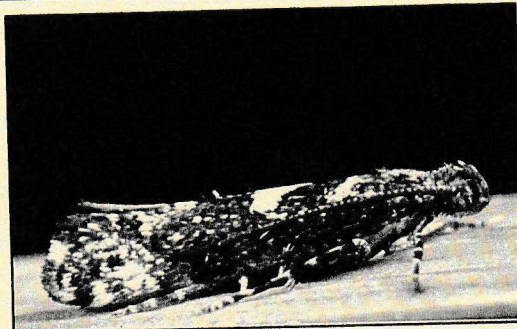




THE GARLIC NEWS

Connecting the Canadian Garlic Network!

Issue 23 Spring 2010



The Leek Moth

The Leek Moth, *acrolepiopsis assectella*, is an imported pest of leeks, garlic, onions and other members of the Allium family. It arrived in the Ottawa area about 1993, likely in plant material from Europe. At our **Garlic Field Day 2000** at Beaver Pond Estates, John Geary, a grower from east of Ottawa announced that he had this pest in his garlic, making growers aware that they had a potential problem. This set me off on a quest to pursue solutions for the budding garlic industry in Eastern Ontario.

The Ottawa Valley Leek Moth Project. Meetings were held with government specialists. I conducted grower surveys to map out the extent of the problem and arranged farms and gardens in the region to host potential research trials. Margaret Appleby, the Integrated Pest Management (IPM) specialist from Brighton agreed to coordinate government officials in conducting research and trials. Dr Peter Mason, Research Scientist with Agriculture and Agri-Food Canada and specialist in moth species, took on the problem of lab studies and collaboration with European scientists. By 2003, we had the Ottawa Valley Leek Moth Project funded and underway. The project would provide answers on such questions as the life cycle and habits of the leek moth and promising approaches for its management.

Meanwhile, this pest, unhampered, continued its relentless march, feeding on garlic, leeks and onions, drifting on the wind or flying against it and moving via the abundant wild leek stands found in the forested areas. No doubt, it was relocated with poorly inspected garlic shipments as well. It has been in Quebec for many years.

Last year, 2009, the Canadian Food Inspection Agency (CFIA) monitoring service had located it in Prince Edward Island. This would suggest that it is likely in New Brunswick and Nova Scotia as well. There is little doubt that this pest will spread to western Canada as well, in due course.

Crop year 2009 revealed another aspect of the damage done by this pest. While previously, market garden growers observed only damage that affected the scapes, with the resultant loss of sales from that portion of the garlic crop, the cooler conditions in spring and summer 2009 resulted in the leek moth larvae boring into the bulbs as well. This was far more serious as sales of table garlic and seed stock were both adversely affected.

This issue of the Garlic News includes a special section on the Leek Moth to assist growers in becoming more familiar with this pest that threatens not only garlic, but other members of the Allium family – leeks, onions, chives and flowering Allium plants as well.

My article, “**Living with the leek moth**” has been updated to account for new information and is on page 9.

Dr. Peter Mason’s article on the Bio-Control agent, *Diadromus pulchellus*, appears on page 8.

Grower letters containing reports and questions are on page 7. See also page 3 for my trials on row covers this year.

We hope that this information will help growers to inform themselves on this serious pest problem.

BUY LOCAL, BUY ORGANIC, BUY CANADIAN

IT MAKES HEALTHY BUSINESS SENSE

THE GARLIC NEWS

Connecting

The Canadian Garlic Network

Issue # 23 Spring 2010

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ABOUT THE GARLIC NEWS

The *Garlic News* is a membership newsletter.
It carries on from where the *Garlic Newsletter*
and *The Voice of Garlic* left off. Distribution is
by subscription to paid members.

The *Garlic News* uses a newspaper column
layout and larger print size for easier reading.
Wide margins and 8 1/2 x 11-size paper enable
growers to save copies in a 3-hole binder.

EDITORIAL POLICY

The purpose of *The Garlic News* is to provide a
networking forum to enable growers to grow
better garlic and enjoy it more. Articles and
contributions are welcome and will be
published subject to space and suitability. Keep
articles to less than 400 words. Pictures may be
either colour or B&W. Letters and articles may
be edited for length and content. The Editor
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Deadline for Summer 2010 Issue: June 1

In This Issue

The Leek Moth

In 2009, the leek moth bared its teeth, damaging garlic bulbs for the first time. Growers are encouraged to inform themselves about this pest. Helpful information is provided.

Notes from our garlic patch

Groundhog reports 2010, unbelievable weather, Bulbil Project update and our own trials in 2010 on ProtekNet for leek moth control.

Al's Garlic Ramblings

Al Pickett's has offered to send in his rambling thoughts on his observations of his garlic patch and share them with our readers. The 1st Rambling appears in this issue.

A clove here and there

Tidbits from the garlic world. Free organic standards, growing Tunceli garlic, El Nino.

People – We get calls and letters

We get calls and letters from garlic fans and learn from their garlic experiences.

Leek Moth – Calls and letters from growers

The leek moth was a hot topic in 2009 as growers tried to cope with the damage this pest caused to their garlic crops.

New Bio-control Agent for the Fight against the Leek Moth

The parasitic wasp *Diadromus pulchellus* has been approved for release in Canada. Dr. Peter Mason of Agriculture Canada describes the process followed.

Living with the Leek Moth – An Organic Approach

Paul Pospisil has updated the guidelines for leek moth management by incorporating the latest information available.

The Garlic Directory

Garlic ads, listings and useful garlic contacts. Growers are finding the advantage of letting buyers know about them. "Don't hide your garlic under a bushel!"

The Best Garlic Recipes, Tips and Ideas

The 10 in 10 Diet. Black & Orange by Lynn Shwadchuk, cook, vegetarian, educator. Freezing olive oil. A garlic gadget called Garlic Genius.

More Garlic Recipes, Tips & Ideas

Mary Lou's famous maple baked beans, an oriental stir-fry recipe, Frances Legault's Beer Bread and some new health research from Japan on allicin.

Checklist for Being an Organic Farmer

A useful checklist for growers wanting to get into organics, by Hugh Martin

Marketing: Increase Your Market Sales of Garlic

Increase garlic sales by 25 %. Advice to market vendors by Paul Pospisil

Garlic Research: Performance & Yield Comparison 2009

Results from the Small-Plot Garlic Variety Trials on 41 different garlic cultivars. (Second page of Report # P – 02-2009. See Issue 22 for first page of the report)

People – Still more calls and letters

The hints and ideas continue to flow in. There's a new GarlicGirl in Haliburton, vodka and garlic in Saskatchewan and much more. In this issue, Jeff Greenberg describes their own version of a garlic dibble made from aluminum.

Attachments: Flyer, Haliburton County Garlic Growers 2010 Garlic Workshop

: Advance Garlic Order Form, 2010 Crop, Small Plot Garlic Variety Trials

: Early Bird Subscription Renewal for subscriptions expiring Summer 2010

RENEW YOUR SUBSCRIPTION EARLY!!

Avoid paperwork during the busy harvest season. **Early Bird Renewal form is enclosed for subscriptions expiring with issue #24, Summer 2010** If no form is included with your News, you are paid up. Check numbers after your name on your address label. The first 3 digits are your member number; the 2 digits after the dash are your last paid issue.

XXXXXXXXXXXX

Eastern Ontario Garlic Field Day 2010

Date: Sunday, 27 June 2010 from 09:30 a.m. to 3:30 p.m.

Location: Garlic Trials Site, Beaver Pond Estates

: 3656 Bolingbroke Road, Maberly, Ontario

Attendance: By invitation. Growers within reasonable driving distance, i.e., northeastern & eastern Ontario and western Quebec receive invitations. However, if you are outside this area and would like to attend, contact the editor. We'll be pleased to invite you.

Notes From Our Garlic Patch

Groundhog Reports as of February 2, 2010

Six more weeks of winter! This was the consensus of the cross-country groundhog reports.

Groundhog day is a traditional festival in Canada and the U.S.A. falling on cross-quarter day, midway between the Winter Solstice and the Spring Equinox. The lore goes that if the groundhog emerges from its burrow and sees his shadow because of the bright sun, it will be frightened and run back into its hole and there will be six more weeks of winter. If it's cloudy, no shadow so winter will soon end, in a month and a half or so. The forecasts are usually quite accurate. They can't miss.

2010 foolish forecasts by silly rodents:

Shubenacadie Sam, saw shadow, winter continues.

