



THE GARLIC NEWS

Connecting the Canadian Garlic Network!

Issue 54 winter 2017-2018

Planning for a new start following garlic crop failure

A crop failure is very disheartening. If you are one of the garlic growers who have experienced crop failure, you know the feeling. You're faced with a major decision. The first reaction is often that you might as well quit or that garlic isn't worth growing because it's just too much trouble. Yet, crop failures on farms happen far more often than you can imagine. Farmers, are determined and resilient people. They take such challenges in their stride.

I hearken back to when I was a child growing up on the farm in Saskatchewan. After a failure or poor year, my father had a saying that "next year we'll have a great crop". He had farmed during the dirty 30s and had experienced every manner of crop failure going, from plagues of grasshoppers, nearly 10 years of drought, a hard freeze and snow in June that killed his young grain crops and even poor seed in the form of the infamous Marquis wheat that was highly susceptible to failure from wheat rust, a fungal disease. Yet, he never gave up but started each year with the same optimistic determination that is the hallmark of successful farmers.

First, in order to start over, review the causes of crop failure, the more common reasons being:

- Lack of a sound Business Plan;
- Planting more garlic than you have resources to cultivate satisfactorily; or, too large a planting started at the wrong end of the Business Plan;
- Planting unsuitable seed garlic infested with the Stem & Bulb Nematode;
- Planting unsuitable seed garlic having diseased or damaged cloves;
- Planting in unsuitable or inadequately prepared soil;
- Wrong variety of garlic for conditions of the region;
- Lack of knowledge, or simply not knowing how to grow this unique vegetable properly. This covers a multitude of topics as the growing of garlic requires a long learning process to learn how to do it well.
- Adverse weather conditions.

There are more causes but the list gives you the idea.

Next is answering the question, "*Why did my garlic fail?*" Do a critical examination to try to determine where the fault lies, to see if the fault is yours or that of Mother Nature. Look back and examine what you may have done wrong to contribute to the failure. The answer should be quite evident. Weather is beyond control but the other causes are in your hands.

Then, you can make the decision of whether to quit garlic and find another occupation, or, start over again from square one, this time, doing it right.

Start with the Business Plan. Did I include my target or goals? Did the Plan provide for a realistic progression or number of years to achieve my aim? Did I have the necessary resources? Did I check out sources of supply, or, did the Plan ignore them? What about labour estimates? Did I assign enough time to match the work? Did I make too many assumptions? Was the Plan too optimistic?

Make sure you eliminate any spurious wish list ideas, mistakenly inserted as goals.

Refer to Issue 46 on Planning a Garlic Market Garden that includes an Acre of Organic Garlic.

Rewrite the Plan to correct any deficiencies.

Then, you can start over again at Year 1 of the Plan. Say that you started with your 1-Acre or 20,000 garlic, the final target in year 5 and your crop failed. Don't even consider starting back at that level again. When starting over, start at year 1, not at year 5 to avoid repeating the same mistakes.

The 2nd most important decision is correcting the lack of knowledge. Don't let a swelled ego prevent you from admitting, to yourself, since no one else will know, that you made mistakes because you just didn't know enough. Growing garlic commercially requires good knowledge of numerous topics. In addition to learning the unique cultural methods for growing garlic, the grower needs a sound knowledge of agricultural methods, soils, nutrient management, crop rotation, other rotational crops, composting, cover crops, diseases and disease recognition, insect pests, seed varieties, seed quality and seed selection, sources of supply, tools and farm machinery, helpful government agencies, sales & marketing and other topics. The learning process is the equivalent of a 4-year university degree in science. It takes time to learn.

A good Business Plan covering 5 years provides the minimum period of time for the farmer to learn while growing, increasing in size and developing markets.

A knowledgeable grower will readily discover that the other causes of crop failure, except for the weather, are eliminated, just by doing it right!

