



Bleuets **NB** Blueberries

UPCOMING EVENTS

October

WBANA Symposium

October 30-November 1

Delta Beausejour

Moncton, NB

See agenda in this newsletter

Also call (506) 459-2583

for further details

November

BNBB

Industry Strategy -

Regional Kitchen Meetings

Wednesday, November 12, 6:30 pm

Complex Les Deux-Riviere

Tracadie-Sheila, NB

Thursday, November 20, 6:30 pm

St. George, NB

Thursday, November 27, 6:30 pm

NB Department of Agriculture

and Aquaculture boardroom

Moncton, NB

For information on all the above,

please call (506) 459-2583

WBPANS AGM

November 21-22

Best Western

Truro, NS

Please phone (902) 662-3306

for details

PEI Wild Blueberry Growers

Association AGM

November 29

Charlottetown, PE

Please phone (902) 569-7638

for details

Field Notes

Bleuets NB Blueberries · 1350 Regent Street, HJ Flemming Centre, Rm 247, Fredericton, NB E3C 2G6

Tel. (506) 459-2583 · Toll Free 1-866-840-2583 · Fax (506) 459-8920 · bnbb@nb.aibn.com · www.nbwildblue.ca

WBANA Symposium

October 30 – November 1, 2008

The upcoming WBANA Symposium is a networking and learning opportunity for blueberry producers. Growers from Quebec, the Maritimes and Maine are expected to attend along with processors and Wild BREW production researchers. The Friday morning program is dedicated to presentations by representatives from promotion agencies in Japan, Germany, the United Kingdom, the United States and Canada. This is where producers can learn how blueberries are promoted to consumers in key markets. Dr. Willy Kalt and Dr. Jim Joseph, leading food scientists, will present on Friday afternoon along with William Cline, a researcher and extension specialist at North Carolina State University. The Saturday program will include various presentations from the Wild BREW group. We encourage growers to attend this one-of-kind blueberry

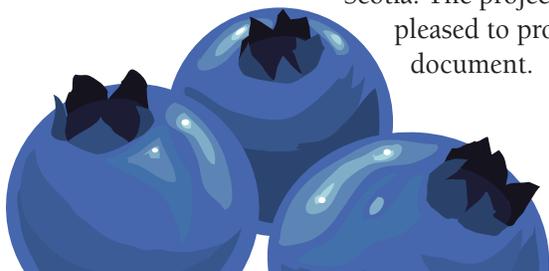
- Production research
- Promotional strategies
- Developments in health research

industry event. A detailed agenda is included in this newsletter (see page 4).

The event takes place at the Hotel Beausejour in Moncton. Participants may book rooms by calling 888-351-7666. There will be a registration fee of \$25 which will include coffee breaks, two breakfasts and two lunches. A separate charge (\$40) will be levied for the banquet. The symposium is being organized by WBANA in partnership with grower associations and agencies in Quebec and the Maritimes. Financial assistance for this initiative is being provided from the ACAAF program of Agriculture and Agri-Food Canada and private sponsors.

Wild Blueberry Research in Maritime Canada

Accompanying this newsletter is a copy of the document *Wild Blueberry Research in Maritime Canada*, the result of a joint project by BNBB, WBPANS, and the PEI Wild Blueberry Growers Association to communicate results of research projects directly to producers. The project involved evaluating and summarizing the results of numerous multi-year research trials conducted in the three provinces. Some project summaries are also included from Maine. ACAAF funding was provided by the New Brunswick Agricultural Council, Prince Edward Island ADAPT Council and Agri-Futures Nova Scotia. The project was announced in the November 2007 newsletter and BNBB is pleased to provide New Brunswick growers with a copy of the final project document.