Balzac Billie, no shadow, early spring.

Manitoba Merv, no shadow, early spring.

Watson Willie, saw shadow, winter continues.

Warton Willie, saw shadow, winter continues.



Our own **Feldspar Freddie**, who locates his burrow within sight of my lettuce patch, as usual displayed a calm approach. A little sign stuck on a dried spinach stalk outside his burrow read "Wake me when the garden is growing". OK, Freddie, I'll plant some special for you.

Winter weather

After a horrible spring and summer last year, here in northeastern Ontario we were blessed with the best fall weather in years, and aside from a one-day ice storm on Boxing Day, we enjoyed the most pleasantly mild January and February in years. Despite many days of thaw, the snow cover on my garlic beds held on, although reaching a dangerously thin crust by the end of February. The few snow flurries melted away within a day or two, saving me the need for shovelling and ploughing. Speaking of ploughing, the municipal snowploughs were running at every sign of a snowflake, sometimes twice in the morning. Was it concern for drivers or merely burning off their budget dollars so they wouldn't face a cut next budget year? So much for government economic measures!!

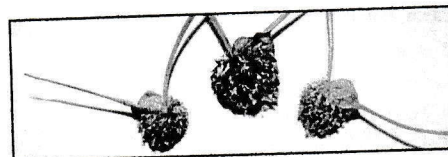
El Nino is at it again

Forecasters say we can credit the lack of winter to El Nino. Warmer Pacific ocean temperatures that cause a shift in the global weather patterns characterize an El Nino year. In this case, the jet stream has mostly been keeping storms south and east of us. While we've had a balmy winter, our neighbours to the south and east have borne the brunt of snow and cold.

March came in like a lamb, went to double-digit temperatures and went out like a soggy sheep, with just a bit of mixed rain and snow. What's in store next?

The Bulbil Project Update

To put it mildly, the first year of the Bulbil Project was a rewarding success. I shipped out 75 packets of bulbils, twenty-some growers are participating and reports from growers who already use this technique as part of their garlic cultivation are coming in. For summer 2010, I've already received 7 new requests for participation. On spreading the gospel, I gave talks to three Seedy Saturdays, an organic growers guild and have requests for several more talks in the coming months on bulbils. The bulbil approach to growing better garlic has certainly struck a musical chord with garlic growers!



Mature bulbil capsules of Porcelain Majestic

Beaver Pond Estates Trial on Netting for Leek Moth

This spring, I'm taking on a big project, that of trying out an insect protecting mesh on part of the garlic patch in an effort to frustrate the Leek Moth. It's a VERY expensive, perforated plastic mesh called ProtekNetNew from Dubois Agrinovation Inc. in Quebec. Supposedly, this pricey plastic will stop insects from destroying your crop. Well, after numerous phone calls and emails to the company, and, the frustration of dealing with salesmen that didn't know the size of their holes or anything else about this product (remember, the leek moth is a very tiny insect, less than 1/2 " across and can get through the tiniest space!), I decided to lay out the twelve hundred bucks to get a little bundle of this plastic stuff.

OK, so I'm a bit of a sucker, but I'd like to know whether or not this overpriced junk works.

Since it was untested on garlic or the leek moth, they couldn't tell me much about using it so I'm trying to figure out how to build a supporting structure (plastic is heavier than floating row cover), how to lay it out in April and keep the wind from blowing it away, how to lift it for inspection, weeding, scaping, and most of all, how to decide whether or not it kept the momma moth from laying her eggs on my garlic. Meanwhile, my conscience is quivering because once more, I've been duped into destroying our environment by using PLASTIC, the bane of our existence on planet Earth!

In the fall issue of the Garlic News, I'll describe what I did, whether or not it helped to frustrate the Leek Moth and my opinion on whether the higher price of this plastic product makes it better than floating row cover. For those coming to our Annual Field Day in June, you'll get to see it on the garlic patch alongside standard floating row cover.

May you always have love to share, health to spare, and friends that care.

Al's Garlic Ramblings

By: Al Picketts

Garlic has the ability to adapt to new environments. Some might find this trait useful, exciting, frustrating, or just plain weird. I noticed that whenever I planted a new variety from pretty much anywhere I would expect to harvest bulbs that resemble those that I planted. Invariably, I would get something quite different. The colour would be different or the size would be off (usually smaller) or the shape would be different. As my collection grew I noticed that the varieties within a type would look very much alike while the types would be quite different. I also noticed that the more years that I planted a particular variety the better it grew. Better meaning that it grew larger, had more cloves produce good bulbs, and became more predictable. Is this due to my learning how to grow garlic better with more compost, wider spacing, etc. or is my selection process producing the kind of results that I want by planting what I consider the best cloves, or is it that garlic simply adapts to my new environment, new soil, new moisture allocations, new winter conditions, new temperatures, new altitude or a longer dormant period? Last summer at harvest time I had a visit from repeat customers who live in Maine but come to PEI each year to visit family. They brought several bulbs of garlic that they had grown from my seed the fall before. I could not recognize it. The difference was amazing. It was larger, much more purple and had a different shape. It was beautiful garlic and they were certainly pleased with the results. Someone told me that I should sell my seed garlic as grown under stress so when it is planted in your garden it will burst forth and become the best garlic you have ever grown. I think I need more research before I make that claim.

Life's Lessons: The obstacle in our path

Humour from Al Picketts

In ancient times, a King had a boulder placed on a roadway. Then he hid himself and watched to see if anyone would remove the huge rock. Some of the King's wealthiest merchants and courtiers came by and simply walked around it. Many loudly blamed the King for not keeping the roads clear, but none did anything about getting the stone out of the way. Then a peasant came along carrying a load of vegetables. Upon approaching the boulder, the peasant laid down his burden and tried to move the stone to the side of the road. After pushing and straining, he finally succeeded. As he picked up his load of vegetables, he noticed a purse lying in the road where the boulder had been. The purse contained many gold coins and a note from the King indicating that the gold was for the person who removed the boulder from the roadway. The peasant learned what many of us never understand!

Every obstacle presents an opportunity to improve our condition.

A Clove Here and There

Organic Standards are now free

From: The COG e-News, January 2010

Canadian Organic Growers (COG) has been lobbying for free access to standards for all. Last year, they got part way there when the Canadian General Standards Board (CGSB) agreed to drop the price. Now they're thrilled to announce that the Canadian Food Inspection Agency and Agriculture and Agri-Food Canada will be picking up the costs for at least the next five years. The deal covers the two latest versions of the standards – General Principles and Management Standards (CAN/CGSB-32.310) and the Permitted Substances List (CAN/CGSB-32.311) both amended December 2008 as well recent amendments released this month.

As of now, if you visit the [CGSB site](#), you'll find that the government is still charging for standards through their US distribution store. Be patient and don't purchase the standards until they are free. It may take some time for CGSB and CFIA to conclude a formal agreement.

Editor: Well! The government bureaucrats have bent a little and won't charge you again for something you already paid for with your taxes. Life is getting better, ey?

Tunceli Garlic to be farmed in Turkey?

Allium longicuspis and *Allium tuncelianum* have long been regarded as the wild ancestors of modern garlic. Both are widely distributed throughout Turkey and *A. tuncelianum* is of particular interest as it is a fully fertile species. Both *A. tuncelianum* and *A. longicuspis* smell of garlic when crushed and are used locally as a substitute for the modern cultivated forms of *A. sativum*. Recent genetic research by Meryem Ipek and Philipp Simon suggested that *A. sativum* and *A. longicuspis* should no longer be considered as genetically distinct. Brian Mathew, in his book, *A Review of Allium section Allium*, puts forward the possibility that *A. tuncelianum* is the wild ancestor of both *A. longicuspis* and *A. sativum*. *A. tuncelianum* is endemic to the region of Tunceli in central Turkey and is collected and consumed locally. The continued collection from the wild has led to concerns about its survival as a wild species and as a result, the United Nations Development Programme awarded a small grant to the Accessible Life Association (UYD) who used the plant as well as market suitability, size and feasibility.

El Nino is at it again

Forecasters say we can credit the lack of winter to El Nino. Warmer Pacific ocean temperatures that cause a shift in the global weather patterns characterize an El Nino year. In this case, the jet stream has mostly been keeping storms south and east of us. While we've had a balmy winter our neighbours to the south and east have borne the brunt of snow and cold.