Starting over in a commercial market garden operation is the right decision, providing its done based on sound knowledge and a realistic Business Plan. *Editor.*

The Garlic News
Connecting
The Canadian Garlic Network
Issue 54 winter 2017-2018

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About the Garlic News

The *Garlic News* is a membership newsletter distributed at cost to members. It provides a networking forum for the sharing of garlic information. Started in 2004, it carries on from where the *Garlic Newsletter* and *The Voice of Garlic* left off.

Back issues are available both in single copy and attractive 1-year bound sets.

For lists of articles in previous issues, go to: www.garlicnews.ca/ or, www.rasacreekfarm.com

The E-Garlic News

The *E-Garlic News* is available by Email. Download size is approx. 5 MB. Inquire.

Editorial Policy

The purpose of the Garlic News is to enable farmers and gardeners to grow better garlic and enjoy it more. Articles and contributions are welcome and will be published subject to space and suitability. Letters and articles may be edited for length and content. Advertising, subscriptions, or material submitted for publication that detracts from the integrity of the News may be refused by Editor. Articles should be not over 400 words or one page of text and pictures. Written permission for use is required for reproduction, duplication or electronic transmission of any article. Contents copyright © 2017-2018 Paul Pospisil.

Deadline spring 2018 Issue: Mar 01.

In This Issue

Planning for a new start	1
When disaster strikes your garlic crop with failure, it's time to review what went wrong, go back to the basics and start over again.	
Notes from our garlic patch	3
Garlic planting 2017, the plague of Lyme Disease, thanks to the many Garlic News supporters, special thanks to Peter Barthel for a gift of <i>Christstollen</i> .	
A clove here and there	4
Congratulations to Deb Barnhart, the newly elected president of the HCGGA. Soil biology promoted by the Underwear Project; Ontario moves to go organic; December 5 is World Soil Day; and a dedicated garliciste, Lawrie Henrey passes away.	
Tissue culture of garlic in Quebec	5-6
Jean Lafontaine discusses the clean garlic seed project in Quebec and the role planned by of one of the large garlic producers, Ferme Stéphane Boucher & Filles, in the project.	
Garlic Connections: HCGGA page	7
Deb Barnhart talks about the Garlic Enthusiast and more HCGGA initiatives.	
Festival Report: Toronto Garlic Festival	8
Peter McClusky, owner/manager of the Toronto Garlic Festival reports on the success of the 7th annual presentation of this fine event.	
The Garlic Directory: Garlic Products at Wholesale from Eureka	9
Al Picketts, a reliable Canadian supplier of garlic & garlic products has seed garlic for spring & fall planting, black garlic and a range of garlic products at wholesale.	
The Garlic Directory	10-11
Garlic ads, listings and useful garlic contacts. Experienced growers know the advantage of letting buyers know about their garlic all year.	
Garlic Recipes & Health Tips	12
A hearty garlic soup for those freezing cold days, a warning about "dangerous garlic", more tips on garlic in the kitchen and garlic for health.	
More Garlic Recipes & Ideas	13
Peter Barthel, Germany shares his taste test results on 24 cultivars from his 2017 crop. And, the search for Tallin garlic brought the editor to recall the baked escargot recipe.	
Garden Mats for weed control	14-15
This simple invention shows promise of solving the weed problem in garlic plots.	
Garlic Research: Garlic Performance - 2017 Harvest	16
The comparative evaluation of 22 cultivars revealed that hardnecks were most affected by the cold wet growing season, while the softneck Artichokes and Turbans again demonstrated adaptability to difficult growing conditions. Wettergren came out 1st with Luciano's Sicilian a close 2nd.	
We Get Calls and Letters	17-20
Diseases, crop failures, reports both good and bad; abiotic damage causes yellow garlic; and lots of queries from members	

RENEWING YOUR SUBSCRIPTION

For subscriptions expiring with issue #56, Summer 2018, an "Early Bird" Membership & Subscription Renewal form is enclosed for your convenience. This is to enable you to select the best time for renewing. We recognize that paperwork over the busy summer period just doesn't fit into our busy schedules that are filled with work on the farm or in the garden. Don't delay, do it now so that your *Garlic News* will continue to arrive with no interruption. If no form was included with your News, don't worry, your subscription is paid up till the next year.

