Prevented Planting Calculator Released as Part of FAST Planting Decision Model

Gary Schnitkey

Department of Agricultural and Consumer Economics
University of Illinois

June 8, 2011

A prevented planting calculator is available from *farmdoc* that compares net returns from prevented planting, planting corn, and planting soybeans. The calculator is part of our FAST decision series which are Microsoft Excel spreadsheets. The calculator is called the "Planting Decision Model" and can be downloaded from the *FAST* section of *farmdoc* or can be directly download from here .

The nearby graphic shows a screen shoot of the main section of the calculator. All input are in blue. The calculator has two main sections 1) net returns from prevented planting and 2) net returns on planting corn and soybean.

Net returns from prevented planting	Corn	Soybeans
COMBO plan	RP	RP
Coverage level	80%	80%
APH yield (bu. per acre)	150	45
Projected price ($ per bu.)	$6.01	$13.49
Prevented planting factor	60%	60%
Final planting date	6/5/2011	6/20/2011
Prevented planting payment	$433	$291
Weed control costs	15	15
Crop insurance premium	17	12
Net returns ($ per acre)	**$401**	**$264**

Net returns on plant corn or soybeans	Corn	Soybeans	
Planting date	6/8/2011	6/8/2011	
Insurance guarantee	786	499	
Maximum yield (bu. / acre)	180	50	
Percent of max	65%	87%	
Expected yield	116	44	Use default
Expected harvest price	$6.75	$13.85	
Basis	-$0.30	-$0.30	
Expected cash price ($ /bu.)	$6.45	$13.55	
Crop revenue	$751	$590	
Crop insurance payment	0	0	
Revenue ($ per acre)	**$751**	**$590**	
Direct costs ($ per acre)			
Fertilizers	123	50	
Pesticides	50	40	
Seed	90	55	
Drying	24	0	
Storage	11	5	
Crop insurance	17	12	
Power costs ($ per acre)			
Machine hire	9	9	
Field cultivate	9	9	
Plant	12	12	
Spray	3	3	
Combine	35	30	
Trucking	12	6	
Costs yet to be incurred	**$395**	**$231**	
Expected net returns ($ per acre)	**$356**	**$359**	

Net returns from prevented planting

The "net returns from planting" section requires input that details the insurance plan selected. This includes the name of the plan, coverage level, APH yield, projected price, and prevented planting factor. In the example, a 60% prevented planting factor is used. At signup time, a farmer could have chosen to buy-up prevented planting coverage to either 65% or 70%. Buy-up prevented planting coverage comes with higher premium.

1. Final planting date is the date at which prevented planting can be taken and the date at which insurance guarantees begin to decline. Final planting dates are county specific. Users entered their county in earlier input.
2. Prevented planting payment equals coverage level times APH yield times projected price times prevented planting factor.
3. Net returns equal prevented planting payment minus costs of taking prevented planting. Net returns from prevented planting can be compared to planting corn or planting soybeans.

Net returns from planting corn or soybeans

In this section, net returns from planting corn and planting soybeans are estimated. A user enters yields, prices, and incremental costs. Main features of this section include:

1. Insurance guarantee is calculated and will decrease once the final planting date has been reached. The insurance guarantee is reduced one percent for each day planting takes place after the final planting date. The guarantee reaches its low point of 60% of the initial guarantee after 25 days have passed from the final planting date. The "planting date" input determines the guarantee reduction.

2. Expected yield is estimated by the model to equal maximum yield times percent of max. The percent of max is estimated by input not shown in the graphic. Users can override the expected yield estimated by the calculator.

3. Crop insurance payments are estimated by the model based on the insurance policy selected, as well as expected yield and expected harvest price.

4. Revenue equals crop revenue plus crop insurance payment.

5. Incremental costs should be entered. These give costs that will be incurred if planting takes place. Note that costs has been incurred already should not be entered. An example is nitrogen fertilizer. If nitrogen fertilizer has been applied, its costs should not be included.

6. Expected net returns are useful for comparison. Planting corn is projected more profitable than prevented planting when expected net returns from planting corn exceed net returns from prevented planting, and vice versa.

Not shown in the graphic are sensitivity tables. The model includes two sensitivity tables, one for corn and one for planting soybeans. The sensitivity tables show net returns for different harvest prices and actual yields.