Agriculture and
Agri-Food Canada

Agriculture et
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Prince Edward Island ADAPT Council



Agri-Futures

Nova Scotia's ACAAF Council
Advancing Canadian Agriculture and Agri-Food

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Management of Grasses in Wild Blueberry Fields

Submitted by *Nathan Boyd*

The presence of grasses in a sprout or crop year blueberry field can significantly reduce yields. Grasses compete for nutrients, shade blueberry shoots, and impede harvest operations. However, in certain situations they can have a positive impact. For example, they reduce erosion in areas with no blueberry cover and may even enhance blueberry rhizome growth into bare areas. For these reasons elimination of grasses on slopes with incomplete blueberry coverage is not desirable. To manage grasses effectively growers need to correctly identify the species present and be aware of the appropriate application timing of herbicides. Timing is especially critical because herbicide effectiveness varies with plant growth stage and different species emerge at different times. Generally speaking, the order of emergence for some of the key species is as follows: bluegrasses, fescues, poverty oat, tickle grass, and witch grass. Inadequate control of witch grass is often achieved because post emergent herbicides are applied before it emerges.

Herbicides registered for grass control in wild blueberry fields are somewhat limited. That is why the development of new grass management tools and techniques is one of the key research priorities of the Vegetation Management Research Program at the Nova Scotia Agricultural College. However, there are currently several effective

grass herbicide options. Growers need to apply herbicides at the right time and, when possible, use different herbicide types in different years to reduce the probability of developing herbicide resistance. Application information for some of the registered products is summarized below.

Venture L is a post emergent grass herbicide that can be applied in the spring of the sprout or fruiting year. Venture should be applied at the 2 to 5 leaf stage of annual grasses or when perennial grasses are approximately 10 cm tall. Care must be taken to apply Venture no later than sixty days before harvest in the fruiting year. Application rate varies with species but generally susceptible annual grasses can be controlled with rates of 1 L/ha whereas perennial grasses require 2 L/ha to achieve adequate control. Adequate control of species such as tickle grass and witch grass can be achieved with Venture. Other species, such as poverty oat, blue grasses, and Mexican muhly grass are suppressed but not controlled.

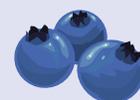
There are several pre-emergent grass herbicides that may be used in wild blueberry fields. The first is **Sinbar** which must be applied in the spring of the sprout year before blueberry shoots emerge. Rainfall is required to activate Sinbar but excess moisture can result in leaching or run-off of the product and as a result inadequate grass control. Sinbar effectively controls tickle grass, witch grass, poverty oat, and Canada bluegrass.

The second option is **Kerb** which must be applied late in the fall of the sprout or fruiting year. Moisture is required to move the herbicide into the soils. Application in warm temperatures will result in loss of the herbicide to the atmosphere. Optimum application timing is before soils freeze but when they are no warmer than 10°C. Species controlled include fescue species and tickle grass. Preliminary observations suggest that Kerb controls other grass species as well but does not control poverty oat. **Casaron** may also be applied in the spring of the sprout year or in the fall after harvest. It effectively controls a wide range of species including some fescues and poverty oat. However, it is a granular product and it is very expensive. It may be an effective option for small growers that are looking for a product to apply with a hand held spreader to small distinct patches of grasses.

Blueberry growers currently have several herbicide options for grass control. It is very important that, when possible, growers rotate different herbicide types. Several researchers in the Atlantic provinces are working to identify new grass management tools for the wild blueberry industry. It is our hope that over time we may be able to provide new tools for growers in the region.

BNBB Website—BNBB has an updated website where producers can find BNBB newsletters, upcoming events, and links to sites with information useful to growers. There is also more general information for people interested in learning about wild blueberries. BNBB will review the website regularly to make improvements and add information. If you have ideas, suggestions or would like to become involved with the website, please call the BNBB office at (506) 459-2583 or send an email to bnbb@nb.aibn.com.

www.nbwildblue.ca



Bleuets **NB** Blueberries

Sulfur is an effective treatment for reducing soil pH to control weeds in wild blueberry fields

