



# Happy Holidays from AgraPoint

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# CropLinks

information on forages, corn and cereals

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## Corn Kernels

### Protect the Bt Advantage

If you're not growing Bt corn, we recommended you do. The Bt advantage is real. Bt technologies give season long resistance to European corn borer along with some resistance to ear worm and army worm. Bt corn generally outperforms standard hybrids by protecting against yield loss from stalk and ear shank tunneling, kernel feeding and stalk breakage. If growing Bt corn, be sure to implement the required refuge program as specified by your seed supplier. An effective refuge program, involving plant-

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This issue of CropLinks includes the 2005 Corn, Forage and Cereal Variety Guides (the recommended varieties based on Maritime testing), soybean trial information, considerations in selecting corn hybrids, corn pest control updates and a strategy for dealing with higher fertilizer prices.

## Changes to the Corn List

There's no getting around it, a successful corn year starts and finishes with choosing the right hybrid. In fact, hybrid selection is probably the single most important decision you make as a grower. The 2005 Corn Guide to Hybrid Selection for the Maritimes can help you make the right decision. Because it is a summation of multi-year corn hybrid performance from four sites across the Maritimes, the Guide gives a very good indication of yield potential and hybrid suitability for your farm.

When using the list be sure to select hybrids within your production zone. For successful grain corn production a hybrid must black layer one to two weeks before being killed by frost. For most areas in Nova Scotia this means grain corn should reach physiological maturity by the third week of September. For silage, the corn should reach the desired milkline (1/3 – 1/2 for bunkers and 1/2 -2/3 for uprights) before a killing frost to help ensure optimum quality. Planting hybrids recommended for your zone will help ensure the crop reaches proper maturity and quality. The Corn Guide clearly indicates that you don't need high heat hybrids to have high yield potential, so be sure to choose the appropriate hybrid for your climatic locale.

There are **four** new hybrids added to the 2005 Recommended Grain Corn List: **Maizex MZ 130**, **Pickseed SilEx Bt**, **Pickseed 2365 RR** and **Pioneer 39T70**.

**Maizex MZ130** is an early non Bt hybrid. Though the plant is smaller it does have a good size cob with a reasonable yield. This hybrid would be a good choice as a non Bt refuge for zone 1, 2 and 3 grain production. **Pickseed SilEx Bt** is a good dual purpose hybrid with excellent yield potential. This hybrid is most suitable for grain in zone 1 or higher heat unit zone 2 fields. **Pickseed 2365 RR** is a Round-up Ready hybrid. Like SilEx Bt this hybrid is most suitable for higher heat unit Zone 2 fields or Zone 1 areas. The fourth new addition to the grain list is **Pioneer 39T70**. This hybrid is new to both the grain list and the silage list for 2005. 39T70 is a Liberty Link/Bt version of 39T68. As well as offering control of corn borer, this advanced Bt hybrid offers in-plant control of black cutworm and moderate resistance to corn earworm. As expected, adding Bt genetics to 39T68 boosted the 39T70 yield, by about 1 tonne/ha, but made it longer seasoned. Whereas 39T68 is recommended for grain production in Zone 1 and 2, 39T70 is only recommended for grain production in Zone 1.

There are **two** new additions to the 2005 Recommended Silage List: **Pioneer 39T70** and **CO-OP Elite 46T06 Bt**. As mentioned Pioneer 39T70 is a new addition to both the grain and silage list for 2005. Recommended for silage production in Zone 1 and 2 Pioneer 39T70 is a Liberty Link Bt hybrid offering season long control of corn borer and in-plant control of black cutworm and moderate control of corn ear worm. The other addition to the silage list is **CO-OP Elite 46T06 Bt**. A Bt hybrid, 46T06 has built in resistance to European Corn Borer with intermediate resistance to Corn Earworm. CO-OP 46T06 is recommended for Zone 1 only.

## Higher Fertilizer Prices in 2005

All indications are that N-P-K fertilizer prices will be higher next year. High natural gas prices have increased the manufacturing costs of nitrogen, especially ammonium nitrate. The upward price on phosphorous (P) is resulting from the four fall hurricanes in Florida that damaged both manufactured product along with causing blackouts and prolonged plant shutdowns (75% of the North American supply is mined in Florida). With potassium, (K) its rising price is due to heavy worldwide demands particularly from Asia and Latin America where strengthening economies are spurring on more local food production and diet changes.

What can NS farmers do to cushion themselves against higher fertilizer prices? Here are a few ideas...

