Cornell CALS College of Agriculture and Life Sciences

PRO DAIRY Education & Applied Research

Forage Management **PD-2022-07-02**

Record silking/tasseling dates for corn fields

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Tracking Growing Degree Days (GDD's) is an effective way to monitor the progress of a corn crop and in recent years a number of online tools to track GDD's were developed. For the Northeast, the Climate Smart Farming GDD tool from Cornell is a great option. Dr. Kitty O'Neil with the North Country Regional Ag Team prepared an instructional video to use the tool. While this tool was designed to estimate GDD accumulation from planting, you can simply enter in silking/tasseling date in the planting date box to track accumulation from that date.

One approach to predict corn maturity with GDD's is to monitor GDD's from planting to harvest and some seed brands provide estimates of GDD's needed for different hybrids. For corn, the 86/50 method is used to calculate GDD's. This references a base temperature of 50°F and a maximum of 86°F.

A few considerations to keep in mind:

- The numbers provided for a hybrid are often from planting to physiological maturity (black layer) which is past the silage stage. A rough rule of thumb is to subtract 150 GDD's from this number to estimate the number needed for silage harvest.
- Studies have shown a fair amount of variation in the GDD's required from planting to silking, which could be exacerbated by the variable weather conditions experienced so far in 2022.

Research in NY by Dr. Bill Cox assessed the number of GDD's required from silking to silage harvest timing in a multi-year study. While there is still some variability in GDD requirements from silking to silage harvest timing, this method offers better results than using full season numbers as it takes out the early season variability of GDD's needed from planting to silking. The average GDD's reported in the study are shown in Table 1.

TABLE 1: Approximate Growing Degree Days needed from silking to silage harvest

Hybrid Relative Maturity	**GDD's (86/50)**
101-110	800
96-100	750
<96	750 or slight less *(extrapolated)*

This study used 32 percent whole plant dry matter (DM) as the target for silage harvest; however, a better target is 35 percent whole plant DM. Therefore, the GDD targets reported in the study offers a sort of early warning for harvest. Once corn begins the dry down process an average rate of dry down is 0.5 percent per day (with a range of zero to one percent per day) indicating that the crop may reach 35 percent DM approximately six days after reaching these GDD targets for 32 percent DM.

When a field reaches these GDD targets, it is a good time sample fields and dry down samples for whole plant DM to further refine harvest timing.