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CropLinks

information on forages, corn and cereals

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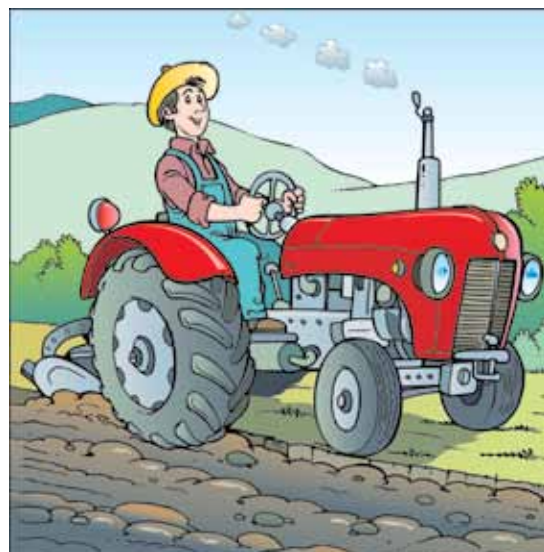
Early Spring/Early Cut?

Have we ever had an earlier spring? By the looks of the trees and the grass I would suggest we are 10 to 12 days ahead of most years. With such an early spring, forage could be ready to cut a week or more ahead of other years. Whether your feeding lactating beef or dairy cows or back-grounding steers, I think we all agree you just can't replace good quality forage. For the most part quality forage is all about time of cut. For an alfalfa stand, once alfalfa buds appear, feeding value will decline about 0.3% per day in crude protein and about 0.4% per day in digestibility. In general grasses decline at about 0.3% for crude protein and at about 0.6% per day in digestibility. Short delays in cutting result in significantly lower forage quality.

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Of course the time to cut depends on the animals being fed and your quality goals. If you don't need the highest quality then a short delay will increase yields. But if high quality is what you after then it is advisable to start cutting when the grass is in the early boot and the legumes are in the mid bud stage. Starting earlier will help ensure the later cut material will still have adequate quality. On a side note, it is important to pay particular attention to moisture levels at chopping. A high quality crop going into storage too wet or too dry for the storage system, can result in poor feed and large losses.



AgraPoint wishes you a bountiful 2010 cropping season!

Critical Weed Control Timings

The University of Guelph weed research team headed by Dr. Clarence Swanton has done some great work defining the critical weed-free period for key agronomy crops. Significant yield losses can occur in corn if weeds aren't controlled from the three to eight leaf stage of crop. In soybeans, this critical weed-free period occurs from the first to third trifoliate leaf. New research on barley suggests weeds should be controlled by the third leaf stage, which is about 8-10 days sooner than many start spraying at the early tillering stage.

Dr. Swanton in an interview with Top Crop Manager magazine said "light quality signals reflected from weed surfaces are detected by crop plants, and this triggers them to grow differently". Corn, soybeans and spring cereals in weedy conditions put too much energy into top growth and compromise on the root growth. The University of Guelph research on corn showed that at the 4th leaf stage, plants grown without weeds had 20% more root volume than plants grown with weeds.

Where we are now using post-emerge weed control on all our spring cereals, soybeans and the majority of corn...it's important to spray early when you'll get the best yield payback on the herbicide dollar.

Using Potash in Corn Starter

If you are growing corn in fields with low soil potassium levels (less than 200 kg/ha of soil test K_2O) then consider this new research by Greg Stewart, Ontario Ministry of Agriculture. In both 2008 & 2009, he showed a big yield increase to adding potassium in the 2X2 starter fertilizer band, on these low K soils even after 120 of K_2O (0-0-60) was broadcast on all treatment areas. The Ontario research showed that a 2X2 band starter of 220 kg/ha of 5-20-20 compared to 83 kg/ha of 11-52-0, produced about 21 and 17 bushels/acre (over 1 mt/ha) more corn respectively in 2008 & 2009.

