



New Brunswick Soil and Crop Improvement Association

September 2024 Newsletter

Volume 10 Issue 3
Revised by Andrea Versloot

Inside this edition

European corn borer	Page 1
Message from the GM	Page 3
Regional Updates	Page 4
Photos	Page 11
Contact Us	Page 12
Partners and Sponsors	Page 13

European Corn Borer

by Gabrielle Schenkels

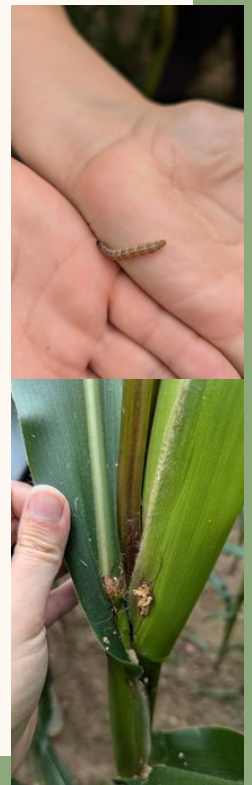
History and resistance

European corn borer (ECB), *Ostrinia nubilalis*, once caused dollars in crop damage to corn before the introduction of Bt corn hybrids introduced in 1996. The effectiveness of the Bt trait to prevent damage from ECB comes from four Bt proteins: Cry1F, Cry1Ab, Cry1A.105, and Cry2Ab2. In 2018, populations resistant to the Cry1F protein were found in Nova Scotia. Since then, resistance to the remaining proteins were found in ECB populations in Truro (Cry1Ab and Cry1A.105) and near Sussex (Cry1Ab, Cry1A.105, and Cry2Ab2). Resistant populations have also been found in Quebec, Manitoba, and Connecticut. As populations become more tolerant, it is key to increase scouting and reporting of damage in corn crops to monitor for resistance.

Life cycle & Damage

ECB causes the most damage in its larval form, when it bores into the corn plant and remains until it emerges in its adult form as a moth. As a pupae, ECB are a reddish brown colour, with a round cranial end and a pointed caudal end. The larvae will bore into the stalk, usually at a node, between the leaf and stalk. Larvae have black heads and cream coloured bodies, with a ring of spots on each abdominal segment – this will be the easiest stage to find ECB in the plant, as this is when they are boring into the corn stalk.

ECB have been found to feed off of over 200 plant species, although corn is their preferred host. The moths will leave the corn field and use nearby brush or grassy areas to mate before returning to corn fields to lay eggs on the underside of corn leaves. Currently, ECB will have one to two generations per year, with the second generation/late season damage being most damaging to corn. Plants are most attractive to the adult moths during pollination.



Scouting and reporting

The monitoring and collection of ECB populations across North America is expanding, and now that Bt resistant populations have been found in NB, it's more important than ever to know the signs! Be sure to walk through the field, stopping at least 10-20 times to check for signs. The tell-tale sign of ECB in a corn field will be dropped tassels – if you see this, definitely stop at that plant to inspect closer!

Early season injury (July-early August)

- Dropped tassels
- Sawdust or pollen like frass on stalk
- Shothole and repeated pinhole injury on leaves
 - Unwhorl new leaves to inspect for shothole bore injury
- Frass at leaf nodes (circled in red)
- Bore holes in stalk (In blue rectangle)
 - Section off the portion of the stalk above and below the bore hole
 - Split the stalk vertically using a knife to inspect for the larvae and bore damage



Outlined in blue is the bore hole and in red is the frass from an ECB.

Late season injury (late August-October)

- Bore holes and frass on leaves and cobs
- Egg masses on the undersides of leaves
- Potential for ear drop if shank is tunneled through
- Bore holes and tunnels with frass

Any signs of suspected ECB injury should be reported to your seed provider and provincial specialist for further investigation. Don't assume damage is only occurring in the 5% non-Bt refuge plants – genetic testing should be done to confirm the genetic traits if ECB damage is found.

Best management for farmers

When selecting corn varieties, select Bt hybrids that have more than one ECB Bt toxin. Avoid choosing the same Bt toxins each year. A diverse crop rotation can also help defend against disease and weeds that would make for ideal conditions for ECB to reproduce in. Mowing or shredding stalks, especially those 30cm tall or higher, has proven to reduce overwintering of ECB in the soil, and thus slow the spread of resistant populations.