Submitted by David Yarborough

In experiments conducted in over thirteen locations in Maine from 2000 to 2005, sulfur applied at 500 or 1000 pounds per acre was effective in reducing the soil pH one-half to one pH unit. When the target level of pH 4.0 was reached we found a reduction in weeds, especially grasses and when used with the herbicides Sinbar or Velpar additional suppression was obtained by the sulfur. The application of 1000 pounds per acre to an organic field reduced the pH from 5.0 to 4.0 and resulted in a decrease in weeds two years after the application. The yields in the organic field were doubled by burning vs. mowing and also doubled with the use of sulfur on the mowed areas, but when burning and sulfur application was combined the yield was increased three fold. Sulfur will reduce the availability of soil nutrients for weeds, but allows blueberries to grow as well at a higher pH because wild blueberries are well adapted to acid soil. This method will not control all weeds, as there are other weeds well adapted to acid soils, but it will control many competitive weeds that reduce blueberry yield.

In general, it takes two to three years for the sulfur application to reduce the soil pH and it takes about 100 pounds of sulfur pellets to reduce the soil pH 0.1 units. There is a difference in the rate of reduction and length of time the pH was reduced. This is related to differences in the organic matter (OM) and the Cation Exchange Capacity (CEC), so that a

soil sample on the field for treatment is needed initially to determine the starting pH and over time to monitor its progress. The goal is to reduce the soil pH to 4.0. Soil pH needs to be monitored and it may be necessary to retreat with sulfur after six years to maintain the lower pH level. This treatment may be initially more expensive than an herbicide application but the effect is much more long lasting.

The soil test is usually taken at the same time as leaf test samples, at the tip-die back stage of blueberry growth in July of the non-crop year. However, if soil samples are taken in spring continue to take samples at the same time of year to get an accurate comparison of the samples. Take a random sample of 30 or more places in your field. Take a sample of the top three to four inches of soil, put it in a container and mix it well. Send a sample of this soil to the soil testing lab and request pH only. The goal is to reduce the soil pH in your field to 4.0, so if it is at 4.5 then it would take 500 pounds per acre and if it is at 5.0 it would take 1000 pounds per acre. It will take two to three years for the pH to be reduced and it may begin to rise five to six years after the initial application.

We applied the sulfur in the spring after pruning but it could be applied other times of the year, except if the ground is frozen, or if the soil is saturated with standing water or if the plant leaves are wet. Applying it pre-emergence in the spring to pruned plants will have the least



Granular sulfur (SO₄, 90%)

potential for any blueberry plant injury.

Sulfur comes in the form of a pellet and looks like a small split pea and may be applied with a conventional fertilizer spreader. It is important to get an even application of the sulfur, so an air assist spreader is the best application method. If growers opt to use a Vicon type granular fertilizer spreader, it will be necessary to cut the application rate in half and then overlap the application by 50% in order to get an even application on the field.



Bleuets **NB** Blueberries



WBANA Symposium *The World is Blue*

October 30, 2008 to November 1, 2008

Hotel Delta Beausejour

750 Main Street, Moncton, New Brunswick

Thursday, October 30

8:00 Evening reception

Friday, October 31

7:15 Networking Breakfast / Refreshments
Sponsored by FCC

8:00 Registration

8:45 Welcome

9:00 Presentations by promotional agencies
Ms. Ai Miyagawa Asahi Agency (Japan)
Marion Bartelt-Simon MK2 Agency (Germany)
Mike Nicholas Nicholas and Knight (UK)

10:00 Nutrition Break
Sponsored by Dow Agro Sciences

10:45 Presentations by promotional agencies
Susan Willemsen Siren Group (Toronto)
Johanna Raynaud Massey-Forget (Quebec)
John Sauve Swardlick Marketing Group (USA)

12:30 Lunch

1:45 Dr. Willy Kalt is a senior researcher at the federal Research Station in Kentville, Nova Scotia. Dr. Kalt is a leading food scientist and has made a large contribution to the success of the wild blueberry industry with her research into the health benefits of blueberries.

2:30

Dr. Jim Joseph is a senior scientist with the USDA Human Nutrition Research Center at Tufts University. Dr. Joseph conducts leading neuroscience research and is the recipient of many international awards.

3:15 Nutrition Break

Sponsored by Dow Agro Sciences

3:45

Mr. William O. Cline is a researcher and extension specialist at North Carolina State University. Mr. Cline will present information on the world wide production of blueberries, where new production is located and what it means for the future.