First, think. Second, believe. Third, dream. And finally, dare.
 Walt Disney - 1901-1966, Entrepreneur, Cartoonist, and Filmmaker

***Merry Christmas and a Happy
 and Prosperous New Year in 2018
 to all our garlic friends.***

Notes from our garlic patch

Fall chores and garlic planting 2017

Our much-reduced garlic planting is in the ground, shivering a bit as the November and December weather has been the worst in years. Rain, cold, snow, rain and colder. This is the first autumn in quite a few years that we haven't been able to spend most of the fall season outdoors. So, that meant fewer fall chores done and more left to do in the spring.

The garlic planting went like a breeze this year. See pages 14 and 15 for this year's experiment with Garden Mats for weed control. I saved a couple of beds for more spring planting and have the seed garlic tucked away in the freezer.

Since we have been cutting back the garlic quantity and the size of the plots to that which we can handle--- age, you know, creepeth up on you - - - we have it down to a comfortably manageable level and, we were able to do the planting only on pleasant days this fall. Fair weather farmers, you say? Definitely! Garlic has to be fun and a little planning ahead can make it happen. We were finished planting on October 20 and had enough time (and energy) to drive up to Renfrew one day and help daughter Catherine plant her garlic. It turned out for the best. The weather turned bad. With her hectic workload, it's unlikely that she could have made it without help this year.

The Bulbil Project is alive and well. Despite cutting back on clove-planting, I have the largest bulbil trials planted that I've ever had. Dozens of cultivars from all Horticultural Groups are in the ground, with start years from 2014, 2015, 2016 and 2017 and in several different growing methods being tested. I dread to think of the amount of counting, measuring and weighing that lies ahead to enable coming to useful conclusions. Since my first bulbil experiments over a quarter century ago, a wealth of information has been discovered and more and more gardeners are trying this excellent method in an effort to grow better and healthier garlic.

After one of the worst growing seasons in many years, it looks like we are in for a much longer and colder winter as well. December is unseasonably cold and it appears that winter is here to stay. I keep wondering what happened to all that global warming those scientists kept on about? We could sure use some of it here.

The plague of Lyme Disease

We are outdoor people and sharing the planet with other creatures means that we are part of someone's food chain. The tiny black-legged tick considers us and other warm-blooded animals as an essential part of his survival. That in itself wouldn't be so bad except that this little beggar spreads Lyme disease. The disease is spreading to every part of the country, and, it's a very, very serious disease.

This past summer endless miseries. Starting with what I thought was the flu in June, I became weak, no strength, lack of balance and more. After two weeks, I sought help.



Well, the doc couldn't find anything despite many tests that showed nothing. He tried pacifying me with that old saw, "well, you are getting older you know!" Thanks loads, fella. Well, by August, after hardly being able to stand up and being a useless old man all summer, he ordered up a crystal ball full of tests. Eureka! One came back with indicators of Lyme disease. It seems that a tick bite in 2015 had given me Lyme and the 1-pill treatment at Emergency, you know, take this, have a good rest and you'll be OK, didn't work. The disease lurked in hiding in my body and emerged TWO YEARS later.

The doc prescribed the 3-week treatment of heavy duty antibiotics. The medication started to work. Day by day, my strength started coming back and after two weeks, I was back to doing my 3 km. walk every morning. Then, disaster again.

On the 21st day of the treatment, I came in from gardening to have a shower and felt a little itch on my back. Mary Lou checked and sure enough, a little tick was digging in to drink my blood. She pulled him easily, he hadn't started to engorge - the indicator that he was cycling my blood, - - and we left it. That wasn't the end of it though as the spot continued to look infected and itch badly so a week or so later, it was back to Emergency. Another 2-weeks of powerhouse antibiotics. This time, it didn't go as well. Although I gained back some energy, there were residual effects, weakness in the legs, lack of balance and a lack of the joie de vivre or zest that comes when you're feeling good. Maybe the Lyme is still there?