If you suspect feeding injury from ECB in your Bt corn fields, please contact Jason Wells (jason.wells@gnb.ca/506-432-2150) or Chris Maund (chris.maund@gnb.ca/506-453-3477) with photos to help diagnose the issue. NBSCIA coordinators Andrea Versloot and Gabrielle Schenkels have also been trained in ECB scouting and can make farm visits to help identify suspected feeding injury.

With information from the Canadian Corn Pest Coalition, Jenna Straughan (MSc Candidate at UGuelph)

Check out these links to learn more:

Canadian corn pest coalition ECB identification guide - <https://cornpest.ca/corn-pests/european-corn-borer/>

Bayer crop science insect damage guide - [https://www.cropscience.bayer.us/articles/traits/guide-to-corn-insect-damage](https://www.cropsscience.bayer.us/articles/traits/guide-to-corn-insect-damage)

Message from the General Manager Ray Carmichael

As the growing season nears the end, I am sure you are wondering how this year compared to previous years. Such comparisons for the last five years can be found on the Weather tab in the NBSCIA web site;
<https://www.nbscia.ca/weather-maps/>.



As in previous years, Pioneer will be sponsoring the NBSCIA Farm of the Year competition for 2024. Nominees from each region have been selected and judging is planned before the end of September.

NBSCIA staff continue to plan various field day activities and as dates are confirmed they will be posted on Facebook and our website. The last event is Rotational Grazing, with Greg Judy, Green Pastures Farm, October 3. Winter workshops are being planned and scheduled dates will be set in the near future, as always we welcome ideas and topics of interest to the farming community.

NBSCIA ACS-OFCAF Manager

As of April 30, 2024 the New Brunswick Soil and Crop Improvement Association closed further intake of applications for the On-Farm Climate Action Fund for the 2024-2025 crop year. Total available funding for Ultimate Recipients for the current fiscal year has been committed and there is no indication of additional funding.

Claims for approved projects will be honored as soon as NBSCIA receives funds for Agriculture Canada. If you have questions regarding the process, contact the NBSCIA OCAFA Program Administrator: Stephen London (506) 392-0408 ofcaf.facf@nbscia.ca

2024-2025 is the final year of the pilot phase of the On-Farm Climate Action Fund. NBSCIA is currently submitting an application for the expansion phase of the On-Farm Climate Action Fund ending in March 2028. The objective of the On-Farm Climate Action Fund is to support farmers in adopting beneficial management practices (BMPs) that store carbon and reduce greenhouse gases, specifically in the areas of:

1. nitrogen management
2. cover cropping
3. rotational grazing practices

NBSCIA is planning field days and workshop sessions to provide guidance and support the implementation of the BMPs to mitigate climate change. As dates are confirmed they will be posted on Facebook, our website and with partner organizations.



SAVE THE DATE!



nbscia.ca

NBSCIA's 46th Annual General Meeting and Technical Workshop

March 13th & 14th, 2025 at the
Rodd Miramichi River Hotel



Regional Updates

An Encouraging Agricultural Season

by Jean-Mars Jean François

Contrary to the proverb, the years follow one another and are not alike. The agricultural sector is unanimous in recognizing that, in the northwest of the Province, everything is moving faster in the fields than usual. Whether it is cereals, hay, vegetables, potatoes, corn silage or canola, we hear the same story from farmers. The 2024 agricultural season is two weeks ahead of schedule. The sunshine and optimal day and night heat have made the crops happy. In the same time, yields are, for all commodities, above the provincial average. The quality is also there. If the current trend continues, potato producers will applaud the 2024 agricultural season with both hands. Until now, the seed potatoes harvested so far meet all expectations. We hope that the sale price of the products will follow an upward curve in order to allow producers to generate a substantial margin of net profit.