Calls and Letters From Our Readers

100 years of growing garlic in northern Manitoba

Walter Krivda of The Pas, Manitoba, a retired university professor, called early one morning to renew his Garlic News and we got talking about the arrival of immigrants from the Ukraine in 1914 to work in the pulp mill in The Pas. He recalled as a youngster all the families growing a pink-tipped garlic, making braids or ropes of it and hanging it under the house. With 100 frost-free days and rich soil of peat mixed with the underlying alluvial clay, gardens grow very good crops. Even grasses grow to 6' height.

Editor: The Pas is located over 600 km NW of Winnipeg near the Saskatchewan border. Population, about 6000.

Christmas Generosity

Carole Campbell, a retired machinist now living in **Dundas, Ontario**, sent me a clipping from *The Hamilton Spectator* (May 2009) about her 6000 bulb garlic operation. It had a nice picture of Carole spreading leaves between the rows as mulch. She has been growing garlic for 12 years from bulbils her uncle gave her. In her note, she said, "Looking forward to my next issue of the Garlic News. Still learning the hard way. Cheque enclosed for renewal and put the rest to good use. Keep in good health and have a good garlic season."

Editor: A fine article on your garlic, Carole. You're doing a great job by spreading the gospel of garlic by this kind of publicity. It's great that you grow from bulbils. Seems that your uncle had the right idea of how to grow garlic. And thank you for your generosity. The extra \$30.00 will go a long way with helping with the rising costs of doing the newsletter.

Reg Forbes of Smiths Falls Ontario called on Jan 26, 2010 to say "Hello" and to let me know he's sending his Garlic News renewal. He didn't get his garlic in last fall. At 87, he's doing OK but slowing down a bit.

Editor: Hi Reg, aren't we all, but I'm just a young sprog at 72 so I haven't noticed the aging process! Not much, Hah!

Spring and greenhouse planting in the north

May Herchuk, Laurier, Manitoba of Prairie Sun Greenhouse and Gardens, inquired:

Read a note from a gardener in Sask. that was told he could plant hard neck garlic in the spring and still get a good crop? Any notes on that? If so I would love to try and sow some full cloves in the spring? Would you maybe harvest them later – say, September??

Our goal is to have garlic as one of our main field crops. We have several different types of bulbils from BC, which if I have time I will start in the small greenhouse we bought. We are a zone 3b. There are two small growers of hard neck in our area here and one would like to retire.

We will continue to build the soil (virgin land – swampy –

clay) though we may not register organic so there will be no issues with the greenhouse growing style. If you have spring garlic for sale please advise.

Editor: I do not sell garlic for spring planting. Our season here, Zone 5 is just too short although I have had limited success with a few types. Fall planting works best for most of Canada. "Good crop" is a relative term. It doesn't necessarily mean 3" bulbs. For some growers, it means just over 1/2" diameter. My opinion? Yes, it's possible to spring plant garlic and get a reasonable crop, especially in the longer season regions. By all means, try it. You'll harvest later, likely September. Just be sure that the bulbs you use for planting are still alive. They tend to dry out by spring. The bulbils that you have may dry out as well if you hold them till spring. Suggest that you get them into soil, dampen them and let them sit till spring. I start my bulbils in paper cups and then bury the cups in the garden. It's easier to find the 1st year rounds at harvest time. As far as varieties for spring planting in the north, I'm still searching for answers. There is no listing as such. Your biggest hurdle is heating the greenhouse. We tried it starting February one year and the heating costs were exorbitant. Now, we don't even bother opening it till end March. I have a number of contacts of garlic growers in your area; also a group around Yorkton, so if you need local advice, let me know. Gardening in your area is a big change from BC.

Always something new to learn

Janice Beringer of Killaloe, Ontario wrote:

Hello, Paul, I heard about your Garlic News from my friend John Coe. I am also a small grower of garlic and I am interested in receiving the Garlic News. It seems to me there is always something to learn. Enclosed is my \$15.00 and I look forward to receiving my first issue. Thanks. In praise of garlic, Jan.

Hi Jan;

Welcome to this network of garlic fans who make the Garlic News possible. Yes, there is always something to learn, especially about this fascinating and marvellous plant, garlic. When I first started doing the growing trials some 20 years ago, I thought I knew it all. Then, after trying out about 160 different kinds over the years, I found that I didn't know very much at all. Garlic always has some surprises for you. I now look forward to every letter from growers across Canada and overseas just to see what they have to tell about their experiences with garlic. It's these letters and stories that have kept me putting out this great growers' newsletter. It's a continuing learning experience with something new coming up every month. If I grow garlic for another 100 years or so, I just may come close to learning all about it!

Garlic just didn't last

Jack Fraser of Silver Spring Farm, Ottawa, called for information before the next planning meeting of the garlic project. It seems that their garlic (all Porcelain types), did not store well. It just didn't last. Can they do anything better?

Hi Jack. Our Porcelains are root swelling a month or earlier this year and the Rocamboles have dried out by mid February. It would appear that the wet harvest last summer prevented garlic from curing fully, resulting in shorter life.

More calls and letters from our readers

Bulbils: Let them duke it out!

Rich McFarlane, of Thunder Bay, Ontario, wrote:

Long ago I stopped planting bulbils one at a time. I'd find an unused patch 1-4 feet square, scrape it up pulling dirt to the sides, unceremoniously dump the bulbils in the center, spread them out regardless of thickness and orientation and rake over. I'd let them duke it out for 2 years, survival of the fittest, and after die down screen out the biggest. Got away from that simply because I ran out of planting room and I'm not a commercial grower.

My hunting partner and I noticed that where Polish Hardneck used to be our 'big gun' year after year both in town and at the hunt camp, it has now degenerated to the point I only maintain a very small planting in town in hopes it will return to its former glory. I'm hoping the bulbils I harvest this fall will restore it to its former position, as it was my first Porcelain. Music took over as my big one but now it's losing size and is being surpassed by Polish Jenn (which used to be smaller) and a local acquisition I call Uke Lady 1. The guy I got it from had no idea of its name as he got it from the old Ukrainian lady that lived down by the tracks.

Influenced by **Ted Maczka's 2007 article** on lost vitality following successive clove planting, I thought I'd try again.

Editor: Check Issue 14 Winter 2007-08 on p16 for Ted's article.

Chinese garlic, again, and a market for domestic garlic

Peter McLusky of Toronto, Ontario, wrote:

I spoke with Ann Slater, President, Ecological Farmers Association of Ontario about the marketability of various vegetables. On garlic she mentioned that customers "are complaining about having to buy garlic from China..."

This bit of anecdotal evidence supports what I'm getting a sense of, and what you surely already know, that there is room in the market for selling Ontario grown garlic. I plan to do a bit of poking around in some Toronto specialty shops, to see where their garlic is from at this time of year, and would they consider non-China garlic.

Editor: You're on the right track going to specialty food shops. Avoid the supermarket chains like the plague. They make their money on dirt-cheap food, much of it bought from the starving countries of the world and sold at exorbitant markups. They will buy Ontario grown garlic provided you supply them at Chinese prices (Guess what? Labour rates, which determine food cost, run \$0.09 per hour or \$1.00 per day in China. Ontario farm labour is hard to get at \$20.00 per hour!). Canada is light years away from growing even a fraction of its garlic consumption.

In the '80s and early '90s, garlic came from California, cheap, grown using Mexican labour. Following Jean Chretien's Team Canada trip to China in the early 90's, they came back with an agreement for cheap Dollar Store items and cheap garlic in trade for selling them nuclear fuel for their weapons program (it was called Candu reactors). Despite such political intervention, the garlic industry in Canada has grown exponentially, but each year, the consumer demand for local still increasingly outstrips the increased supply. I have written more words on the topic of unfair competition in food prices than on any other aspect of garlic.