My advice to all gardeners is to take the time to learn about this tick, treat him seriously and start taking measures to check and protect yourself against bites. Lyme disease is serious and it isn't going to disappear on its own.

Looking for an article or a recipe in the Garlic News?

Two of our members have kindly posted searchable Table of Contents (TOC) pages from the Garlic News on their websites as a service to garlic growers. To search for an article, first download the TOC page or pages from either of these websites:

www.garlicnews.ca/
www.rasacreekfarm.com

A big "Thank You" - -

- - To the following who added \$\$ to their membership renewals to help with the rising costs of production and mailing. The Garlic News is alive and well! **Thank you!**

Andre Beaucher, Jerome Charlebois, Peter Collis, Wayne Davey, Henriette Dauphinais, Mark Liznick.

A special Thank You to **Peter Barthel** for adding money to buy some "*Christstollen*" or "Dresdner *Weihnachtstollen*", those delicious fruit breads that are part of the Christmas tradition in Germany. We will, Peter. Enjoying the stollen will bring back happy memories of the years that we lived in Germany and later in Belgium, learning about and enjoying the customs of Christmas. *Editor*

A clove here and there

Newly elected chair of the HCGGA



Congratulations to Debbie Barnhart who was elected to serve as Chair of Haliburton County Garlic Growers Association. Debbie is the hard-working reporter who prepares the HCGGA page for the Garlic News. We believe that the members of that fine Association will be

well-served by their new Chair. Keep up the good work!



The "Underwear Project"

The Soil Conservation Council of Canada has been promoting the "Underwear Project" as a catchy way of bringing attention to good soil biology practices to aid in soil conservation.



I was first made aware of this novel technique in 2003 when one of our Lanark County 4H Clubs displayed decomposed undies at their information stall at the International Plowing Match hosted by our County. Soil biology was getting a lot of attention by these young farmers, long before "conventional" farmers started to take notice and mend their ways.

The instructions the Council provides for conducting this simple test are as follows:

"Take a new or clean pair of white 100% cotton briefs (no dyes or polyester blends) and using a shovel, dig a narrow trench and bury the underwear in the top six inches of soil. Leave the waistband showing a little and mark the spot so you'll be able to find it again. Leave it buried for about two months. Dig it up carefully and rinse in a bucket of water to remove the soil."

If you have healthy soil, you'll see that not much cotton is left, indicating a good level of biological activity. These same soil organisms break down plant materials in much the same way. If the undies are fairly undamaged, it's time to start working on restoring your soil to health.

Anyone can investigate biological activity in farm fields or backyard gardens using this simple experiment.

The Underwear Project received a lot of media attention in 2017. Even OMAFRA got on board, conducting the test at Ridgetown College and posted a YouTube video called Soil Biology "The Cotton Test" Ontario Canada.

Photo courtesy of the Soil Conservation Council.

Editor's note: Yes, I have a pair of my white cotton briefs buried in the garlic test plots. They will remain there over the winter to see if the microbes (in my organic soil) will completely break them down, even the doubled seams.

IN MEMORIAM

It was with great regret that we learned of the passing of **Lawrence "Lawrie" Henrey** in Langley BC. Lawrie was born in Johannesburg, South Africa and immigrated to Vancouver with his family in August 1977. He was a dedicated devotee of garlic, creating an organic farm, Klipspringer Inc. on the Sunshine Coast in his retirement. Lawrie named his farm after the klipspringer, a small antelope found in southern Africa. He was a great believer in garlic and introduced the growing of it to many of his friends and family. Our sincere condolences to his wife, Margaret and their children.

Margaret wrote: Thank you for your kind words. Lawrie always found the Garlic News informative and interesting. Regrettably, I am only an occasional gardener and garlic grower. We had a good crop this year. Lawrie advised on planting, but unfortunately was not around when it was harvested. Our family will keep up with the planting for next year as we have some good-sized bulbs.



