Holmes Agro-Nomic Newsletter

April 2024

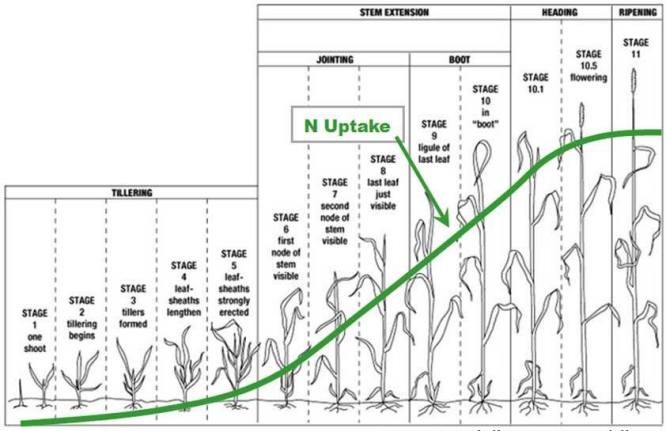
Winter Wheat Management

The infamous early spring question for winter wheat growers……what is the correct N rate to apply to achieve maximum economic yield response, and when should I apply N to my winter wheat fields? What other factors affect the yield potential of my crop?

A healthy plant stand of **at least 7-10 but ideally 20 evenly spaced and well-rooted plants per foot of row is needed to capture 90- 95% of yield potential**. To determine good plant health, dig several plants with as many roots attached as possible. Cut the crown at the base of the plant. If the crown is a white/light green colour the plant is still alive, if the crown is brown the plant is dead. Very rarely is a winter wheat field completely uniform so the percentage of winter kill in the field should be taken into consideration as well. **If 30% or more of the wheat crop is affected by winter kill the field should be replanted to another crop**. Other tools we have in the 'agronomic toolbox' to help assess plant stands include the use of satellite imagery.

Some things to consider in balancing your fertility program:

- ✓ Nitrogen availability is enhanced with the addition of Sulphur, and we find a minimum 7:1 ratio as a good agronomic balance.
- ✓ Wheat needs approximately 60% of its N requirement from the start of stem elongation to maturity. The use of a split application, where nitrogen would get applied (spoon-fed) to the crop two or three times throughout the growing season helps with risk mitigation from weather events and offers the ability to fine-tune each pass with crop demands and yield potential.
- ✓ The plant staging and stand in the spring should also be considered. The general rule of thumb is the later you plant your wheat, and the fewer tillers you have going into dormancy, the earlier and harder you are going to have to push your nitrogen applications to encourage the crop to tiller out and fill in. Conversely, earlier planted wheat tends to tiller more in the fall so applying a large amount of available N in early spring can create lodging, which will also be determined by variety.



Source: S.A. Ebelhar, University of Illinois.

As we move closer into spring this year there will always be things we will have no control over; why not utilize and manage what you DO have control over so you can maximize your yield potential in 2024. Visit your Holmes Agro rep for further details about winter wheat management and be a step closer to executing your plans toward a profitable wheat harvest.

Fertilizer Market Update

Spring is here in the Northern Hemisphere. Although the markets remain readily able to supply current demand, logistics has once again become the driver in pricing. A general lack of interest in early market opportunities driven by an expectation of lower costs has kept terminal and retail outlets south of the border in tight supply. The general expectation is that the market will remain elevated until we move through the main planting season in the mid-west. The worst-case scenario is that pricing remains strong due to an inability in logistics to catch up to demand.

However, the longer-term news is good. Globally, we are already seeing a softening in pricing of the NPK complex. It is unlikely that we will see the effects of this market reset in Eastern North America given the imminent arrival of the planting season. But relief should be evident in the early summer as long as the market does not experience any unforeseen shocks!

Seed Deliveries

Spring is here! Which means planting time is around the corner! Please call the Orangeville Office or let your agronomist know if you can take your seed.

Getting the Most Out of Your Forages – Spring Nitrogen

Spring is an excellent time to fertilize hay fields and pasture with nitrogen to promote growth. A fertility program will not only increase yields but also increase feed quality and protein in your forages. Legumes produce their own nitrogen, so a forage stand of 60% or more legume (alfalfa) generally doesn't need additional N.

P and K should be applied to cover the removal rate or by soil test levels. Since the N from MAP is the most economical source of N, it never hurts to apply MAP as your source of phosphorous applying a small amount of N even in a legume stand. Since nitrogen is a very water-soluble nutrient, it can move quite easily in the soil so N losses can be high in sandy soils or after heavy or extended rainfall. Therefore, it's always best to apply smaller quantities more frequently as the forage crop is growing. A pure or high % grass stand or pasture requires 40-60 lbs of actual N in the spring and after each cut.

Consider sulphur (S) requirements by including either an elemental or sulphate S source to avoid S deficiency and increase % CP. Rule of thumb 1 lb of S for every 7 lbs of N. These rates can be reduced if manure is applied. Never apply manure or fertilizer on frozen ground and since nitrogen is so volatile, consider treating urea with a urease inhibitor to delay volatilization losses. Products such as ESN will allow the N to become available over a longer period of time and are ideal for pasture-promoting growth over a longer period of time with fewer applications.

Spreader Safety

With the spring rush hopefully just around the corner, please keep in mind some important points when using fertilizer spreaders.

- ✓ **Complete a circle check** – tires, wheel bearings, make sure **dust caps are on**, safety chains, in/out of gear, monitor tightness of drive belts, if you see any issues, please contact your local office.
- ✓ We instruct our delivery drivers to **set the spreader** when filling it, but please double check. The density and rate will be on the loadout ticket, use the chart on the spreader to determine the spread width and gate setting. Double check the High/Low speed is on the correct sprockets.
- ✓ **Cleanliness** – Ensure that spinner blades and flow divider are clean and not damaged.
- ✓ Run at optimum tractor **PTO speed** (most tractors should be run around 2200 RPM), at a 40 or 50-foot interval, depending on the spreader. Avoid turning sharply as damage to the PTO shaft may occur.
- ✓ Slow your ground speed as rates increase, for optimal pattern.
- ✓ Ensure that while parked, the jack is secure.
- ✓ **Do not exceed 30 mph** when towing a spreader on the road, and make sure that the spreader is out of gear.
- ✓ Loads should not exceed 0.5 mt when being towed behind a ½ tonne pickup truck.
- ✓ Loads should not exceed 2 mt when being towed behind a ¾ tonne or larger pickup truck.

Spreaders are always in high demand in the growing season, please contact Holmes Agro as soon as you are finished with your spreader - your neighbour may be waiting for it!

4R Nutrient Stewardship – Right Placement

When looking at the 3rd R of the 4 R's of nutrient management we are considering the 'Right Placement.' The core principles behind the right placement of fertilizer include

- Consider where the plant roots are growing. Nutrients should be placed in a zone where they will be accessible to the growing roots when there is nutrient demand from the crop.
- Consider soil chemical reactions. Placing certain nutrients such as phosphorous in a band can help improve nutrient availability.
- Goals of the tillage system. Aim to conserve nutrients and water where they can be utilized by the roots while maintaining the crop residue cover on the soil.
- Variability between field, soils, and crop production systems. Assess the nutritional needs of the crop based on the specific location and tailor the placement of fertilizer based on the spatial differences.

We are continuously learning about soil-to-nutrient interactions and these principles will continue to evolve as knowledge of soil increases. 'The Nutrient Stewardship 4R Pocket Guide' can be a great resource when looking to learn more about the 4R Principles. nutrientstewardship.org/4r-pocket-guide

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