

Monthly Newsletter – July 2021

Grain:

Mid-Season Agronomy Reminders

Farms all across northwest Ohio are starting to see more weed pressure in their fields at this time of year. We are at the point in the growing season when residual herbicides are starting to wear off



and the more competitive plants are showing up. One of those plants is palmer amaranth, but a more prominent weed in the northwest Ohio area is waterhemp. Waterhemp is mainly seen in soybean fields and harvested wheat fields where the crops are shorter. Waterhemp can be identified by its leaves, which are without hairs, are oval to lanceolate in shape, and have a waxy appearance. One waterhemp plant can grow up to 1 inch per day and produce 1 million seeds. The impact of waterhemp can be very harmful for corn and soybeans; reducing soybean yields by up to 44% and corn yields by up to 15% according to Perdue University Extension.

To manage a weed that can have such a large impact on crop yields, agronomists suggest applying a residual at the beginning of the crop year, followed by a second application when the mid-season herbicides, such as glyphosate or glufosinate, are applied. The reason that residuals are suggested for stopping waterhemp is because it is a resistant weed that can get out of control if they are not dealt with properly. It is important for all farmers to participate in this fight against the weeds and other pests so that chemicals do not lose their effect and become useless for future generations. Waterhemp produces a very large number of seeds per plant and the seeds can remain dormant underground for years, waiting for the ideal conditions for them to grow. It is important that farms begin looking ahead for the 2022 crop year and working with their agronomist on making a plan for pest management.

An additional value to applying a residual herbicide is that it helps with another weed that is known in the northwest Ohio area: marehail. Applying a residual herbicide near the planting stage and again mid-season will assist with this hard to control weed.

For farmers who have taken off wheat, it is time to consider soil sampling those fields so that you and your agronomist can work on a fertilizer plan for the 2022 growing season. Soil samples should be taken every 2-3 years according to many sources. This ensures that the farmers and the agronomists have a firm handle on what nutrients to apply so that they will be most financially and environmentally efficient.

Feed:

Forage Testing for Greater Profits

Forage testing is an inexpensive way to be sure animals are being fed properly. Are you testing your forage quality?

For nearly four decades scientists have been refining their ability to test forage quality. This has been done in an effort to improve animal nutrition and, consequently, animal production. Analytical procedures that previously required a week, or more, to complete can now

be done in less than 10 minutes and with more accuracy than before. As the ability to analyze forages has improved, the understanding of how to use the test results to improve animal efficiency and performance has also improved. Unfortunately, though, forage quality testing is a valuable management tool that many livestock producers still do not utilize. For a more in-depth explanation of the forage sampling and analysis process, look at the Penn State article on Forage Quality and Testing.

Greater net profit is the bottom line for why livestock producers need to know the quality of the forages they are feeding. If forages are not tested, animals may underperform due to a lack of awareness about nutrient deficiencies in the diet they are receiving. Conversely, forage quality may be higher than is necessary for a particular animal group, resulting in excess nutrients passing through the animals and being wasted. The forage may be better suited for a different animal group or in a different combination of feedstuffs for a mixed ration. Matching forages to animal groups and understanding the need for supplementation can only be achieved well when forage testing is used for management decisions.

Guessing that forage crude protein is greater than what it actually is will likely lead to insufficient supplemental protein being added to the ration. It will save on feed costs but, unfortunately, [livestock] will be “short changed” on CP and probably fall short on production goals. For lactating [livestock], milk production will be negatively impacted, especially in early lactation. For brood livestock, saving the best hay for the last trimester of pregnancy and the following period of heaviest milking will accommodate better recovery for the dam and benefit any suckling offspring.

Guessing at fiber and mineral content will also have enormous economic impact. For example, the neutral detergent fiber (NDF) content of forages helps determine how much of

U.S.U. Extension-Fairfield Co.		Date Reported: 07/12/2019	
831 College Ave., Suite D		Lab Number: 19-768	
Lancaster, OH 43130-1081		SAMPLE I.D.: Mixed Hay	
		Mixed First Cut	
Item	Units	As Sampled Basis	Dry Matter Basis
Moisture	%	10.64	
Dry Matter	%	89.36	
Crude Protein	%	6.12	6.85
Available Protein	%		
Adjusted Crude Protein	%		
A.D.F. Protein	%		
N.D.F. Protein	%		
Soluble Protein	%		
Protein Solubility	%		
Lignin	%		
Acid Detergent Fiber	%	45.14	51.63
Neutral Detergent Fiber	%	58.54	65.51
NFC (Non-Fiber Carbohydrate)	%		
Sugar	%		
Starch	%		
NSC = Starch + Sugar	%		
Crude Fat	%		
TDN	%	33.97	38.02
NE1	Mcal/lb.	.329	.368
NE2	Mcal/lb.	.214	.240
NE3	Mcal/lb.	.002	.002



the forage an animal will be able to consume. Guessing too high or too low can have tremendous implications on intake, animal performance, and health. Knowing the quality of the forage being fed to animals not only saves or makes more money, but it also allows managers to fine tune diets to meet production and efficiency goals for milk production or weight gain relative to feed consumption. For more details on feed analysis and phase feeding for animal groups, read *Determining Forage Quality: Understanding Feed Analysis*.

Knowing the quality of forages when selling or buying them has also proven to be economical. Grass hay removes approximately 50 pounds of nitrogen, 50 pounds of potassium, and 15 pounds of phosphorous per ton of dry matter harvested. Based on 2021 fertilizer prices, each ton of hay contains approximately \$30 in fertilizer. If manure or legumes are used to supply nitrogen to the crop, input prices can be reduced, but all management costs should be reflected in selling price. Forage quality testing will provide a true ash, or mineral content, to make actual estimates for nutrients leaving the operation.

Forages like dry hay can be sampled when they are harvested. Sampling at harvest allows them to be sampled by field or lot and sorted in the barn according to quality for the purpose of understanding how much or how little supplement may be needed during winter feeding. Ensiled forages should be sampled closer to feeding. It is important that the ensiling process is complete before the sample is taken. Waiting an adequate period will allow for a more accurate measure of digestible fiber and starch, as well as any hazardous acids, in the feedstuffs being fed to livestock. However, you want to leave enough lead time between sampling and feeding the forage to receive test results and adjust rations as needed.

The bottom line is that investing in a forage quality analysis is a low-cost way to make educated decisions that will benefit both animal and economic health of a livestock operation.

*Source: Justin Brackenrich, Field and Forage Crops Extension Educator, Penn State University
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