Ontario moves to go organic

Notice courtesy of Canadian Organic Growers (COG)

On September 13th, a private member's bill was introduced in Ontario legislature that, if passed, will enact provincial organic regulation. Bill 153 was developed by the Organic Council of Ontario to address lack of regulation of organic claims within this province. COG has endorsed this Bill.

Editor's note: Until Bill 153, the Organic Products Act, 2017 passes and becomes law, it is unknown whether Ontario will simply adopt the Federal Organic regulation or produce one more applicable to local sales requirements. At this time, the Bill has passed 2nd reading in the Legislature.

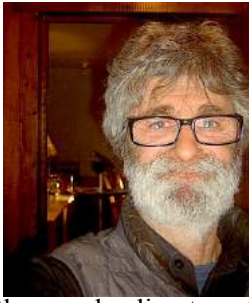


World Soil Day December 5

An international day to celebrate and raise awareness of Soil was recommended to the United Nations Food & Agricultural Organization (FAO) in 2002. The December 5 date was chosen as it is the birthday of the King of Thailand who officially sanctioned the event.

Healthy soils are critical to farm productivity, biodiversity and security in producing food for today and for the future. Even more important, healthy organic soils, teeming with beneficial microbes, produce the best garlic you can grow.





Garlic tissue culture in Quebec

By: Jean Lafontaine

Ferme Stéphane Boucher & Filles, a division of Pépinière Boucher could become a partner in "**Semences Boréail**", an innovative clean garlic seed project in Saguenay/Lac St-Jean.

The geographical characteristics and the cool climate of Saguenay-Lac-Saint-Jean favour a distinct agriculture associated with its nordicity.

For instance, this region produces the most lowbush blueberries, oats, canola and seed potatoes in Quebec. When in 2006 the golden potato nematode crisis hit producers across the country to the point where neighboring countries closed their import borders, only one region was spared: Saguenay-Lac St-Jean.

Yet, despite the protection afforded by their geographical enclave, local garlic producers encountered the same problems as most of us. Somehow, they needed to find a source of healthy seeds.

First Steps

In 2013 -14, inspired by the French expertise and rich with a \$220,000 grant offered by the Regional Economic Development Agency for a project spread over three years, they went into action.

Objective: To ensure the production of healthy seed on three local farms to eventually supply the Quebec garlic producers market.

The project started with 2000 certified Music rounds from Guelph University and five farms. Three would be multipliers, Ferme Tournevent in Hébertville, Potager Grandmont in St-Gégéon and Stéphane Boucher.

Two other farms constituted the test network. They estimated the need of Quebec producers between 80,000 and 160,000 kg (based on a planting rate of 1,000 kg / ha), and planned to produce 2000 kg in 2015, 5000 kg in 2016 and 20 000 kg in 2017. They called themselves "Semences Boréail".

The realization of the project proved to be more difficult than expected. So, at the end of the third year of the project and the exhaustion of the budget, there were only two farms left and they had merely managed to market about 1000 kg in the autumn of 2017.

Of course, many were quick to conclude that the project was a failure, but they were wrong.

Learning from the difficulties they had encountered, the survivors were able to adjust the shot by attracting a new partner with a wealth of expertise in early 2016.

Végétolab

Végétolab Inc. is a company specializing in the development of protocols and laboratory multiplication of different plants by in-vitro culture from meristem.

In other words, they are able to multiply rapidly and almost to infinity each clean (i.e. nematode and viruses-free) bulbil they collect the meristem from. And within the same year they can bring each of these clones to produce a round.

These rounds are then cultivated for three years on the multiplying farms (I save you the details of the rigorous specifications which they must respect).

So, a Music round planted, say, in October 2016 will give one bulb (F3) in early August 2017, which will then be cracked into an average of 4.5 cloves to be planted two months later, and so on until certified F5 are ready to be distributed to Quebec producers.

