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CropLinks

information on forages, corn and cereals

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Sprouted Wheat/Forage Management Strategies

The excess moisture and humidity is good for forage and corn growth; however it's a detriment to winter wheat and perishable produce that are near harvest. This issue of CropLinks discusses sprouted wheat and some fall management strategies for forages.

Delayed Grain Harvest — Sprout Problems

Grain growers are frustrated by this wet spell that's stalled over us since August 8th. With all the humidity and 5-7 inches of rainfall in the Valley region during this period, some sprouting and discoloration of the grain is happening. Kernel sprouting affects field drying, germination of seed, and possibly grade or feeding value depending on the amount of sprout. It's crucial that this weather quickly changes and growers are able to get the wheat and barley dried down to 15-17 percent moisture so the threshing process will hopefully knock off the sprout tips. Once in storage, grain moisture will have to be watched closely to determine the duration of drying or aeration that's required.

In regard to the spouting effect on feed value, David Lalman of Oklahoma State University, who did an extensive review of the research, reports that Idaho scientists fed sprout-damaged wheat in backgrounding and feedlot diets to cattle. In this study, sprout-damaged wheat (0, 10 and 25 percent sprouted) composed 35 percent or 65 percent of the concentrate. Feeding different levels of sprouted wheat had no effect on animal performance or efficiency in these experiments. Other research conducted at Washington State University found no difference in the feeding value of sprouted wheat compared to unsprouted wheat. Research at Michigan State University indicated that sprouted wheat should not make up more than 20 percent of the total ration dry matter in order to minimize the risk of reduced feed intake. Dr Lalman recommends having an aflatoxin screening test conducted on the grain if mold is present. Sprouted wheat should be efficiently utilized in beef cattle rations, provided that aflatoxin is not a problem.

Janice Murphy, OMAF Swine Nutritionist, states that the feeding value of sprouted wheat for pigs is not significantly different from that of regular wheat. Depending on the degree of sprouting, energy content of the wheat may be reduced by up to 10 percent. According to Murphy, this reduction in energy in sprouted wheat should not have a negative influence on growth rate but it will cause pigs to have poorer feed efficiency. Sprouting has little influence on the quantity or quality of protein or amino acids in wheat. Research in France by Gatel and Bourdon (1989) has shown that feeding

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New Herbicide Option for Grasses

There is another option for broadleaf weed control on grass forages and pastures called **Target**.

This product is a 3-way mixture of MCPA, mecoprop and dicamba (Banvel), which has been used on grain crops for years. The manufacturer of Target, Syngenta, has been given permission by Health Canada for registration on forage grasses under the User Requested Minor Use Label Expansion program.

Target should give us some activity on tougher weeds such as chickweed and plantain that aren't controlled with 2, 4-D and too costly to treat with the recommended rate of Banvel. Read the label carefully before using Target on grass forages or pastures. Don't use this product on legumes and don't graze or harvest forage within seven days of application.

Fall Seeding Forages

With winter injury damage and weediness prevalent in some forage fields, it may be time to consider re-seeding. In a trial done by Thomas and Knight (1992) in Truro it was found that of the nine commonly grown grasses or legumes, only timothy and bromegrass established and properly survived a September 15th seeding. More recent experience has shown that winter survival in August-seeded alfalfa is often good, but forget it for clovers, orchardgrass, perennial ryegrass or meadow fescue. If you're going to re-seed timothy or a 50:50 timothy-alfalfa mixture, make the decision quickly and apply burndown, wait three days then plow and quickly prepare seedbed, seed and roll. For advice on the chemical burndown strategy call Jack or Bill.The approach will vary depending on the amounts of dandelion/wild carrot, the tillage or non-tillage situation and whether alfalfa is to be re-seeded.

Fall Alfalfa Management

Two frequently asked questions in September are, do the alfalfa fields need extra potash? Or, should the alfalfa be harvested in mid-September to prevent winter-kill from smothering?