4:30 Questions to presenters

5:00 Adjourn for afternoon

6:30 Evening Reception

7:00 Banquet and Entertainment

Janelle Dupuis, Canada's Wild Blueberry Ambassador
Lucien, professional comedian

Sponsored by: Bayer Crop Science, Cavendish, Dupont, Engage Agro Corp., Koppert, McCains, Syngenta, UAP



Saturday, November 1

7:30 Networking Breakfast, continental style

Session 1

(Please note the order of presentations may vary)

8:30 **Welcome**

Fall Application of Tribenuron methyl for Bunchberry Control in Wild Blueberries, Dave Yarborough, University of Maine.

Mesotrione efficacy on goldenrod and black bulrush, Nathan Boyd, Nova Scotia Agricultural College.

Aménagement d'une bleuetière à l'aide du glyphosate, Sophie Gagnon, Agrinova.

Sheep sorrel biology and management in wild blueberry fields, Nathan Boyd, Nova Scotia Agricultural College.

Weed control issues in NB, Gavin Graham, New Brunswick Department of Agriculture and Aquaculture.

10:00 **Nutrition Break and Poster Display**

Sponsored by RBC

Posters

Optimum Leaf Nutrient Concentrations of Wild Lowbush Blueberry, Jean Lafond, Agriculture and Agri-Food Canada.

Update on the distribution of Rhagoletis mendax (Diptera: Tephritidae) in lowbush blueberry fields in northeastern New Brunswick, Canada. S. O. Gaul, E. N. Estabrooks, C. Vincent, and K. MacKenzie, Agriculture and Agri-Food Canada.

Towards identification of Rhagoletis mendax (Diptera: Tephritidae) in lowbush blueberry fruit with real time PCR. K. L. Burgher-MacLellan, S. O. Gaul, K. E. MacKenzie, and C. Vincent, Agriculture and Agri-Food Canada.

Organic Production of Wild blueberries I. Insects and Disease. F. Drummond, S. Annis, J. Smagula and D. Yarborough, University of Maine.

Organic Production of Wild blueberries III. Fruit Quality. D. Yarborough, F. Drummond, S. Annis and J. Smagula, University of Maine.

Session 210:40 *Flies in the Trees?* Frank Drummond, University of Maine.

Insecticide Efficacy Trials, Judith Collins, University of Maine.

Biological Control of Monilinia and Botrytis Blights of Lowbush Blueberry, Paul Hilderbrand, Agriculture and Agri-Food Canada.

Fungicides For Suppression of Septoria and Rust in Wild Blueberry Production, D. Percival, L. Cooke and J. Grant, Nova Scotia Agricultural College.

12:15 **Lunch****Session 3**1:30 **Extension Reports**

Dave Yarborough, Maine

Daniel Simard, Quebec

Jane White, Newfoundland

Chris Jordan, Prince Edward Island

Michel Melanson, New Brunswick

2:30 *Towards an Automated, Wireless Irrigation System for Efficient Water Use in Wild Blueberry Production*, Jean Pierre Privé, Agriculture and Agri-Food Canada.

Impact of Septoria and Rust on Leaf Photochemistry and Resulting Yield Potential, J. Dawson, D. Percival, P. Hildebrand and N. Pitts, Nova Scotia Agricultural College.

Current Status and Issues on Blueberry Production in China, Dave Yarborough, University of Maine.

Thank you to all our sponsors

Field Day Report

Blueberry producers enjoyed a very successful field day at the farm of Russell and Bonnie Weir in Pennfield. The day included equipment displays and demonstrations; technical displays for insect, weed and disease identification; information booths by WBANA and the Agricultural Alliance; lunch and a Pie Eating Contest at the nearby Lions Hall; and a very informative, well organized afternoon of field tours. Field tours

included a demonstration of FAE mulching equipment, a discussion of weed trials, a look at irrigation equipment and a drive through the Pennfield Range area. It was a spectacular day with great opportunities to learn and share information. BNBB thanks Russell, Bonnie and their family for their dedication to the blueberry industry and for hosting blueberry growers at their farm.