The Great Canadian Garlic Collection

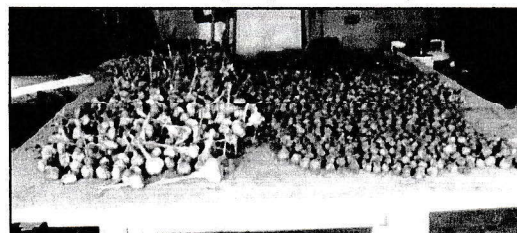
In response to my query, **Bob Wildfong, Executive Director** of Seeds of Diversity Canada replied:

Hi, Paul. Thanks for asking. We had unfortunate weather on our main growing site for two years in a row, including an early spring flood that froze overnight. That made it quite difficult. We still have 90% of the varieties and they're planted in a good field so I have good hopes for 2010. We're reintroducing the program this year with a few changes. The costs of sending seed garlic proved to be too great, partially because postage rates have skyrocketed since we began doing this in 2004, and also due to the unfortunate fact that a lot of people took the garlic and never reported. I give a lot of credit to the faithful minority of people who sent in reports, multiplied and restocked other people with garlic samples, and generally did what we'd hoped. The program had to change because it was unsustainable as first conceived. I think we're going to have to charge a shipping and handling fee when participants request seed garlic from us, which I hope will maintain the interest of the real garlic growers, while weeding out those who just wanted some free garlic. Also, this means that we'll be able to justify opening up the program to the general public, not just our members. People who were interested in the program, but not too interested in paying our membership fee just to be part of it often approached Brian. As you might imagine, the membership fee did not finance the shipping of garlic, since almost all of it goes toward the cost of member publications. As well, the paper forms were an obstacle to data-collection, since someone had to enter them into a spreadsheet and then ... somehow analyse the data. This year we'll have the forms on-line, and we'll request people to enter their information directly to our database. I saw a bit about your **bulbil project**, and I'm very interested in that. Please let me know how to proceed.

Keep doing what you're doing Paul, it's great to see. Bob.

Editor: Needless to say, I'm very pleased that you found a way to continue the Great Canadian Garlic Collection. I agree with you on mailing costs. You have to charge for packaging and shipping. Consider retaining a paper input form for the gardeners who do not use the Internet. In my case, about 40 % of the Garlic News membership does not have email or even use a computer. Be aware of the difference between gardeners and googlers!

Bob Osmack of Yorkton, Saskatchewan sent this photo of garlic grown from bulbils by **Darlene Burback**. The large, first year rounds on the right grew directly from bulbils.



Quite impressive for a Porcelain garlic!

Leek Moth News: Calls and letters summer 2009

Larvae bored down into bulbs in 2/3 of crop

Anne Janssen of Aylmer, Quebec reported: I wanted to let you know about my experience with the Leek Moth this year. I must not have seen all the cocoons or eggs when I hung up the garlic to dry as I ended up with an infestation - cocoons all over the drying area. By then, larvae had bored down into more than 2/3 of the crop. I opened up each bulb to get rid of the damaged cloves - many of them still had a happy worm in them. A couple of moths emerged from the bulbs that seemed okay and had been taken indoors. Next year, I plan on cleaning the garlic well and cutting back the stems/leaves before drying so I can look more closely and avoid this from happening again - but hopefully it won't get this far if I use row cover in the spring. Anne.

Jennifer Allen, Vegetable Crops Specialist, responded: This year, although not comforting, you are not alone. In my five years of research we couldn't find any evidence that the darn things moved into the bulbs. In fact, we couldn't even find critters in storage. This year - wow! My hypothesis is that the cold, wet spring slowed down their activity initially so that it took longer for the first generation to emerge from overwintering sites. Then because it took a long time to get the degree-days for insect development, the generations took longer to occur, resulting in critters still developing when the garlic was harvested. Hopefully, this year was an anomaly with cool spring and relatively cool summer temperatures. Next year, I imagine populations may be down, especially if garlic farmers preparing their garlic for planting find larvae/pupae and destroy them. If not, it will be really important to minimize early season colonization. The use of row covers can help out as can the use of pheromone traps. A couple of traps can help to reduce the overall male population. Hope this helps.



Ottawa Valley Leek Moth Project 2003: Peter Collis with Margaret Appleby. Peter was the first grower to report that the leek moth bored into his garlic bulbs in his basement storage.

Using Row Covers

Sue & Bill Joiner of Limoges, Ontario, who were the host farm for Margaret Appleby's trial on row covers, provided this update for 2009: "We used the row covers on one stretch of row last spring, but we didn't get it on early enough and there was damage anyway. We did not use any

hoops, just laid it loosely over the plants and held the sides down with yellow tent pegs. The plants grew just fine and did not seem to suffer from having the cover on them. We cut back drastically on our planting last fall. This spring, we may experiment again with the covers. They are pretty sturdy and are re-useable.

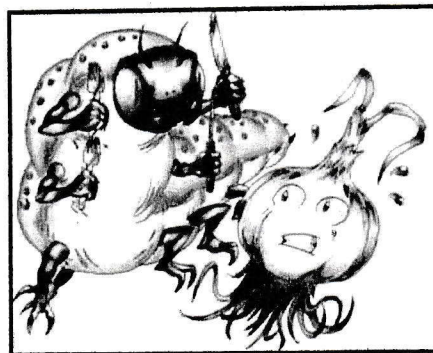
We definitely had leek moth damage last year, especially on the scapes. I guess there's not too much we can do about it except look for damage and kill the little wormie guys!!"

Editor: Thank you for your comments. I will be doing a trial this summer on ProtekNet from Dubois in Quebec. If you can make it to the Field Day on Sun June 2, Dr. Mason or one of his team will be doing a presentation on the parasite trial starting this coming spring. It sounds very promising

Bernard Smyth of Perth, Ontario asked:

In addition to Lee Valley Tools, you had mentioned another company and cover type to protect garlic against the leek moth. Could you give me the details on this? Is one company/cover better than another?

Editor: I would stick with floating row cover. It's cheaper and easier to use. Lee Valley offers basically one size. For home gardens, William Dam Seeds gives you the best choice of sizes. Prices are quite competitive between retailers. The material I ordered for my 2010 trial, called ProtekNet, from Dubois Agrinovation, is verry, verry pricey. A 320' roll, with delivery, came to almost \$1200.00! I wanted to get some answers so I paid the price. I'm not recommending it until I see how it works.



*The attack of the leek moth monster
Cartoon courtesy of Ken & Linda Willis*

Spreading the Word about the Leek Moth

Following last summer's leek moth uprising, I was asked by several organizations to speak on the topic of the leek moth. My first talk of the fall season, to the Lanark Organic Growers Guild, kept me captive for well over an hour just answering questions about this little monster. Gardeners were just dismayed that such a tiny little worm could devastate the magical garlic. In my series of talks this spring to the various "Seedy Saturdays" in this area in which I attempted to keep the focus on my current research, the Bulbil Project, again, questions turned to the leek moth. This little beastie has to be brought to its knees, so that garlic gardeners can once more concern themselves with the positive aspects of the wonder bulb, garlic!

New Biocontrol Agent for Canadian Leek and Garlic Growers' Fight Against Leek Moth

By: Dr. Peter Mason and research team

The parasitic wasp *Diadromus pulchellus* was recently approved by the Canadian Food Inspection Agency for release in Canada for biological control of the leek moth, *Acrolepiopsis assectella*. This biological control agent attacks and kills leek moth pupae, reducing overall adult emergence and infestation of *Allium* crops, particularly leek and garlic.

Leek moth, accidentally introduced into the Ottawa region in Canada, was first reported in 1993 and has since spread down the Ottawa valley into eastern Ontario and southwestern Quebec. In 2008 it was reported from Prince Edward Island. Leek moth is having an increasing impact on *Allium* production in Ontario and Quebec. The year 2009 saw the most significant damage yet in garlic crops: leek moth were abundant in up to 100% of the bulbs, making entire crops unmarketable. The presence of this pest in Canada has led to severe trade restrictions being imposed on fresh *Allium* products exported to the USA. Given that the value of these exports in 2006 exceeded Can\$40 million, such restrictions are having an impact on producers.

In 2003, an integrated pest management programme was initiated to investigate sustainable approaches to managing this exotic pest. As is commonly observed with invasive alien species, early surveys in *Allium* crops in the Ottawa region revealed very low attack rates by indigenous generalist parasitoids on leek moth, suggesting that the leek moth's separation from Europe also released it of its European natural enemies. There did not appear to be any North American parasitoids that attacked leek moth sufficiently to regulate the pest's population. In contrast, a number of leek moth parasitoids were known from the European scientific literature. Hence, a classical biological control approach held promise.

A research team composed of scientists and staff from Agriculture and Agri-Food Canada (AAFC), CABI Europe – Switzerland (CABI E-CH), the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and Carleton University, with financial support from AAFC's Pest Management Centre, took on the challenge to provide growers with tools for combating the leek moth. CABI E-CH took the lead for the biological control component of the project, conducting research to discover and evaluate the impact and safety of potential agents.

Studies were conducted in Europe to determine mortality factors of leek moth and to discover and assess potential agents for biological control. Following two summers (2004–2005) of field surveys in central Europe and based on the available literature on leek moth parasitoids, the pupal parasitoid *D. pulchellus* was selected for an in-depth study of its suitability for classical biological control of leek moth in Canada.

