# Cost of Planting Corn vs. Cutting First-Crop Alfalfa

With the late start to the planting season we will probably be forced to make a decision when first cutting approaches. Do we keep planting corn or harvest first cutting? Modern equipment makes it much easier to plant and/or harvest a lot in a day, so the effects of this decision may be less of a challenge, depending on weather.

## Considerations

1. Delaying alfalfa cutting past ideal first-crop harvest timing reduces both the quality and quantity (lodging). Subsequent crops are also delayed, making timely harvest of the last crop before fall more difficult.
2. Delaying corn plantings past mid-May reduces yield potential, whereas quality is generally less affected.
3. Use of a Sila-Bac® brand Fibre Technology inoculant could be of benefit if the choice is to continue planting corn.

In many cases, there is not a clear-cut answer. If only you knew what the weather was going to do! And even with current corn and alfalfa prices being below last year's prices, these trade-offs can still have significant effects on overall profitability.

## Delaying First Cutting Harvest

Delaying alfalfa harvest one day can cause an average drop of four RFV points. At $0.70 to $1.25 per point of RFV, a four-point drop results in a loss of $2.80 to $5 per ton. If harvest weights average four tons per acre (first cutting) then the loss is $11.20 to $20 per acre per day.

Also, don't forget that delaying first-crop harvest means all subsequent crops are delayed as well, which could be an issue when trying to get that last crop harvested in the fall.

## Delaying Corn Planting

Corn yield loss is two to three bushels per day after May 10-15th, which means the loss is a minimum of $9 to $14 per day per acre, figuring $4.50 per bushel corn.

With relatively lower corn prices, it would be an easy decision to harvest high-quality haylage for top-end cows then go back to planting corn. However, if corn prices were to increase significantly, this would be a more difficult decision.

Once you get back to planting corn, is it better to switch to shorter-season hybrids or hold on to what you have? The switch to earlier hybrids is not as critical for silage as it is for grain. However, an early frost can make a mess of immature corn at chopping time.

When contemplating this decision, consider the data in figure 1. This shows silage harvest yields for Pioneer® hybrid P0210HR over a month long planting window with no significant yield or quality differences. (Note that these data points are from multiple locations, and weather will play a significant role.)

Another tool that can be utilized is the DuPont Pioneer Field 360™ Tools App. (figure 2). This app will allow you to input a planting date for your location, and based on 2013 and historic weather data, it will display an approximate silking and blacklayer date.

Figure 1.

SILAGE VS. Planting Date

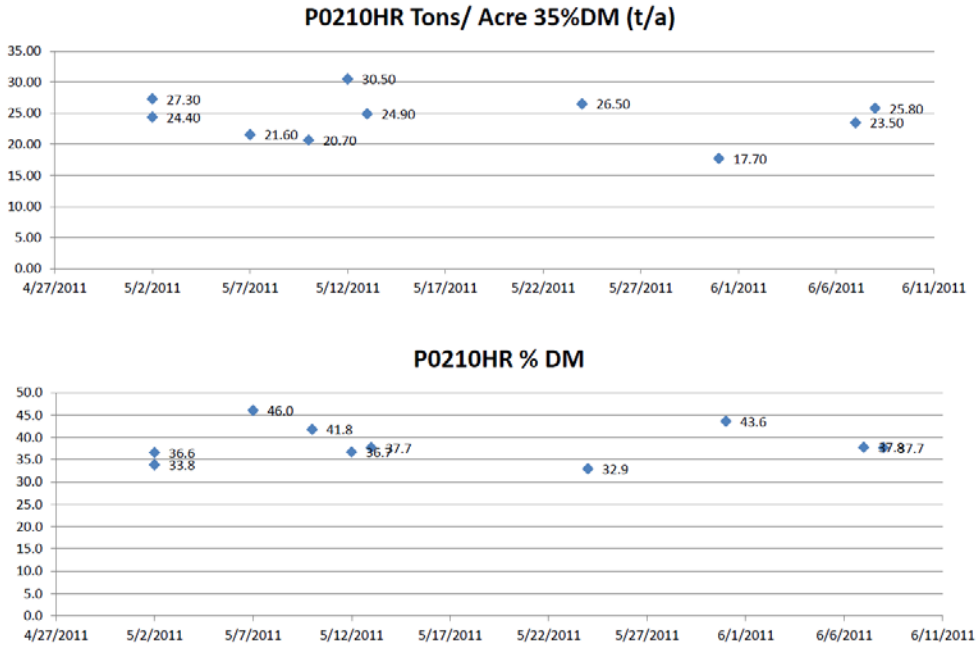
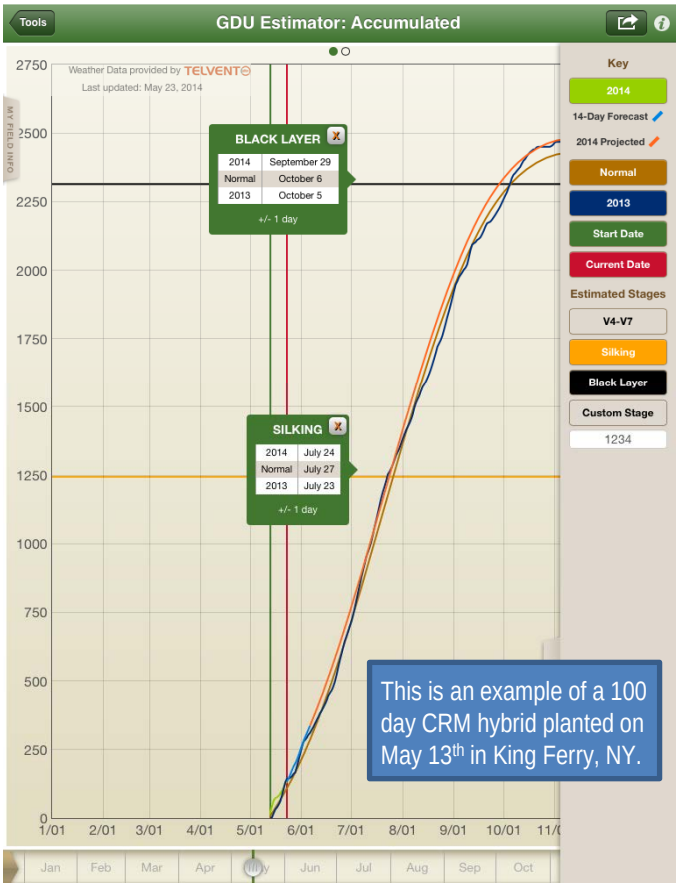