*We now have a clean Music seed bank, the Végétolab Development General Director **Martine Girard** told me yesterday. Think about it, it is an extraordinary security for all Quebec producers!*

When asked if the same could be done with other varieties of garlic she answered in the affirmative, although with caution because it is necessary to have healthy material to start with, and also a protocol has to be developed for each new variety. So yes, it's possible, but not easy. And probably not cheap. The protocol is in place, the machine works. It now only remains for it to grow, and reach its cruising speed.

Only one other country in the world has such a system for the production of clean garlic, France. A French-speaking country. Is it a coincidence?

To Grow or Not to Grow?



Pépinière Boucher in St-Ambroise QC

In addition to specializing in the production of billions forest seedlings, **Stéphane Boucher** of Pépinière Boucher in St-Ambroise, Saguenay, has developed the native seedling market for reforestation, revegetation of soils, stabilization of banks with young plants genetically suited for each specific location, the company's main client being Quebec Ministry of Forests, Wildlife and Parks. But it is to tell us about their new garlic project, he and his wife Sophie Limoges were

guest speakers at Ail Quebec Fourth annual meeting held in St-Hyacinthe on December 9, 2017.



Sophie Limoges and Stéphane Boucher

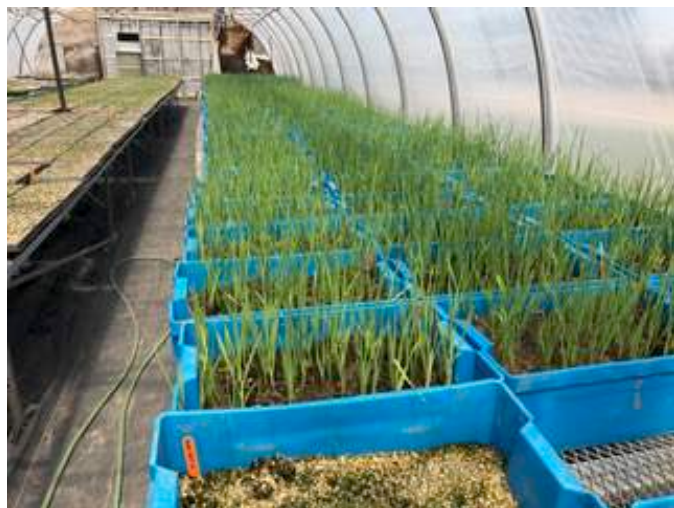
(Continued on page 6)

Ferme Stéphane Boucher.... continued from page 5

Because of their expertise, impressive facilities and one hundred qualified employees, **Boucher** and **Limoges** were invited to participate in the *Semences Boréail* project in 2015, and they soon realized how this type of crop was perfectly suited to their operations, because planting and harvesting times occur when their main operations are slowing down and so they have employees available.

The difficulty of finding healthy seeds of garlic ensured that they led their efforts to produce seed from bulbils, starting their first trials with Music in 2015 and expanding to twenty different varieties through 2016 and 2017.

They try different methods of culture: In the greenhouse in cells, trays and bins. In the ground under net, or in open fields in buttes or beds.



One million young garlic plants from bulbils.



Planting rounds in containers



Bulbils under net

At the end of their presentation, **Stéphane Boucher** announced that the decision was taken to concentrate their efforts on the production of meristem in-vitro starting material by 2018. Asked whether he is referring to Végétolab, he remains vague.

Must we understand that he plans to become the third multiplier farm? The mystery still hovers.

Importations Allium Inc.

They nevertheless have recently created a new entity, Importations Allium Inc., the latest division of the Pépinière Boucher group. It was set up to provide producers with the opportunity to stock up on certified garlic seeds from France at very competitive prices. In the fall of 2017 a full container of 13 tons was imported to meet the needs of some 30 Ail Quebec producers.

But no one guarantees that we will depend on France forever, warns Boucher who does not appreciate the mechanically inflicted injuries and the presence of Fusarium in the French garlic.