Investigations on the host range of *D. pulchellus* were carried out in 2006–2008 in Europe and in containment in Canada. Laboratory experiments tested the suitability of 12 non-target host species for the candidate agent. The test species selected satisfied one of more of the following criteria: (1) Phylogenetic affinity to target pest, (2) Ecological similarity to target, (3) Safeguard species (i.e. beneficial or rare), (4) Morphological similarity to target and (5) Known host of another *Diadromus* sp. parasitoid. Additional non-targets had been considered for testing but were ruled out based on early results. Of the non-target species tested, only three species belonging to the families Acrolepiidae and Plutellidae were attacked by *D. pulchellus*. Like leek moth, these non-targets had stiff, non-sticky cocoons. *Diadromus pulchellus* is known to be attracted by volatile sulphur compounds, which are characteristic of *Allium* and Brassicaceae plants. Nonetheless, there are no known field records of this parasitoid from any host other than leek moth. Furthermore, recent evidence from field trials suggest that *D. pulchellus* is probably very selective of the habitat in which it forages, since it avoided cabbage plants infested with a suitable non-target host despite the extremely close proximity of these plants to leek fields.

A petition for release of *D. pulchellus* was submitted to the Canadian Food Inspection Agency in May 2009 and approval was given in September 2009. Release is planned for spring 2010 and a post-release monitoring project will be implemented. The host specificity of *D. pulchellus* and its capacity to parasitize a significant proportion of available hosts is expected to have a substantial impact on leek moth in Canada.

By: Peter Mason^a, Wade Jenner^b, Ulli Kuhlmann^b & Naomi Cappuccino^c

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Citation:

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This article was provided to the Garlic News by Dr. Peter Mason to enable garlic growers to keep abreast of measures being taken to find controls for the leek moth. We would like to express our sincere appreciation to Dr Mason and his international team of researchers. Editor

Leek Moth News

Living with the Leek Moth -- An Organic Approach

By: Paul Pospisil, Master Gardener Emeritus

This article, originally published in the March 2003 issue of the Garlic Newsletter, has been updated from findings of the Ottawa Valley Leek Moth Project and other current information.

Management

The basics of a good management program are:

Identification

Early detection

Prevention

Destruction

Following good garden practices.

Identification:

1. Learn to identify and recognize the leek moth in all its stages and by the damage it does to your garlic.

Early detection:

2. INSPECT, INSPECT, INSPECT. Watch temperature for first emergence. Use an outdoor thermometer. The Leek Moth starts flying when temperatures reach 9-10 deg C, usually about the 2nd week of April. So, you have to start checking daily. The moth lays eggs singly on different plants, soon after. Each female lays up to 100 eggs over her 3-week lifespan so the pest multiplies quickly. The eggs start hatching into larvae in 3-10 days, depending on temperature. It's the larvae that do the damage. Watch for the signs of feeding damage by a daily or regular walk through inspection.

3. Set out pheromone traps if you want to find out when the moths are mating.

Destruction:

4. Home gardeners can crush the larvae by hand. The more you find and destroy at this stage, the fewer there will be for the 2nd and 3rd generations.

5. You can spray with *Bacillus thuringiensis* (Bt) a naturally occurring bacterial disease of insects used as an insecticide (type *kurstaki*, Btk, is recommended). Conventional growers now have a choice of approved pesticides. Spraying is recommended by OMAFRA as being very successful. However, there are doubts as to the practicality of spraying – you would have to spray at least weekly for 2 ½ months as the larvae are hatching daily!!

6. Moving earwigs from your lettuce and flowers is a useful measure as these omnivores feed on the pupae.

Prevention:

7. Use floating nylon row cover to prevent the moths from laying eggs on the garlic. Trials conducted by the Ottawa

Valley Leek Moth Project demonstrated their success on a 1-acre plot of garlic.

8. Carefully inspect both your own seed garlic and that sold or given to others to prevent further spread. Braids require special attention.

9. Follow good garden practices such as:

- At scaping time, burn or deep-bury any scapes found with evidence of the leek moth.
- At harvest time, carefully inspect each plant for damage, cocoons or the larvae as you handle it. Set aside damaged ones for examination. Burn or deep-bury all residue from harvesting and cleaning of bulbs.
- Turn under the soil in garlic plot right after harvest to destroy any cocoons or eggs on the surface.
- Inspect all other alliums in your field or garden. The leek moth attacks leeks, onions, chives, shallots and even flowering alliums.
- Check garlic curing and storage areas. You can hang a pheromone trap for detection and use one of those electronic zappers to kill flying moths.

10. DONT PANIC if you discover the leek moth in your beautiful garlic. With the spread of this pest, it's only a matter of time before it will find your plot.

11. For the future, the parasitoid research will hopefully come up with an effective biological control method to reduce leek moth populations. However, this project is just at field trials stage so the results are yet to be seen.

12. The leek moth is here to stay so growers must have a pest management program to minimize crop loss.

References:

- Past issues of the Garlic News
- Factsheet AGDEX 625/252, Leek Moth - a Pest of Allium Crops, April 2008
- OMAFRA Publication 363, Vegetable Production Recommendations

Sources:

- Pheromone Traps & Lures available from:
Cooper Mill, Ltd.,
RR 3, Madoc, ON
K0K 2K0 Ph. 613-473-4847
- Row cover available from:
William Dam Seeds
RR 1, Dundas, ON
L9H 5E1 Ph. 905-628-6641
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See article on organic garlic bags, The Garlic News Issue #10.

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The Bulbil Project
The Bulbil Project was started in 2009 for the purpose of learning more about growing garlic in the different regions of Canada by this advanced method. To participate in this project in 2010, contact the Editor, phone 613-273-5683 or, Email garlic@rideau.net

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Paul Pospisil, Editor, The Garlic News, Beaver Pond Estates, 3656 Bolingbroke Road, Maberly, ON K0H 2B0.

"You harvest as you sow."

This lesson from the past is as true today as it ever was. With the spread of diseases in garlic, it becomes more important to plant only good, healthy planting stock if you want to sustain your garlic growing operation. Choose wisely.

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The best garlic recipes, tips & ideas

The 10 in 10 Diet

By: Lynn Shwadchuk

The 10 in 10 Diet is a total system that makes it easy to stop eating meat and cook healthy food conveniently while keeping your grocery bill under \$150 a month per person, and reducing our contribution to climate change – with a goal in mind of 10% reduction of CO2 in 2010. It's a way to fast track to a simpler, more peaceful life. It's totally possible to really enjoy food while eating more like the majority of people in the world.

On garlic, Lynn says: "One thing it isn't worth getting on the cheap is garlic. In the last year or so I noticed garlic was coming in neat net bags and looking very clean and white and it was dirt-cheap. The next thing I noticed was that I was using it by the whole head. The third thing I picked up on was that it was from CHINA! Then one of my local gardening friends chided me for being foolish enough to risk my health eating "two-year-old" Chinese garlic. So, I went and bought \$7 worth of local fresh garlic. Now I'm back to using it one or two cloves at a time and everything tastes WAY YUMMIER! So, if you want all these recipes to be as tasty as possible, seek out homegrown garlic at your local farmers market. Next year we're going to try growing it ourselves."

Editor: Check out with Lynn's website, www.10in10diet.com, for more recipes and details about her forthcoming residential hands-on cooking weekend with Lynn Shwadchuk April 9-11, 2010 at Wintergreen Studios.



Black and Orange

Lynn Shwadchuk conducted a local workshop on cooking with beans and this recipe was featured. Reprinted with Lynn's permission from her website, www.10in10diet.com.

"Lentil stew with sweet potatoes and rutabaga" is too big a mouthful, especially when I say it a lot, since it's Andrew's favourite supper. So, we call it Black and Orange. It is. This lentil stew has the flavours of the poultry stuffing I grew up loving. Spooning it over smooth mashed root veggies makes for a real comfort food.

This lentil stew has the flavours of the poultry stuffing I grew up loving. Spooning it over smooth mashed root veggies makes for a real comfort food.

First, the stew:

Ingredients:

1 diced onion	ground pepper to taste
2 cloves of garlic, minced	bay leaf
3 cups boiling water	2/3 cup black (Beluga, or
1/3 cup red lentils	French) lentils
1 veggie bouillon cube	1 tsp sage
1 tsp thyme	1 tsp salt

The red lentils are key to making a smooth, gravy-like stew, because black lentils hold their shape like beans.