In addition, the North-west Agri-Environment Club has been very active with farmers. The Coordinator was requested in the realization of nutrient management plans, fertilization plans for farmers and the fields mapping. Fields screening, sampling of soils and test collection of petioles in the fields of potatoes have been to the Club's agenda. At the same time, some farmers have benefited the Club's technical support in planting trees in order to strengthen riparian strips. In addition, follow-ups were carried out on the zero chemical nitrogen trials in corn silage in Baker-Brook. Furthermore, the Iroquois-Blanchette project (see photo below) allowed farmers in the

Edmundston region to implement Best management practices on farms, including controlling erosion and surface runoff, installing new fences along waterways and improving pastures. Club members send a note of gratitude to the Provincial and Federal governments for financial support through the On-Farm Climate Action Fund (OFCAF) and Sustainable Canadian Agriculture Partnership (SCAP) programs. Recently, on September 3th, 2024, the Club helped organize an open house at the Laforge Holstein farm in Saint-André, New Brunswick. Participants learned a lot from Mr. Jacques Laforge about the process of producing electricity from agricultural residues. The day ended on a nearby field where a demonstration of the spreading of digestate at least through a new "Dragline" equipment. We thank farm credit Canada (FCC) for providing the snack. Finally, in collaboration with Charles Karemangingo of the Ministry of Agriculture, another field day is planned in Saint-André for September 18, 2024. During this day, participants will have the opportunity to observe the results of the Trials on the reduction of nitrogen, phosphorus and potassium in potato fields.



Northshore Update

by Gabrielle Schenkels

The blueberry harvest season has come and gone in the Northeast once again. With dry conditions during fruit formation in July, yields were lighter than expected, with some fields producing half of their average weights. In the south and south west of the province, moisture seemed to be less of a constraint, but the total provincial yield for 2024 will certainly be less than the 60 million pound average, likely closer to the 50 million mark. This summer in particular, moisture patterns were sporadic, and dissipated quickly once they reached the coast. Managing at the right times for pest and disease pressures seemed to help some growers keep closer to their historical yields, but for others, the lack of rain was difficult to compensate for. In the BioPolin product trial I was managing this summer, the drought conditions have also made any significant differences in treatments difficult to measure. For producers looking to make a management plan for next year, please get in touch with me over the winter.

In other commodities, we saw great quality forage in first cut but now are seeing some issues in recovery after cuts – especially with the geese being back this way so early! Be sure to apply a healthy dose of fertilizer and/or manure before the winter to be sure your grass is set for winter – talk to me or another coordinator to get the 4Rs just right. Corn as well is being cut as I write this in early September, some of the earliest in recent history according to many members. The dry spell certainly created difficult conditions in terms of nitrogen availability for some crops planted later in the season.

We had a great field day at the end of July on likely one of the only rainy days that month, with the lovely Dr Nancy MacLean from Dalhousie and Jason Wells from DAAF. Both initiated great discussion among members on topics like legume nitrogen credits and European Corn Borer. Thank you to Jacques Laviolette and family for their hospitality and for showing us around their modern robot barn and automatic feeder system!

I'm looking forward to making plans with producers to help make the most of their land and their dollars for next year. On top of several workshops and webinars in the works, I'll also be working on planning the 46th Annual NBSCIA AGM which will be hosted at the Rodd Hotel in Miramichi on March 13th and 14th. We're all looking forward to getting farmers together again to learn and to celebrate the Farm of the Year of course!



Carleton Region

by Andrew Sytsma

One thing a lot of us will remember the 2024 growing season by is how things were earlier than usual. We've seen this in the fields and we've also seen it in our weather tracking as well. At the end of July, the heat unit accumulations for Carleton were about 300-400 CHU's higher than average. Heat unit accumulations started around the middle of May. August weather data is still being compiled but it looks like the above average CHU trend will continue.

We had a great year for our oat variety development trials in Williamstown. The plots were able to be planted early, good yields, enough lodging pressure to identify some standout lines and no mechanical or personnel breakdowns either! Many lines yielded around two tons per acre. The winter wheat variety development trials suffered a fair amount of winterkill but considering they were planted very late, a good number of lines did well with yields of two tons per acre. This year's winter wheat planting will be on time.

NBSCIA had a forage field day with Nancy McLean and Jason Wells as guest presenters. Topics included forage variety selection, management and corn borer information. Big thanks to Graham Farms for hosting and to Hartland Agromart for sponsoring lunch.

The Carleton region has had a new weather station installed in the Hartford area near Woodstock. This is in support of the collaborative NBSCIA-NBDAAF apple fireblight monitoring network and will also contribute to our general weather mapping.