With a large smile, **Sophie Limoges** adds: *In a near future we hope this new company will be the distributor of certified seeds produced by us.*



Meristem tissue culture

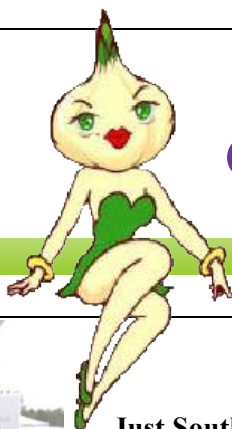
Plant tissue culture is a collection of techniques used to maintain or grow plant cells under sterile conditions. It is widely used to produce clones of a plant in a method known as micropropagation.

Meristem culture mainly involves culturing a bud in a culture medium under sterile conditions. A meristem is the tissue in most plants containing meristematic cells, found in zones of the plant where growth can take place.

The method is gaining considerable interest in the production of clean seed garlic in an effort to reduce the spread of garlic diseases.

Garlic Connections

Start your day the growing way



Just South of Algonquin Park

Garlic Enthusiast!

The new face of garlic!

An enthusiast is one who is inspired and ardently attaches to a cause, object or pursuit, who is filled with enthusiasm; a **garlic enthusiast.**

It is enthusiasts, the ones with a hunger for healthier foods, who want to expand their culinary palette and share with friends, family and neighbours that are driving the definition of a grower, **“the backyard grower.”**

As populations grow and land shrinks, new solutions are sprouting.

Haliburton County because of lack of agricultural land is in the perfect position to offer growing solutions as we build healthy soils from the ground up. These good growing practices are being transplanted to urban centres, community gardens, and senior residences.

For this association, our vehicle is garlic. Good growing practices will include a three-year rotation which encourages the growing of subsequent crops and deny pest and diseases the opportunity to flourish on a monoculture diet.

Soil enrichment to strengthen the soil web and grow our health from the ground up.

What we are growing is a community model that works for our County – local solutions and transferrable skills that can be repeated over and over again wherever one may roam.

Our organization is comprised of individuals with a wealth of growing, harvesting, preserving, marketing and sharing.

Our County is connecting, partnering and rediscovering “community”.

In Early 2018, the HCGGA will be unveiling the next phase of engaging, educating/sharing, collaborating and growing partnerships.

What follows is a very small sample of what is to come as we grow forward!

“Connect – Learn - Grow” With your local garlic community



Recently the HCGGA partnered with Abbey Gardens and hosted a Soil Rejuvenation and Garlic Planting workshop at the Stanhope Museum. This event was sponsored by Harvest Haliburton as the final "Dig-in" series of 2017.

The Heritage garden now features a 75-clove garlic bed all snuggled in for the winter and an accompanying bed with a super supplemented bed awaiting "citron" seeds in the spring. Be sure to visit Stanhope Heritage Days next summer and see the abundant results of rich healthy soil, local seed and lots of TLC!

Whether you are young, young at heart or somewhere in between...permanent, part-time, weekend or day tripper... Whether you grow windowsill garlic, one bulb, one row, a plot or in a pot, “just for friends and family” and most especially for “FUN”! Then stay tuned to

www.facebook.com/haliburtongarlic.ca

To contact the Haliburton County Garlic Growers Association: Visit website: www.haliburtongarlic.ca or phone Debbie Barnhart 705-489-3987, Email barnhartdebbie@gmail.com