Method:

Sauté the garlic and onions in oil. Add remaining ingredients and simmer 30 minutes or more, until it gets quite nice and thick.

Then, the mashed vegetables:

In a medium to large pot, boil, 1 small rutabaga, no more than 1/2 inch thick, 1 large sweet potato in bigger chunks, 2 medium white potatoes peeled and quartered. When the rutabaga is soft, drain and mash with 1/4-cup butter and 1 tbsp brown sugar.



Does freezing olive oil degrade its quality?

Below 6°C, there is a slow increase in hardening of olive oil as the temperature is lowered. At 2°C, olive oil has more or less the consistency of butter at room temperature. At -10°C, it is hard enough that a fork cannot penetrate it. Chilling or freezing olive oil does no harm and the oil will return to its normal consistency when warmed.

Keeping oil at low temperature is a good practice as the oxidation process that is responsible for the degradation of flavour increases with temperature.

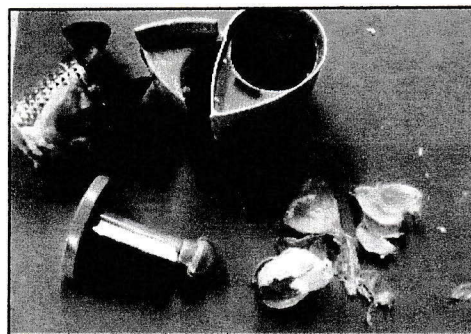
In fact, it's so good that a patent has been issued for a method of freezing olive oil so that it retains its original properties. Why not serve your best olive oil frozen, like butter? That's what Costas the Greek suggests!

From the OGourmet newsletter.



Just couldn't resist another garlic gadget

Shopping in Canadian Tire, I spotted a new gadget in the kitchen utensils section. My loving bride, Mary Lou, just humoured me as I spent 15 bucks, took it home and tried it out. It was called the "Garlic Genius" by Starfrit.



Testing it out: Well, the instructions sounded too good to be true. Well, guess what? They were.

You were supposed to take unpeeled garlic cloves, open the little door, stick a clove in, hold the gadget with one hand, apply pressure to the door while holding and turn the little knob at the top. It was supposed to peel the clove and squeeze out finely shredded garlic out the bottom. After a couple of bulbs of garlic, jamming the thing on wedged clove wrappers every clove or two, I wound up with a sticky mess, a gadget that took a lot of work to clean and about 1 cloves' worth of garlic in the dish! Rating: ZERO!

More garlic recipes, tips & ideas

Mary Lou's Three Bean Maple Baked Beans

Recipe from Mary Lou's Country Kitchen

For baked beans with a truly homemade flavour, this one is hard to beat. It's a dish to serve with pancakes and maple syrup, with ham and scalloped potatoes for your family Easter Brunch or serve just anytime you crave some real baked beans.

Ingredients:

2 cups dried beans, either white or coloured
1 cup dried lima beans
1 cup dried chick peas
10 cups home made chili sauce
¾ cups maple syrup, amber or medium grade
6 cloves garlic, freshly minced
1/3 cup prepared mustard
1 cup tomato juice

Method:

Wash beans and chickpeas. Place in separate bowls and soak overnight in 3 times their volume of water. Next day, discard any beans that have risen to the surface. Drain thoroughly. In separate pots, bring beans to a boil in 3 times their volume of fresh water; reduce heat and cook until tender but still firm (about 45-60 minutes). Drain, saving the cooking liquid. Combine beans in a 20-cup (5-litre) casserole and stir in all ingredients, except tomato juice. Slowly add tomato juice and enough cooking liquid, stirring until mixture resembles very thick soup. Cover and bake in 300 deg F oven 5-6 hours or until beans are slightly broken down. Add more cooking liquid while beans are baking to keep top of beans covered. If beans are too runny, remove cover for last hour of baking. Makes about 25 servings. Freeze any that you don't use right away or reduce amounts proportionately for a smaller amount.



Oriental Beef Stir-Fry

Adapted from a Foodland Ontario recipe

Stir-fries are quick and delicious light meals. This one has a fine choice of healthy vegetables.

Ingredients:

1 lb beef top sirloin or tenderloin steak, thinly sliced
3 tbsp vegetable oil, divided
2 medium onions cut into 8 wedges each
3 or more large cloves garlic, minced
2 tbsp finely chopped ginger root
12 oz mushrooms, white button or shiitake, sliced
1 hot house sweet orange pepper, thinly sliced
6 cups sliced Savoy cabbage
1-cup beef broth
½ cup soy sauce
1 tbsp brown sugar
1 tbsp cornstarch
1-8 oz can bamboo shoots (optional), drained
Sliced green onions or green onion curls (optional)

Method:

In a large deep skillet or wok, heat 1 tbsp of the oil over medium-high heat and stir-fry beef for 2 minutes or until browned but still pink inside. Remove and set aside. Heat remaining oil in skillet and stir-fry onions, garlic and ginger root for 2 to 3 minutes. Add mushrooms and orange peppers; stir-fry for 1 to 2 minutes. Add cabbage; stir-fry for 1 to 2 minutes. Add broth, cover and steam until vegetables are crisp-tender, 2 to 3 minutes.

Mix soy sauce, sugar and cornstarch until smooth; stir into vegetables. Bring to a boil, stirring constantly, and boil until thickened slightly. Add bamboo shoots, if using; return to pan and heat just until warm. Garnish with green onions, if using. Serve hot, as a meal or with cooked rice. Makes 4 to 6 servings.



Beer Bread with a hint of garlic

Frances Legault of Penobsquis, New Brunswick

Here is a really good recipe. I cut down on the sugar and salt from the original recipe. There's enough sugar in beer. You can put whatever you like in it. It's great as toast.

Ingredients:

2 ½ cups of white flour, sifted
½ cup of 7 grain flour, sifted
½ tsp sugar
1 tbsp baking powder
1/8 tsp of salt
12 oz beer (I have used Guinness and Grolsch, both good)
¼ cup melted butter (or 2 Tbs.)
½ bulb garlic, peeled, finely grated
1 cup grated parmesan cheese

Method:

Preheat oven to 375 deg F
Mix all dry ingredients, add beer and mix together
Pour into a greased loaf pan
Pour melted butter over mixture
Bake 1 hour, remove from pan
Cool for 15 minutes before serving



Japanese research shows that fresh garlic is best

Researchers Toyohiko Ariga and colleagues in Japan report that fresh garlic maintains higher levels of allicin than preserved versions and may be better for you. Allicin has beneficial effects in preventing blood clots, cancer, and bacterial infection. Bottled garlic is often stored in oil or water. To find out how storage and preservation methods affect levels of allicin, Ariga's group compared allicin levels in extracts of fresh garlic after one to two weeks of storage in water, alcohol, and vegetable oil. Garlic stored in water at room temperature lost about half its allicin in six days and garlic in vegetable oil lost half its allicin in less than an hour. The garlic lost its antibacterial action as allicin broke down. However, allicin broke down into materials that still are believed to have some anticancer and anti-blood clot effects. When you use garlic for its antibacterial effects, consider fresh garlic instead of bottled, preserved chopped garlic.

Checklist for Being an Organic Farmer

From a paper by Hugh Martin, Organic Specialist, OMAFRA

Some of the basic requirements for organic farmers are:

Use only inputs listed on the "Permitted Substances List" of the Canadian Organic Standard during the 36 months prior to harvest of the organic crop;

Have a farm plan detailing inputs and practices;
Maintain field records and daily journals to permit traceability of the farm products and on-farm practices;
Never use genetically modified inputs;
Do not grow the same crop as organic and non-organic, unless it is visually distinguishable;
Maintain an identification system for distinguishing organic and non-organic crops, livestock and products during production, processing, handling and storage;
Soil fertility and biological activity of the soil is maintained by using crop rotations, incorporating plant and animal matter (cover crops) and animal manure as appropriate according to the farm plan;
Manage manure to minimize soil and water degradation;
Manage crop pests to enhance crop growth using preventative methods using a combination of cultural and mechanical methods and botanical and biological measures when necessary;

Manage livestock responsibly with care and respect.
Minimize stress in handling animals;
Establish and maintain preventative health care measures;
Organic livestock operations shall establish and maintain animal living-conditions that accommodate the health and natural behaviour of all animals;
Organic livestock shall be fed organic feeds and have access to the outdoors whenever weather conditions permit. Herbivores must have access to pasture during the grazing season for a minimum 30% of total forage;

An organic system must maintain the organic qualities of the product from production, preparation, storage, handling and labelling, to point of sale;
Processing methods can be mechanical, physical or biological (e.g. fermentation and smoking) and minimize the use of non-agricultural ingredients, food additives and processing aids;

Protect the environment, minimize soil erosion and soil degradation, and maintain water and air quality;
Practice biological diversity within the farm system;
Recycle and use renewable resources when possible.