Central Soil and Crop Update

by Andrea Versloot

We have experienced amazing growing conditions in the central region this summer. The accumulated heat units have brought several crops ahead of regular seasons. Many cattle producers are well into their second and third cuts for forage and the grass just keeps on growing. The strawberry, blueberry and raspberry season is now over and the fresh vegetables are filling local markets. We are very fortunate in the central region to have many vegetable producers from whom we can purchase fresh produce.

As corn and soybeans approach maturity, farmers should continue to be diligent in monitoring for pests and diseases as well as the moisture of the grain up until harvest. Having the opportunity to allow your grain to dry down in the field saves on cost and risk of spoilage in storage. As crops come off, potentially earlier this year, it provides the opportunity to plant a cover crop such as winter wheat or fall rye to help capture residual nutrients and maintain soil structure through the winter and early spring. Post-harvest is also a time when manure storages are emptied and spread on fields. I'd like to remind producers that manure should be incorporated whenever possible to reduce loss to volatilization or runoff and, if at all possible, be followed by a cover crop to hold the nutrients in the soil for next year's crop. Manure should not be spread on frozen ground or snow as this increases the risk of runoff, carrying all the benefits of manure out of the field.

European corn borer is again being monitored closely this year to capture any resistant populations. If you have never seen a non-bt corn field, the evidence of European corn borer damage can be easily detected. I attended a training demonstration in August on how to scout and find corn borer larvae as well as test corn plants to indicate whether they contain one or several of the Bt traits. Chemical control of corn borer is challenging as the window between larval emergence and their entrance into the corn stalk is very small. In past studies, flail mowing of the corn stalks after harvest has shown to reduce the ability for the corn borer larvae to overwinter. Typically, larvae can be found overwintering in the bottom 30cm of the remaining corn stalk.

Apple producers prepare to open their farm stands and u-picks in the next few days, some producers remarking that they are a week ahead of usual. Fire blight has not been as great of a concern this season; however, producers continued to utilize weather models and risk reports from specialists to time spray applications to prevent disease outbreaks. Unfortunately, in several parts of the province, including the central region, the honey crisp apple has slipped into a biennial production cycle resulting in a lighter crop this year. Growers continue to spray to prevent diseases as they approach harvest.

A manure management field day is being planned for mid October to showcase tools that can be utilized to incorporate liquid manure. These field days are more than presentations; they are a way to get farmers, specialists and the agriculture industry providers together and discussing the opportunities and challenges each has experienced. Through the sharing of these experiences, new ideas and solutions can arise that may benefit individual producers or the industry as a whole.

Throughout the summer I had the opportunity to attend many training sessions and field days. I also worked with several producers completing an environmental farm plan, assisting in nutrient management plans and generating field maps. The fall is filling up with more mapping and nutrient management planning but I am always happy to have producers reach out to me with services they require.

I hosted in coordination with the Carleton region soil and crop club and the New Brunswick Department of Agriculture Aquaculture and Fisheries (NBDAAF) a field day covering forage production, corn production and a tour of the NBDAAF cereal research plots. The field day was hosted by Graham Farms, and I am very thankful to Nick, John and their father Kenny Graham for welcoming us on their farm. Dr. Nancy McLean of Dalhousie University walked with the group through several alfalfa mix fields to discuss nitrogen contributions from alfalfa and optimal harvest times for the crop. Scott McCarthy from Bayer and Brennan McCarthy from Hartland Agromart showcased Dekalb's corn variety test plots before lunch. Jason Wells from NBDAAF spoke on European corn borer and emphasized the importance of scouting for this problematic pest. After the barbeque lunch and the remainder of the discussion at the Graham's, we went to Albright Farms where NBDAAF cereal specialist Peter Scott shared the details of his plots. I'd like to recognize Hartland Agromart and Dekalb again for sponsoring the amazing lunch and thank all the participants that came out to this event.

Kings County Summer

by Joseph Graham

This Summer has been incredibly eventful with lots happening across the province. All regions hosted various events relating to the major themes within OFCAF (On Farm Climate Action Fund). We also had the privilege of attending the Atlantic forage field day, which demonstrated some very interesting research work. In the Kings Region, we just recently hosted our Tillage Day on Sept 4, at Dan and Deslie Kolverboer's Farm. The local was very thankful to have a great host site. Overall, it was an amazing event and we thank Hall Brothers and Fundy Agriculture for attending with some very interesting equipment. Those who attended got to discuss the ever-advancing tillage implements and tractors shown and even test drive some items.