**1. Use Urea instead of Ammonium Nitrate in most cases.** With urea being a better nitrogen buy than ammonium nitrate use urea (46-0-0) or urea N-P-K fertilizer blends for applications to pastures, haylands and winter wheat in late April and early May. Any 1<sup>st</sup> cut nitrogen fertilizer application on grass should be on at least 4-5 weeks prior to harvest. Urea conversion in the soil to the plant useable nitrate form happens within 2-3 days at soil temperatures above 3°C. Key situations where ammonium nitrate should still be used instead of urea are for 2<sup>nd</sup> cut forages or when banding higher rates of a high N fertilizer (ie 200 lbs/acre of 30-10-0 AN) in a corn planter.

**2. Use high ratio fertilizer blends that contain the minimal amount of filler.** For example use a 1<sup>st</sup> cut grass fertilizer of 29-12-12 U or a 1<sup>st</sup> cut legume fertilizer of 12-24-24 U + .3 Boron.

**3. Don't buy Phosphorous if you don't need it.** Some fields that have had a history of heavy manure or fertilizer applications (500-1000 kg/ha P<sub>2</sub>O<sub>5</sub> or higher soil test levels) don't need any fertilizer P for forages, cereals or soybeans. Most field crops only use 40-60 kg/ha of P<sub>2</sub>O<sub>5</sub> annually, so once these soils get below 350-400 then consider applying manure periodically. We still recommend banding minimal amounts of P through the corn planter on high phosphorous soils.

**4. Credit N-P-K contributions from manure properly.** Dairy and beef manure are an excellent source of both nitrogen and potassium, and also contains a bit of phosphorous. Move manure applications around the farm to the fields or crops that can utilize it the most. Bill or Jack can help you maximize these manure nutrients (providing you have a fairly recent soil analysis). Just call us for a consultation.

**5. Lime occasionally to keep soil pH in the 6.1-6.5 range.** With soil pH's in this range you have higher availability of N-P-K nutrients and quicker release of organic nitrogen from manures and decaying plant material.

**6. Maintain decent potassium levels (300-400 kg/ha of K<sub>2</sub>O).** Research has shown there is an interaction between higher potassium levels and improved nitrogen fertilizer efficiency.

**7. Check into buying excess broiler or hog manure in your area.** If delivered to your field, broiler manure is worth \$20/tonne and liquid hog manure about \$2/tonne (i.e. 3000 gallon load = 13 tonne). If you have to go it, then hog manure could easily cost you more than it's worth.

**8. When using fertilizer, use enough to make it pay.** For grass forages, nitrogen rates of 50-70N are necessary for decent 1<sup>st</sup> cut yields, and corn needs 120-150 N, but don't forget to factor in past/present manure N contributions.

**9. Practice good crop management to get a fertilizer payback.** It goes without saying (but is often forgotten) that crop input costs such as fertilizer, fuel and equipment are considerable so the management has to be first rate. Use proper seedbed prep, timely seeding, good populations, superior varieties, required pest control and wise harvest timings to milk every dollar you can from your fertilizer investment.

## PLAN TO ATTEND! SCIANS 2005 Conference

The Soil and Crop Improvement Association of Nova Scotia has an informative conference planned for February 22 and 23, 2005 at the Best Western Glengarry in Truro. More details will follow from SCIANS shortly but if you have any questions, please contact Carol Versteeg at (902) 758-3530.



## Corn Kernels (continued)

ing 20% of the corn field to a non Bt corn in strips that are at least 6 rows wide, will help prevent insects from developing resistance to Bt and preserve this very valuable technology long into the future. The non Bt corn grown in the refuge area needs to be very similar in maturity (silking date) to the Bt hybrid that's being used. To insure that you have similar maturity between a Bt and a non Bt hybrid consider buying both hybrids from the same seed company for specific fields. Federal inspectors are starting to do cross-country audits to see if growers are complying to the 20% non Bt refuge area, and are checking seed sales slips and have the technology to do in-field forensics. Check out the website [www.cornpest.ca](http://www.cornpest.ca) and adhere to their slogan "Don't Risk it All - Plant a Refuge!"

### Poncho Seed Treatment – two rates

With Lindane off the market farmers are encouraged to buy seed treated with Poncho 250 for early season protection against corn seed maggot, wireworm and black cutworm. Some seed companies are only offering Poncho 250 on specific hybrids or require booking by a particular date to treat seed with Poncho, so check with your seed rep for specifics. Poncho 250 will only give effective early season seed and seedling protection of wireworm. For fields where wireworm is a major problem and you want season long control you need to request Poncho 1250. According to research in Ontario, this higher rate of Poncho gives season long control of wireworm similar to granular insecticides.

### Seeding Rates

When purchasing seed plan to drop 30,000-32,000 seeds per acre for silage corn and 26,000 -28,000 seeds per acre for grain corn. Research has shown corn performs best when final populations are around 28,500 for silage and 26,000 for grain.