During the transition to certified organic, apply for certification to an accredited organic certification body at least 15 months prior to harvest of the organic products;

This is a very brief synopsis of over 60 pages of the organic standards and on using organic farm practices. For more details, go to www.ontario.ca/organic

Marketing: Increase Your Market Sales of Garlic

From a talk to market vendors by Paul Pospisil

You can start selling garlic earlier, expand your market, make your customers happier and make more money from your garlic patch by imaginative marketing. In the 11 years we sold organic produce at a farmers' market, we always had fresh garlic available weeks before the other growers by following the simple rule that all parts of the garlic plant are edible, delicious and loaded with health-giving goodness.

First, remember your SSGs - scapes, scallions and greens. Scallions and greens can be sold starting in May, when your garlic is young and tender. Package the scallions and greens in convenient \$2 - \$3 size bunches. Have some simple recipes ready to entice your customers. What could be more delicious than a platter of sautéed asparagus and garlic greens? New potatoes with chopped scallions, parsley and butter? You can almost taste the mouth-watering freshness. Garlic greens will outsell chives or green onions two to one.

You can even succession plant extra garlic in the spring to ensure a steady supply of garlic greens into late summer.

By mid June, when scapes are removed (and be sure to snap them off before they get woody), prepare them for market by making attractive curls of a dozen or so scapes held together with a rubber band. Put them over ice to keep them fresh on hot market days. Make up a puree with scapes and olive oil (the extra virgin grade, of course!) and give samples served on cream cheese and crackers. The puree will sell your bunched scapes for you, and if you have time, you can even make up some frig packs of garlic scape puree for sale as well.

Pickled scapes are another great seller.

The SSGs will advance your garlic market period by at least two months.

Second, who says that garlic has to be fully mature and cured before using it? No one. Start selling freshly pulled, uncured or "green" garlic as soon as the bulbs reach a respectable size, usually around end June or early July. Your customers will delight in the fresh taste of this young garlic. Sell young garlic with leaves, stems, roots and all, just making sure that all dirt is washed off and any dead leaves removed. Tell your customers about eating the whole plant.

If you're into value added sales, make up all kinds of garlic jellies, pickles, purees and garlicky foods. Customers are buying garlic for health and flavour. Just remember to follow your local Health Unit guidelines for prepared foods.

By selling fresh garlic earlier, you'll make 25% of your garlic sales before your main crop is harvested and cured!

REPORT # P-02-2009 Performance & Yield Comparison of Proven Strains 2009 Crop – page 2 of 2

Purpose: To determine relative yield and performance of 41 proven strains from all Varietal Groups grown in the 2008/2009 Small-Plot Garlic Variety Trials. New strains under evaluation and Seed Saver strains are not included.

Method: All garlic was grown using standard organic methods under conditions sufficiently equal so as not to bias any strain. Trial beds were fall-planted Oct 11-19, 2008 and hand-harvested July 12-August 03, 2009. Raised beds contained double staggered rows at density of 3 plants per foot of row (corresponding to 87,120 plants per acre).

Yield* Calculation: Yield = Avg. Bulb Wt x 87, 120/1000 x 2.20462 x (100 % less % Loss) = lbs/acre

B-Grade garlic (<1.5") is included in harvest. % Loss column includes all losses including winterkill, non-emergence, insect, disease & animal losses and harvest damage. Losses reduce yield.

H: S Ratio (Harvest to Seed Ratio) is calculated by dividing Column 5 (Harvest Weight) by Column 2 (Planted Weight).

STRAIN	Cloves Planted /wt grs.	Harvest Date	Bulb Harv	Harv Wt in grs.	AvBulb Wt grs.	% Loss *	Yield * lbs/acre	H: S Ratio	Relative Standing In Variety
PURPLE STRIPES (6 strains evaluated)									
Czech Broadleaf	87/531	29 July	40	1258	31.45	54.0		2.4:1	Crop Failure
Purple Glazer	87/494	27 July	86	2407	28.0	1.1	5316	4.9:1	4 of 6
Duganskij	43/290	27 July	43	1561	36.3	0.0	6972	5.4:1	1 of 6
Robust	42/250	27 July	31	978	31.5	26.2	4472	3.9:1	5 of 6
North. Siberian	48/290	29 July	50	1559	31.2	+1.04	6628	5.4:1	2 of 6
Siberian	45/282	25 July	45	1308	29.1	0.0	5582	4.6:1	3 of 6
ROCAMBOLES (11 strains evaluated)									
Yugoslavian	76/450	26 July	82	2262	27.6	+1.08	5722	5.0:1	6 of 11
Carpathian	77/470	26 July	74	1945	26.3	3.9	4851	4.1:1	10 of 11
French	105/600	24 July	113	3174	28.1	+7.6	5805	5.3:1	5 of 11
Glengyle	74/350	27 July	69	1840	26.7	6.7	4784	5.3:1	11 of 11
German White	60/310	26 July	59	1603	27.2	1.7	5130	5.2:1	9 of 11
F7	54/360	24 July	52	2993	57.6	3.7	10,646	8.3:1	1 of 11
Reliable	75/400	26 July	67	2047	30.6	10.7	5240	5.1:1	8 of 11
Spanish Roja	60/280	24 July	60	1682	28.0	0.0	5384	6.0:1	7 of 11
Spicy Korean Red	75/510	25 July	80	2306	28.8	+6.7	5907	4.5:1	4 of 11
Korean Purple	57/373	25 July	64	1892	29.6	+12.2	6371	5.1:1	3 of 11
Hungarian	30/190	26 July	32	1693	52.9 **	+6.7	10,482	8.9:1	2 of 11

Notes: *Some strains produce doubled cloves, accounting for more bulbs harvested than cloves planted.

: ** Hungarian was grown from rounds. These had been the result of planting bulbils the previous year.

Comments on Crop Year 2009:

The 2009 crop was smaller than normal, smaller plants, smaller bulbs and smaller yields.

Despite a very early emergence of the garlic (some strains were up on March 16 and all were up by April 1, a full two weeks earlier than a usual year), a very cool April, May and June with insufficient sunshine resulted in shorter than normal plants and smaller bulbs. Thus, expected yields were down.

A few strains suffered winterkill, or more likely, early spring kill. One very robust strain, Czech Broadleaf, appeared to succumb the most, losing over half its plants.

A very wet July and August again made harvest difficult and garlic was found to be rotting in the wet soil. The Asiatics and Turbans had to be lifted quickly as they were most affected by the wet conditions. Most notably, the high humidity created new challenges for all growers in the region.

More calls and letters

Early Garlic Emergence

Carolyn Smith of Roblin, Ontario, attending my garlic talk at Seedy Saturday on March 14 in Kingston reported that her garlic in raised beds was up 3-4". Snow still covered the remainder in the flat field.

Editor: Carolyn won the Grand Champion Award last year and may be going for it again in 2010 with an extra early crop!

Who decides what you will buy? Your money talks!

Product of China: While the Chinese export inferior and even toxic products and dangerous toys and slipshod goods to be sold in North American markets, the media wrings its hands and criticizes the government. 70% of North Americans believe that the trading privileges afforded to the Chinese should be suspended.

Well, duh? Why do you need the government to suspend trading privileges? Simply do it yourself! Look on the label of every product you buy, and if it says 'Made in China' or 'PRC', simply choose another product, or none at all. You will be amazed at how dependent you are on Chinese products, and you will be equally amazed at what you can do without. Who knows? Even the Chinese will get the message and listen to the voice of the consumers. Today, we suffer having to buy garbage, not because of Chinese greed but due to the greed of our own importers and retailers.

Editor: The above message, in various forms, was sent to me by email by several people. It may be true, except for the part that says the government is responsible. We live in a democracy, not a totalitarian state. I don't want to have any government dictating to me what I can or cannot buy on the legal market, neither do you. Choose "Product of China" and your supermarket will continue to stock the shelves with it. Choose something else every time and you'll see results. It's your decision. Your money talks!

