

CropLinks

information on forages, corn and cereals

Prepared by:
Jack vanRoestel
Field Crops Specialist
(902) 678-7722
j.vanroestel@agrapoint.ca

Bill Thomas
Forage Management
Specialist
(902) 896-0277
b.thomas@agrapoint.ca

CONTENTS

- Alfalfa Stands and Winter Injury
- How Much Corn Silage?
- Nutrient Management Planning
- Army Moth Monitoring 2003
- Winter Wheat - Winter Injury
- Reducing Wireworm Damage

Welcome to Spring and CropLink's 2nd Season —

The spring issue of CropLinks deals mostly with assessing and managing the extensive winterkill problem in legumes, wheat and some grasses. We will also touch on some pest management strategies and Nutrient Management Planning. Best of luck adjusting to any winter injury problems on your crops!

Evaluating and Managing Alfalfa Stands and Winter Injury

Farms in many areas of the province are reporting winter injury or kill in their forage stands. Alfalfa fields appear to be the hardest hit. A number of factors can increase the likelihood of winter injury of alfalfa stands:

- *Age of the stand.* Older stands are more prone to winter injury than younger stands.
- *Soil Moisture.* Stands that go into the winter with higher soil moisture levels are much more likely to winter kill.
- *Number of harvests.* The number of harvests taken the previous year has a big affect on the likelihood of winterkill. Stands that have been cut three times are much more prone to winter injury than stands that have been cut twice, particularly if the third cut was harvested between September 1 and October 15.
- *Variety.* Variety can make a difference
- *Soil Fertility.* Soils high in fertility, particularly potassium, are less likely to winterkill. Alfalfa grows best on soils with a pH of 6.5.

- *Snow cover.* Late winter rains followed by severe cold often results in ice sheeting, heaving and winterkill.

How much corn silage can you feed?

by Daniel Scothorn, Ruminants

The recent winterkill has left many dairy producers with no other option than to increase the corn silage production. Therefore, when considering a higher feed rate of corn silage you must consider several factors. Corn silage can supply up to 100% of forage to lactating dairy cows when chopped with a processor equipped harvester. This ensures adequate effective NDF, or particle size, to guarantee good rumen health. However, non processed corn silage is more finely chopped allowing for better digestibility, and may not contribute enough particle size when fed as the sole forage. Hay or straw can be fed with the non-processed corn silage to supply enough effective NDF. Corn silage typically is lower in fiber (ADF and NDF) than ensiled grasses. This means that a greater portion of forage may have to be fed as compared to a grass silage and less grain. The protein content of corn silage is lower than grasses and legumes, however, a greater concentration is bypass protein, or undegradable (UIP). This means that degradable protein (DIP) sources such as soybean meal, canola meal and wheat shorts can adequately meet the UIP and DIP needs of the animal. There are several other factors which should be considered when switching the cows from a grass/corn silage diet to a corn silage diet. Consult with your nutritionist to discuss the options.

Assessing winter kill: When alfalfa fields are brown and slow to green up it's a sure sign of winter injury. The best way to determine if the plants are going to recover is to pull at the stubble. If the crown breaks apart easily and the exposed tissue is brown and dehydrated the plant is most likely winter killed. Some plants can recover by sending up new shoots. If injured plants are to recover they should show some signs of recovery in early May. If stem density is under 40 per square foot or if plant density is less than 3-5 per square foot then yield will be limited and you should consider

(continued on page 2)

Alfalfa Stands *(continued from page 1)*

overseeding or replacing the stand. For injured stands that have been slow to green up this spring, delay first cut until the plants have at least 10% bloom. While this will reduce forage quality it will help the plants recover.

Can you overseed alfalfa stands damaged by winterkill? The answer is yes, but success will depend on how open the stand is. Areas with 100 percent kill will reseed best. Several forage species can be drilled or no-tilled into an existing alfalfa stand to extend the life of the crop and increase yields. Red clover, meadow fescue, and orchardgrass, have the greatest chance of establishing when sown into an existing stand. A mix of 40% red clover, 40% meadow fescue and 20% timothy is often recommended in these situations. First cut yield can be boosted with the addition of 25 kg/ha of barley into the mix. Legumes overseeded into a thin alfalfa stand should be inoculated. Grasses will need additional nitrogen. Mixed stands should receive about 50 kg of N per hectare per cut.