Figure 2.

DuPont Pioneer Field360™ Tools App




## Nutritional Factors

It is generally easier to offset a reduction in corn silage or grain yield than it is to make up for the milk production losses of feeding poor-quality haylage. Thus, attempting to get haylage harvested on time is probably the best option overall.

First cutting can be a significant portion of a dairy's forage supply. Even with increased corn silage in rations, there is still a significant amount of alfalfa haylage fed. While late planted corn could have a yield loss factor, late-harvested alfalfa has both yield (lodging) and quality loss consequences.

Don't forget the feeding implications of poor-quality feeds. Besides lower nutrient values, what about the lower dry matter intake that often results from lower-quality forage? Three to five pounds less milk from feeding poor-quality alfalfa would weigh heavy on the decision to park the planter and mow.

If choosing to continue planting corn is the course of action, then a good management strategy would be to utilize Sila-Bac® inoculant 11AFT or 11GFT to capture some of the lost feed quality. Figure 3 shows data from a 2013 study comparing haylage inoculated with Sila-Bac inoculant 11H50 vs. Sila-Bac inoculant 11AFT. The study showed that even though 11AFT treated haylage had lower NIR quality, the Fermentrics™ analysis demonstrated that 11AFT haylage had better rates of digestion for all three CHO pools, it reached peak digestion faster, and produced more microbial biomass. The analysis also showed an efficient fermentation and increased aerobic stability due to the *L. buchneri* strain.

Figure 3. Nutrition and Fermentation Averages from Two Cooperative Dairy Farm Alfalfa Silage Samples

| | Sila-Bac® inoculant 11AFT | Sila-Bac® inoculant 11H50 | Average Difference | % Increase |
|---|---|---|---|---|
| **Nutritional – Dairyland NIR Analysis** | | | | |
| Moisture | 61.5 | 58.4 | 3.07 | |
| Dry Matter | 38.5 | 41.6 | -3.07 | |
| Crude Protein, %DM | 18.6 | 17.9 | 0.71 | |
| Adj. Crude Protein, %DM | 17.0 | 16.3 | 0.70 | |
| Bound Protein %ADIN/%TN | 8.7 | 9.1 | -0.38 | |
| Soluble Protein, %CP | 55.4 | 52.2 | 3.22 | |
| ADF, %DM | 40.7 | 39.2 | 1.45 | |
| NDF, %DM | 48.9 | 48.3 | 0.59 | |
| Lignin, %DM | 8.7 | 8.2 | 0.49 | |
| NE-L, (Mcal/lb DM) | 0.56 | 0.57 | -0.01 | |
| Ash, %DM | 9.9 | 9.7 | 0.19 | |
| Fat, %DM | 3.5 | 3.5 | -0.03 | |
| Sugar, %DM | 2.2 | 2.4 | -0.28 | |
| NFC, %DM | 21.1 | 22.5 | -1.44 | |
| RFV | 109 | 112 | -3.65 | |
| RFQ | 90 | 101 | -11.06 | |
| **Digestion – Dairyland NIR Analysis** | | | | |
| % NDFD (24-hour, %NDF) | 31.4 | 35.6 | -4.27 | |
| **Digestion – Fermentrics™ Gas Fermentation Analysis** | | | | |
| Starch (C:B1) Pool Kd, %/h | 16.7 | 12.6 | 4.10 | 25% |
| Soluble fibre (C:B2) Pool Kd, %/h | 35.5 | 26.8 | 8.73 | 25% |
| Slow (C:B3) Pool Kd, %/h | 3.97 | 3.40 | 0.58 | 15% |
| Fast (C:B1) Pool, time to max rate, hrs | 1.50 | 2.00 | -0.50 | 30 min |
| Slow (C:B3) Pool, time to max rate, hrs | 13.5 | 15.5 | -2.00 | 2 hours |
| Organic Matter Disappearance, % | 48.5 | 44.1 | 4.34 | 9.7% |
| Microbial Biomass Production, mg/g | 152 | 144 | 8.00 | 5.5% |
| **Fermentation – Dairyland NIR Analysis** | | | | |
| pH | 4.53 | 4.40 | 0.13 | |
| Lactic acid %DM | 3.97 | 5.35 | -1.38 | |
| Acetic acid %DM | 1.92 | 0.96 | 0.96 | |
| Ammonia nitrogen, %CP | 6.33 | 5.24 | 1.10 | |

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