There is still more to come so keep an eye on the NBSCIA Facebook page for updates on all the upcoming events across the regions. This fall we will be hosting Greg Judy. He will join us for a pasture tour within the Sussex region on October 3rd. Our goal is to allow producers the chance to ask questions and discuss best grazing practices. Overall, these themes are crucial towards advancing our industry and we are thankful to have the chance to host Greg.

This season the NBSCIA weather station data has been crucial for our region, the day of our field event (Sept 4) CHU in the Millstream location was 2300, at our forage site in Knightville we were at 2400. These are fairly high numbers for the region at this time. Corn harvest is expected to come fairly early. Speaking of the forage site, trial work is still being done. There are very interesting festulolium, alfalfa, and a newly established timothy/orchardgrass trials underway. Working with NBDAAF and the Atlantic Grains Council we hope to have good data to share with producers from 2024.



Greetings from Moncton/Chignecto

by Beverly Booth

Hello Everyone! I hope you all had a good haying/cropping season. This summer has flown by and the cows will be coming home before we know it. I have been busy nutrient management planning and have been consistent with that throughout the summer and fall. Along with nutrient management planning comes nutrient and fertility recommendations which have been the bulk of my work load. I have been fortunate to meet with many of the producers in my area from one end of my region to the other. I was able to plan a couple of field days this summer starting with the Precision Ag Demo Day on July 15th where Valley Precision Ag came out to demonstrate fertilizer applications using a drone. There were nearly 60 individuals in attendance, one of the biggest turn outs for a field day in the Moncton region to date! The next field day I have planned will be held on October 3rd at Davis Farm, 142 Davis Road, Mates Corner, NB. This field day will highlight a gentleman from Missouri named Greg Judy who specializes in livestock grazing management. I hope to see you all there! I look forward to working with you in the near future to enhance the soil and crop sustainability in New Brunswick. Don't hesitate to contact me at 506-364-2853 or moncton@nbscia.ca for any of your soil or crop needs!





Service Description

Geomatic Package

Includes a basic set of farm maps. These maps are georeferenced and illustrate watercourses and other buffers.

Custom mapping packages include soil status maps, target balance maps, variable rate application maps, GPS work, perimeter mapping, area determination, and crop yield determination.

Soil, Manure & Tissue Sampling

Sampling, sample preparation, completion of soil form, submission of samples, interpretation of results, and recommendations. Does not include the cost of soil analysis. 15% discount for PEI lab soil analysis.

Emergency Response Plan

A written emergency response plan for compliance with regulatory bodies.

Environmental Farm Plan

Preparation of field maps and emergency response plans as part of your EFP.

Equipment Calibration

Manure spreaders, sprayers and seeders.

Nutrient Management Plan

Whole farm nutrient management plans including plans compliant with the Livestock operations Act.

Crop Monitoring and IPM

Planning, integrated pest management, scouting fields for insects, pests and weeds, plant population counts, and plant emergence counts.

**Cost of Production Analysis
Research
Production Management**

And more!

Contact Us

If you are in need of any services, or have any questions, please contact your local coordinator.

General Manager

Ray Carmichael
Office: (506)276-3311
Cell: (506)392-7214
gm@nbscia.ca

Central

Andrea Versloot
(613)262-5546
central@nbscia.ca

Moncton/Chignecto

Beverly Booth
(506)364-2853
moncton@nbscia.ca

Northshore

Gabrielle Schenkels
(506)625-7718
northshore@nbscia.ca

Fredericton Office

150 Woodside Lane, Unit 2
Fredericton, NB E3C 2R9
Telephone: (506)454-1736
Fax: (506)453-1985

Carleton

Andrew Sytsma
(506) 245-2220
carleton@nbscia.ca

Kings

Joseph Graham
(506) 567-0224
kings@nbscia.ca

Northwest

Jean-Mars Jean-Francois
(506) 273-1674
nwno@nbscia.ca



Thank You to Our Partners & Sponsors!

Rainmakers



**Sustainable Canadian
Agricultural Partnership**

Competitive. Innovative. Resilient.



PIONEER[®]



CORTEVA[™]
agriscience



Farm Credit Canada

Canada 

Thank You to Our Partners & Sponsors!

Barn Raisers



Harvesters



Sussex, NB



Seed Sowers