No-tilling alfalfa into an alfalfa stand that is more than a year old is not recommended. Mature alfalfa plants release toxins into the soil that inhibit the root development of new alfalfa seedlings. The degree of inhibition is dependent on the number of alfalfa plants per square foot, soil type and rainfall. Sandy soils and low rainfall increases the chance that new alfalfa seedlings will be inhibited by these toxins.

Re-seeding alfalfa fields: Alfalfa fields establish best following a break crop. Older fields with a high percentage of alfalfa are probably best rotated out of alfalfa. Corn is a good choice to follow alfalfa because of its high yield and feed quality. Another option would be to re-seed the field into a cereal-field pea mix that would be harvested in late July and then re-seed the field into a mix of alfalfa and timothy in mid August. Small grain silage should be harvested at the late boot stage, before heading, for highest digestible feed.

Nutrient Management Planning

Most farmers should have received an information package from NSDAF recently on various programs including the Nutrient Management Planning (NMP) and the Limestone Transportation Assistance. AgraPoint is currently trying to get more information on specific components of the NMP so we can assess what's required both in terms of product and time commitment. These plans would be done in the July-February timeframe for the 2004 cropping year. Consider AgraPoint for your Nutrient Management Plan. We can provide the agronomy and soil fertility expertise that is needed.

Winter Wheat - Winter Injury

Over half our winter cereal crop is very patchy with a fair amount of winterkill throughout the field. Both late fall seeding dates and exposure to extreme March weather (plus some ice sheeting) were the causal factors. Many growers have assessed their fields and determined which fields are worth managing through to harvest and which wheat fields should be changed to corn, barley or direct seed forage crops this spring.

For those of you that have delayed this decision, hoping that some fields will improve, it's important to re-assess each field. If the particular wheat or rye field has reasonable vigour, a 75% stand overall, the potential for over 300 heads/m² (over 28 heads per ft²), and yield possibilities of 3.5-4 t/ha (over 1.4 tonnes/acre) then you've got a winner for 2003. For patchy fields with less than 50% stand, you need to seriously consider applying a "Roundup like product" and growing a proper crop of corn or barley (either no-till or with minimal tillage required). The other option may be to interseed barley in with the winter wheat before May 17th, if you can feed a mixed barley-wheat crop on your farm.

Army Moth Monitoring for 2003

We are not expecting an armyworm problem this summer, but will still monitor for armyworm moths from late May throughout June, on 25 farms around Nova Scotia. Should there be the unlikely situation of an armyworm hatch similar to 2001, AgraPoint will be better able to assist you with the management of this pest.

Reducing Wireworm Damage

The increasing wireworm problem in corn and spring cereals has been discussed before in CropLinks (Issues 1 and 3, 2002) but it's worth re-capping because the "new and improved" seed treatment won't be available until 2004. Wireworm problems in these crops tend to be much worse in the 1st or 2nd year after grass forages. This pest is more prevalent in sandier parts of the field and can destroy the seed, kill the small plant by chewing out a section of the below ground stem, or stunt growth by pruning the roots. Wireworms have reduced the plant population of many cornfields by 10-20%, and brought some heavy infested fields well below 50% of the intended plant stand.

If the current Agrox DL Plus seedbox treatment for corn isn't giving you the required wireworm control, then your two options for 2003 are:

- Lindane 25W – applied with field sprayer pre-plant and incorporated with last tillage pass, no deeper than 5 – 10 cm. Very effective, product cost \$30/acre at 2.5 kg/ha (1 kg/acre) rate, use good safety gear and judgment when handling.
- Force 3G or Counter – insecticide box application, however less than 10-15% of our planters have this feature. Works well, product cost \$20-25/acre.

For spring cereals, if there is the potential for serious wireworm problems then consider a seed treatment of Co-op NM Dual Purpose or Vitavax Dual Purpose and mix onto the seed in the drillbox (use respirator, gloves, and mixing stick). For the Co-op NM Dual Purpose that is 18.75% Lindane, use 52 grams (for wheat), 65 grams (for barley), and 92 grams (for oats) to treat 25 kgs of seed. Cost of seed treatment for barley is about \$3/acre.