BNBB Feast in the Field display area with Jamie Morrison, Lynn Morrison, and Greg Hatt.

Feast in the Field

On September 7th, Bleuets NB Blueberries was pleased to participate in Feast in the Field at the Riverside Resort and Conference Centre in Mactaquac. Feast in the Field involves the participation of many community supporters including businesses, volunteers, corporate sponsors and local chefs to offer an afternoon of delicious food, drink, and great entertainment to participants. The event is a fundraiser for the Canadian Paraplegic Association (NB) Inc. and is an excellent opportunity to raise local awareness of the goodness and tastiness of wild blueberries. BNBB was pleased to offer participants delicious blueberry pie and muffins. BNBB thanks Russell and Bonnie Weir of MacKay's Blueberries for their generous donation of pies for this event. Over \$35,000 was raised through Feast in the Field for CPA (NB) Inc.

Deer Damage Report

**This form is for data collection purposes only.*

Bleuets NB Blueberries is implementing a reporting system to record and document deer damage. This information will be compiled by the agency and used to support future presentations to government.

Producers Name: _____

Address: _____

Phone Number: _____ E-Mail: _____

Location of Damage: Community: _____ County: _____

Map Grid No: _____

or GPS Coordinates: _____

Location of Damage: Community: _____ County: _____

Map Grid No: _____

or GPS Coordinates: _____

Location of Damage: Community: _____ County: _____

Map Grid No: _____

or GPS Coordinates: _____

Landowners Name: _____ Landowners Phone No: _____

Estimated Value of Destroyed Crop: _____

Electric Fence Installed: Yes No

Was Fence Working Properly (well grounded, etc.)? Yes No

Have Deer Caused Damage Here Before? Yes No When? (approx.) _____

Action Taken: Trapped or Shot _____

Other _____

How was Animal Disposed? _____

Were Photos Taken? _____

Return this form to: Bleuets NB Blueberries
1350 Regent Street, Rm 247
Fredericton, NB E3C 2G5
Fax: (506) 459-8920



NOTICES

Blueberry Industry Strategic Planning Sessions

BNBB has been asked by the Department of Agriculture and Aquaculture to conduct a strategic planning process for the New Brunswick blueberry industry. As part of this process BNBB is inviting growers to participate in a series of regional kitchen meetings as follows:

- Nov. 12, 6:30 pm Complex Les Deux-Riviere
Tracadie-Sheila
- Nov. 20, 6:30 pm St. George
- Nov. 27, 6:30 pm NB Department of Agriculture and
Aquaculture boardroom Moncton

Pesticide Certification Training

BNBB will organize a pesticide certification program for March 2009. We have had growers express an interest in training. The training is one day and the cost is between \$90 - \$110. There is a manual and testing will be conducted at the end of the day. If there is sufficient interest BNBB will consider offering both private (L1) and commercial (B1) training programs.

We encourage growers to register their interest by contacting BNBB at 1-800-840-2583 or (506) 459-2583. Please remember that all producers, and persons who apply pesticides on behalf of producers, are required to have pesticide certification.

BOARD OF DIRECTORS

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 Kathy Trueman 536-8995
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Producers are invited to call their local board members with any ideas, questions, and comments they may have concerning the agency **Bleuets NB Blueberries**, upcoming activities, and the work of the board. Please remember that at the annual regional meetings one board member will be elected in each region for a three year term. We please ask producers to consider serving for a term on the board. If you would like more details please call the office at (506) 459-2583 or toll free at 1-866-840-2583.

Office Hours

The hours of operation for the office located at 1350 Regent Street in Room 247 of the Hugh John Flemming Forestry Centre are: Wednesdays and Thursdays from 8:30 to 4:30. Producers are invited to stop by the office when they are in Fredericton.

The editors would like to thank those who contributed to this newsletter: Nathan Boyd, Assistant Professor, Nova Scotia Agricultural College; Dave Yarborough, University of Maine.



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