.55	\$10.60	
Basis	-\$0.45	-\$0.50	
Cash price	\$4.10	\$10.10	
Crop revenue	\$577	\$414	
Insurance revenue	0	0	349
Crop and insurance rev.	\$577	\$414	\$349
Costs yet to be incurred			
		<i>Budget Defaults</i>	<i>Budget Defaults</i>
Direct costs			
Fertilizers	0	0	0
Pesticides	25	15	6
Seed	80	40	0
Drying	15	1	0
Storage	0	0	0
Crop insurance	35	15	35
Power costs			
Machine hire	5	5	3
Field cultivate	9	9	0
Plant	10	10	0
Spray	3	3	0
Combine	35	30	0
Trucking	9	3	0
Costs yet to be incurred	\$226	\$131	\$44
Revenue less costs	\$351	\$283	\$305

1 Assumes a CRC or RA policy has been purchased. Prevented planting payments are not available for GRP, GRIP, or CAT policies. Prevented planting is available for APH but is not modeled here.

Figure 2. Projected Yields

Expected yield on May 1	200	55
Daily yield loss between		
May 1 through 10	1.0	0.00
May 11 through 20	1.4	0.10
May 21 through 31	2.0	0.23
After June 1	2.2	0.42

Default yield losses from Nafziger, Emerson. *Illinois Pest Management Bulletin*. University of Illinois.

("Corn Planting Date Revisited", April 10, 2009), ("Soybeans from April Showers Bring May ...", May 1, 2009)

Planting Date	Plant corn		Plant soybeans		corn
	Yield	Net Rev	Yield	Net Rev	Prevented planting Net Rev
6/6	140.8	\$351	49.0	\$363	\$305
6/7	138.6	\$342	48.5	\$359	\$305
6/8	136.4	\$333	48.1	\$355	\$305
6/9	134.2	\$324	47.7	\$351	\$305
6/10	132.0	\$315	47.3	\$346	\$305
6/11	129.8	\$306	46.9	\$342	\$305
6/12	127.6	\$297	46.4	\$338	\$305
6/13	125.4	\$288	46.0	\$334	\$305
6/14	123.2	\$279	45.6	\$329	\$305
6/15	121.0	\$270	45.2	\$325	\$305
6/16	118.8	\$261	44.8	\$321	\$305
6/17	116.6	\$252	44.3	\$317	\$305
6/18	114.4	\$243	43.9	\$312	\$305
6/19	112.2	\$234	43.5	\$308	\$305
6/20	110.0	\$225	43.1	\$304	\$305
6/21	107.8	\$216	42.7	\$300	\$305
6/22	105.6	\$207	42.2	\$296	\$305
6/23	103.4	\$198	41.8	\$291	\$305
6/24	101.2	\$189	41.4	\$287	\$305
6/25	99.0	\$180	41.0	\$283	\$305
6/26	96.8	\$171	40.6	\$279	\$305
6/27	94.6	\$162	40.1	\$274	\$305
6/28	92.4	\$153	39.7	\$270	\$305
6/29	90.2	\$144	39.3	\$266	\$305
6/30	88.0	\$135	38.9	\$262	\$305
7/1	0.0	\$0	38.5	\$257	\$305
7/2	0.0	\$0	38.0	\$253	\$305
7/3	0.0	\$0	37.6	\$249	\$305
7/4	0.0	\$0	37.2	\$245	\$305
7/5	0.0	\$0	36.8	\$240	\$305
7/6	0.0	\$0	36.4	\$236	\$305
7/7	0.0	\$0	35.9	\$232	\$305
7/8	0.0	\$0	35.5	\$228	\$305
7/9	0.0	\$0	35.1	\$223	\$305
7/10	0.0	\$0	34.7	\$219	\$305
7/11	0.0	\$0	34.3	\$215	\$305
7/12	0.0	\$0	33.8	\$211	\$305
7/13	0.0	\$0	33.4	\$206	\$305
7/14	0.0	\$0	33.0	\$202	\$305
7/15	0.0	\$0	32.6	\$198	\$305
7/16	0.0	\$0	32.1	\$0	\$305
7/17	0.0	\$0	31.7	\$0	\$305