In determining if extra full potash is needed, you will need a relatively recent soil test of the field and do some calculations. To improve alfalfa winter survival chances, you need a potassium soil test level (K_2O) over 350 kg/ha. In determining whether the field is still over 350kg/ha of potassium, subtract 120 – 180kg/ha for 2003 K_2O usage (subtract 180kg/ha when three cuts were taken or for higher percentage alfalfa stands) and add on the potassium supplied by this years fertilizer or manure applications. If potassium levels are below 350 kg/ha, and need to be replenished, then apply a late August application (i.e. 125 to 175 kg/ha of 0-0-60) to increase alfalfa root reserves going into winter. Potassium also acts as a bit of an anti-freeze in increasing the electrolyte level in root cells, allowing the plant to withstand colder winter temperatures.

Probably more important to alfalfa winter survival is not harvesting during the Critical Fall Rest Period (September 1st to mid-October). By not harvesting alfalfa during this critical fall period, root reserves have the proper time to build up and key bud development occurs, which is important for shoot growth next spring. Research done in the Maritimes in the mid 90s proved that harvesting alfalfa during the critical rest period significantly reduced yields the following year. Alfalfa can't smother itself from too much fall growth — it doesn't happen.

Delayed Grain Harvest

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value of sprouted wheat was the same, or even slightly better, than that of regular soft wheat. With hogs, be even more careful about feeding moldy grain, which can lead to higher vomitoxin levels. To check toxin levels, contact the Guelph lab at (519) 767-6215.

For growers that use some of their homegrown winter wheat for seed, be aware that research strongly shows that sprouting reduces percent germination and seedling vigour. Higher seeding rates will compensate, but with the amount of seed-carried disease that's present in many fields, you're advised to use certified seed instead. There will be tight supplies on some varieties, so order certified wheat seed soon. Best of luck with the grain harvest!

Winter Wheat Tips

An important starting point for successful winter wheat crops is a proper seeding rate and timing. To get high head density, strive for a seed drop of 350-400 seeds per square meter (40 seeds/ft²) which, depending on 1000 kernel weight, usually requires 130-145 lbs/acre of seed. High head density also is affected by a timely seeding date which allows the plant to tiller out properly before winter. Good seeding dates for the "Valley floor" are September 14-27th, with all other locations and most no-till seedings, needing to occur between September 10-16th.

For fertility, the winter wheat crop requires about 110 lbs/acre of nitrogen. Only about 15 lbs/acre of nitrogen is required in September, with the remainder hopefully split between a late-April and late-May application. Any required P & K should be applied at seeding (based on soil test levels). This can be applied through a low nitrogen 5-20-20 fertilizer, or with moderate manure applications. Go with a drillbox-seed treatment of Vitavax Dual Purpose or Co-op NM Dual Purpose, if there is a recent history of wireworm problems, or if the designated wheat field is coming out of forages.

Variety trials from the Nova Scotia Agricultural College reported the following 2002 yield results which reflect the combined three sites averages from Woodville, Canning, and Truro tests: Pioneer 25R49 (7.6 t/ha); AC MacKinnon (7.3); Freedom (6.7); AC Winsloe (6.4); Borden (6.3) and milling varieties AC Sampson (5.7) and Fundulea (5.6). Pioneer 25R23 has looked good in the 2003 trials. Check with your buyer; some mills may require a hard red wheat versus a soft red type.

August 5-8, 2004
Lyndhurst Farms
Canning, Nova Scotia

AgraPoint has changed the dates for Agrifest, the Maritime celebration of innovations in food production. New dates are **AUGUST 5-8, 2004**. The event will be a combination of field plots and trials; agribusiness/food/retail/informational exhibits; interactive displays; and seminars. There will also be hands-on demonstrations and plots including new and niche vegetables, potatoes, forage varieties, berry irrigation methods, crop input trials, weed identification and solutions, organics and farm machinery. For more information or information on how to participate, please contact Tawnya or Sara at the Resource Contact Centre at (902) 896-2345 or info@agrapoint.ca