Wisconsin Alfalfa Yield & Persistence (WAYP) Program 2009 Summary Report

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PROGRAM OBJECTIVES

1. To verify the yield and quality of alfalfa harvested from production fields over the life of the stand beginning with the first production year (year after seeding).
2. To quantify decreases in stand productivity of alfalfa fields as they age.

2009 OVERVIEW

UW-Extension agents were asked to identify forage producers who would be willing to weigh and sample forage from a 2008-seeded field and continue to do so for the life of the stand. Eight such fields were identified on six separate farms. Also included in this summary are the data for the 2nd and 3rd production years from fields entered into the program in 2007 (2006 seedings) and 2008 (2007 seedings). As is always the case in these types of studies, there is some attrition of fields over time. This is usually the result of not being able to obtain critical yield or forage quality data for a cutting or multiple cuttings. In total, production data was collected from 23 fields in 2009.

2009 WEATHER

Cool and dry were predominant weather patterns across most of the state in 2009. In fact, it was a record cool growing season in many regions. Extended stretches of dry weather made it easy to schedule alfalfa harvest but yield potential was reduced in many areas, especially for cuttings taken in late-July and early-August. A wet and cool October did not lend itself to any late-fall harvests.

2008 WEATHER

May was extremely dry across much of the state. Heavy and frequent rains during early June were the predominant weather anomalies in 2008. In some cases, this caused a delay in first-cut harvest date and in one case resulted in the forage being chopped back onto the field. Dry weather returned later in the summer. Overall, the growing season was below normal for growing degree units.

2007 WEATHER

Weather conditions varied across locations. A frost in early April delayed initial spring growth at several locations. All sites experienced some degree of dry conditions during the growing season. Drought was especially severe in western Wisconsin.

DATA COLLECTION

Project fields were identified and an accurate measure of field size was determined (if not previously calculated). Forage yield from an entire project field was weighed (usually this was done with an on-farm drive-over scale). Both empty and full weights for all trucks/wagons used were recorded. Beginning in 2008, two forage samples from each harvest were taken and submitted to the Marshfield Soil and Forage Analysis Laboratory (only one sample was submitted per harvest in 2007) for NIR analysis. Data from the two forage samples was averaged and recorded by the local coordinator. Information was inputted into a spreadsheet and shared with the producer following each harvest. At the end of the season, all data was collected and summarized for this report.

FORAGE DRY MATTER YIELD

Weather conditions across most of the state did not accommodate high total season DM yields in 2009. This was the first year when no project field exceeded 6.0 tons DM/ac for the total season. The mean average yield was ~4.0 tons DM/ac, well below the average yield of 2007 and 2008. This decline can be attributed to weather conditions, the inclusion of six 3rd production year fields in the overall average, and the lack of any fields cut five times. First-cut DM yield was actually slightly higher than that obtained in 2007 and 2008. Third cutting, primarily harvested in late-July and early-August, was exceptionally poor (average of only 0.6 tons/ac) across the state. In fact, only two of the 23 measured fields had a 3rd-cut yield of over 1 ton/c. Fourth cutting yields were about the same as those obtained in 2007 and 2008. A comparison of 1st, 2nd, and 3rd production year fields cut four times in 2009 shows a steady decline in overall yield. Most of the difference can be attributed to first-cut yield between the three stand ages. As is always the case, there is extreme yield variability between fields that can be attributed to cutting schedule and environment.

SUMMARY

The WAYP is designed to provide forage growers and agricultural professionals a unique look at what is happening at the farm level. As more fields are entered and years pass, the reliability of information increases. It is important to keep in mind that only three years of data have been collected. Nevertheless, the information presented here can be contrasted and there certainly is enough information to begin to formulate possible trends and topics for discussion. Producers interested in being in the project should contact Mike Rankin (michael.rankin@ces.uwex.edu).