On these low potassium (K) soils both cattle or poultry manure is a great source of potash. Even with a manure application though, it's important to know that corn uses more potassium than nitrogen in the early growth stages. Rutgers University in New Jersey reports that a big silage corn crop of 20 tonne/acre @ 65% moisture (approx. 3 tonne/acre dry grain corn) uses 10 kg/ha of K_2O by the 4th leaf and another 20 kg/ha of K_2O by the 8th leaf. This compares to 6kg/ha N and 10kg/ha N for these same growth stages.

Here are some different corn 2X2 band starter fertilizers to consider at application rates of 125-175 kg/ha:

1. Low P_2O_5 (<200 kg/ha) & Low K_2O (<200 kg/ha) use 12-24-24 plus manure if possible
2. Good P_2O_5 (>300 kg/ha) & Low K_2O (<200 kg/ha) then use a 10-10-35AN starter
3. Medium P_2O_5 (200-300 kg/ha) Medium K_2O (200-350 kg/ha) then use either 17-17-17 with manure or 10-10-35 when there is no recent manure history
4. Good P_2O_5 (>300 kg/ha) Good K_2O (>350 kg/ha) then use 30-10-0 AN starter.

It must be noted that adding K_2O to the starter blend will increase the chance of fertilizer burn to the developing seedling. This makes it even more important that the corn planter be set up to place the starter band 2" below and 2" beside the seed. Good luck in getting the corn and soybean planted by May 22nd, because it's looking like a lot of Valley forage (particularly alfalfa-reed canary or orchardgrass mixtures) will need to see the mower by May 25-30th.

Placement of Starter Fertilizer

It is well established that corn benefits from the use of a starter fertilizer. In general starter fertilizers are most beneficial when a crop is planted into cold, wet soils in early spring. The idea of a starter fertilizer is to place a small amount of fertilizer near the seed to meet the demands of the seeding for readily available nutrients until the plant develops its root system. Nitrogen and phosphorous are the key nutrients for starter fertilizers in corn. Phosphorous because it is immobile in the soil making it more difficult for the developing seedling to obtain (banded phosphorous is about twice as effective as broadcast phosphorous). Nitrogen is important because it helps the seedling develop rapidly. Fast growing young plants are generally more disease and insect resistant and can compete with weeds more effectively. Well nourished plants develop larger leaves which are necessary for greater photosynthesis, earlier maturity and bigger yields.

When it comes to the amount of fertilizer in the band, it is very important not to over apply. Over application will cause seedling injury. As a general rule, when the fertilizer is placed 2 inches beside and 2 inches below the seed, **no more than 75 kg/ha of N + K_2O should be applied (nitrogen in Ammonium Nitrate form only).**

For example, if 200 kg per hectare of 23-15-10 is applied, then:

$200 \times 0.23 = 46$ kg N per hectare

$200 \times 0.10 = 20$ kg K_2O per hectare

Total 66 kg N + K_2O per hectare

The 75 kg/ha maximum only applies if the fertilizer is placed 2 inches from the seed. If the fertilizer is placed closer than two inches it is important to reduce the rate of starter. If the fertilizer is placed directly with the seed, referred to as a "pop-up" fertilizer than no more than 11 kg/ha of N + K_2O should be applied per hectare. If you are planting 1.5 inches deep then the fertilizer opener needs to be running 3.5 inches or deeper to maintain the two inch vertical space between the seed and the fertilizer band. It is a good idea to check your planter to ensure that the fertilizer is being placed at the proper spacing and depth. Worn fertilizer discs or improperly aligned fertilizer openers can result in a high rate of fertilizer

New Automated Phone System

We Now Have an Automated Phone System (Fear Not!)

Both the Truro AgraPoint office (902-896-0277) and the Kentville office (678-7722) have these new automated phone systems. To be directed immediately to Bill T. or Jack punch in Extension 225 when the connection is made, and you'll either get us or our voice mail. The quickest way to reach us during the cropping season is the cell phone. (890-4555 for Bill or 670-5777 for Jack). If we are busy talking to another grower on the cell phone, let it ring long enough to go to voice mail and leave a message. Don't hesitate to call for information or to ask us to drop out for a quick crop management visit, there is no charge for this, where it's part of our NSDA contract.