Protecting the wild leek

Felicity Fowke of Toronto, Ontario wrote:

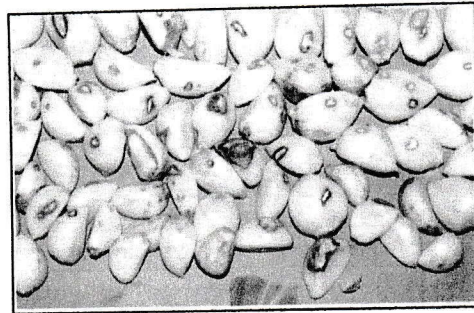
Thank you very much for the article you did on wild leeks and the need to conserve them. I have a horrid feeling that with the increase in popularity and availability in urban markets they will soon become extinct! There is a patch of them in a woodlot my husband and I own and many years ago I transplanted some nearer the house, hoping to have a handy supply. However they have been very slow to multiply and I haven't dared to harvest any. I belong to the North American Native Plant Society and I would like them to reprint the article in their newsletter "The Blazing Star". With your permission, I'd also send to food columnists to reach people who might be buying or selling wild leeks. Thanks for your work in the "Garlic News". I love it.

Editor: Hi Felicity. Enclosed is the article on the wild leek from Garlic News Issue 20. Yes, you have copyright permission to have the article published elsewhere, provided they credit "Paul Pospisil" and "The Garlic News" when they do.

Diseased Garlic

Victor Danyluk of Dunvegan, Ontario, sent this photo and asked:

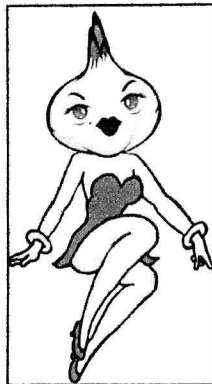
The first year, I purchased seed stock from several sources in Canada, and had good success. This past year was not as successful, with the wet season, most of our garlic had spots and was not by my standards appropriate to sell. I decided to purchase new stock and plant in a different area. I ordered from a so called reputable firm, and when it came time to plant the stock, I found more that 60% had spots and actually had a fungus on the true stems of the future plant. They were kept in a cold room, in the brown paper bags that they were shipped in until they were "popped". Photos are enclosed, and I would appreciate if you could let me know if you would have planted these cloves.



Editor: Hi Victor. Definitely not! You never plant an imperfect clove, whether diseased or mechanically damaged. Not only will that plant be diseased but you risk spreading it to your crop. A reputable grower would take it back or refund your money!

GarlicGirl to make her debut in Haliburton County!

Debbie Barnhart of Minden, Ontario has a new logo for



this year's Minden Banners that are hung on our town's entire main street from June to Oct each year. This is her submission to introduce **GarlicGirl** and continue to highlight the garlic theme of the County!

Editor: GarlicGirl is a great logo. Ingenious. Much different from any others I've seen and should help to give garlic some sex appeal. It should win the street banner competition easily.

Well readers, can you come up with a better idea to promote your garlic? Debbie has a hard act to follow.

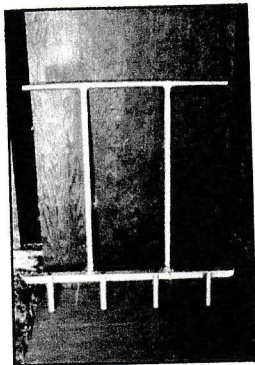
Katmandu Garlic

In response to my request for the origin of this garlic, **Martin Reichert of Morewood, Ontario**, said: The story goes that this lady was in the mountain communities of Nepal, helping to setup cottage industries, when she asked if she could have some of their garlic to mail home. They sent a runner to the Katmandu Valley market to fetch a couple of lbs of garlic. That is why I gave it that name. Thanks Martin

Still more calls and letters

Planting with a handy dibble

Jeff & Joanne Greenberg of Guelph, just moving to Maberly, sent this picture along with a short report:



We planted our first garlic in late October and used this handy dibble. It incorporates much of the advice that you and Sep Bonner provided in earlier issues of the Garlic News (Winter, 2004). We had the dibble made from aluminium at Queen's University. It came out pretty close to what we described over the phone! Punches are one inch in diameter and 9 inches apart and the dibble is meant to go across a three-

foot bed. The punches are hollow and this worked well where we had wet loam. When we got down to the clay end of the bed, the punch didn't push through the top as well but still worked acceptably. The flat bar was useful for stepping on and rocking the dibble back and forth as we went. We added the wire markers to allow us to set the dibble at 6-inch intervals for the Porcelains and 4 inches for the Rocamboles. Working backwards down the row, the markers were set into the previous punched hole for consistent punch distancing. The one-inch holes were a bit tight for the German Reds but still worked well enough for all 4 hard neck varieties that we planted (Russian, French, German and Georgia Fire). It was important to create flat and smooth raised beds to get a uniform planting depth in going across the bed rather than end to end. We'll see how things look in the spring as I suspect that some of the seeds on the bed's shoulders were planted too shallow.

Overall, this tool was extremely useful and allowed us to get our 4,000 seeds planted in a few hours over two days. Although this feels like version 1, the only change for next year is to add bicycle grips to the handles. **Jeff and Joanne**

Rose de Lautrec Garlic – can you help?

Liz Primeau of Mississauga, Ontario asked: Do you know anything about the pink garlic grown in Lautrec, France? The town has a garlic festival the first Friday of August every year and their publicity material says their garlic is very special, with a sweet and subtle taste and long storing qualities. Its history goes back to the Middle Ages, they say, to a mysterious traveller who paid for his lodgings with a few cloves of unusual pink garlic, and it's been grown there ever since. It's also protected, with an organization called the Lautrec Union for the Preservation of Pink Garlic, formed in 1959, governing its growing and marketing. I've asked a few people here about it but no one has heard of it. I'm wondering if the flesh is actually pink. I'm writing a book about my garlic, and I'm considering making a trip to this year's festival but I'd like to be sure beforehand that it's worth the cost!

Editor: Well, friends, can you help with Liz's query? I've heard before that Lautrec is grown in Canada, but where?

Vodka and garlic in Saskatchewan?

Anna Schaab of Yorkton, Saskatchewan wrote:

We are doing some mini plots under our growing lights in the basement involving treated seed. We are trying a javex/water solution, pure vodka solution and untreated seed. As of now, the javex and untreated are winning with the vodka in last place. Too much vodka perhaps?!

Editor: What a waste of vodka!! Ted Maczka makes Polish firewater by putting garlic cloves in a bottle of vodka and then drinks it to improve his health (and his spirits)!! I'll be interested in your final observations. Certainly, both treatments will help destroy soil-borne diseases but I'm not sure what effect they would have on seed-borne disease.

Spring planting of garlic

May Herchuk of Laurier, Manitoba asked:

Just read a note from a gardener in Sask that was told he could plant hard neck garlic in the spring and still get a good crop? I would love to try and sow some full cloves in the spring? Would you maybe harvest them later – say September??

I bought the garlic, Yugoslav, Russian Red & Music about 5 pounds each from John Kostiuk in Hudson Bay Sask. He could not plant it himself as he had too much water on the ground last fall. Says he usually plants 40,000 cloves. He prechilled them so they had already started small roots. They were mailed to me and maintained good firmness. I got the last 100 cloves planted a couple of weeks ago. I planted them in 1-gallon pots and kept them in my heated header till they rooted. The first 100 are already out in the cold greenhouse freezing. The second 200 are ready to go out this weekend. They have about one inch of nice long white roots. I will move them out this weekend. Hopefully this works and we can slip the entire soil ball into the cool spring soil. (if our raised beds are ready soon enough). We are as I said still working on the drainage for our land so will go to raised beds.

Editor: My opinion? Yes, it's possible to spring plant garlic and get a reasonable crop, especially in the longer season regions.

By all means, try some spring planting. You'll harvest later, yes, September, and you might get lucky. Just be sure that the bulbs you use for planting are still alive. They tend to dry out by spring. As far as varieties for spring planting in the north, I'm still searching for answers. No listing is available. I've found that you may get success with a particular variety one year, but the next is a dismal failure. It's garlic you're dealing with, you know, the most misbehaved vegetable in your garden!!!

A word from Haliburton

Sheila Robb of Minden Ontario sent thanks for the article on the late Charlie Robb. She also said they are thrilled I will be able to attend their workshop.

Editor: My pleasure Sheila. Your full-page flyer on the workshop is included in this issue. I look forward to being there.