A very successful 7th annual Toronto Garlic Festival

By: Peter McClusky

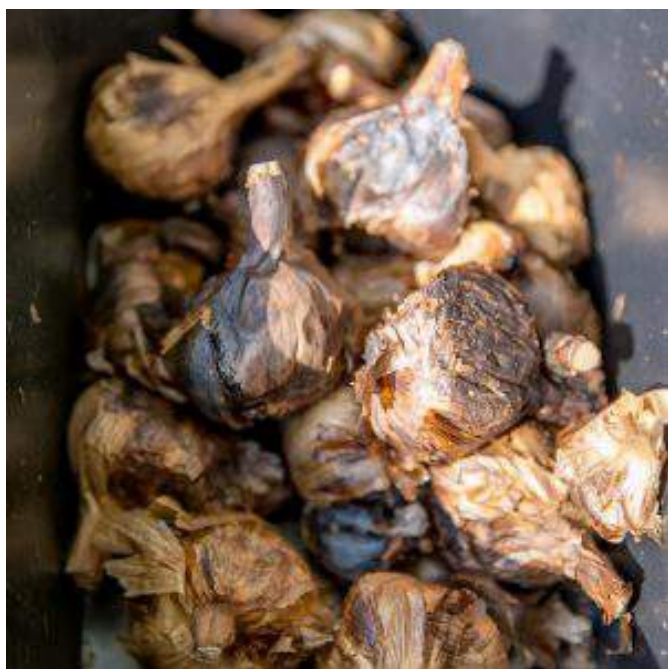
Photo credits to Toronto Garlic Festival

I wanted to give you an update on the 7th Annual Toronto Garlic Festival held September 17, 2017 at Artscape Wychwood Barns. By all measures the festival was a great success. As one vendor, Acadian Shamrock Farms, said, "Toronto consumers know their garlic!! I am confident

that all vendors felt the same way as people came out to purchase in droves. The weather helped of course!! Thanks again, we look forward to next year." As always, Ontario garlic was the Toronto Garlic Festival celebrity.



Garlic, lots of Ontario garlic



Black Garlic (above) is a delight for foodies. Recipes using this popular garlic product include an endless array of desserts.

Garlic lovers from as far away as Sweden and Australia showed their appreciation. 4,000-plus visitors swarmed the one day festival, to taste sweet and savory items, including Garlic Fries, Ostrich Slider Topped with Garlic Aioli, and Garlic Marmite. Desserts on offer at the festival included Vanilla, Fennel and Black Garlic Gelato, Black Garlic Beer, and Chocolate and Black Garlic Truffles.

To view a slideshow of more festival pictures, go to: <http://www.torontogarlicfestival.ca/2017-festival-pics/>



Getting the festival spirit. Festival goers love to stroll around and munch, sampling the novel assortment of garlic-laced street foods that can only be found at a garlic festival.

Live Music, reflecting the many cultures that love garlic, was performed all day, including Lucio Raggiunti performing traditional Italian songs on an organetto, Waleed Abdulhamid performing Sudanese percussion, and Jonno Lightstone and Brian Katz with their Klezmer Smorgasborg. Talks and presentations ranged from the academic to hands-on, including a talk on Soil Biodiversity by soil biologist Sarah Hargreaves, and tips on growing garlic by garlic farmer Shawn Stevens. The VR Farm Tour, now in its 2nd year, was a hit, and the Garlic Shot Station, and Garlic Breath Contest, where visitors get their breath measured in the parts per billion, are always a festival favorite. We were honoured to have the new president of the Ontario Garlic Growers Association, Joann Chechalk, visit the festival and meet many of the farmers.

The Toronto Garlic Festival is uniquely positioned to show off to the world not just Ontario garlic, but by virtue of the great range of local visitors, the cultural diversity of Toronto and Ontario. In other words, garlic, and its diverse audience, makes for a unique tourist draw.

Some visitors asked why we charge admission. We run this festival out of a strong passion for Ontario garlic and the farmers that grow it. It's a unique challenge to put this festival on in Toronto, where costs are quite high. All festival revenue, including gate receipts and vendor fees, goes toward festival expenses, venue rental, advertising and administration.

Paul, thank you for your support! It means a lot.

Peter McClusky, Founder/Director, Toronto Garlic Festival

Garlic & Garlic Products from Eureka Garlic, Kensington, PEI

Attention, Market Gardeners!!

**Seed Garlic Cultivar List for both Spring
& Fall planting, as available.**

“Let my business help your business”

Garlic Products at Wholesale

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Variety	Type	Variety	Type
Eureka Clayton	T	Kettle River Giant	Art
Keeper	T	Portugeorge	Art
Morado Gigante	T	Sicilian Gold	Art
Shangtung Purple	T	Transylvania	Art
Eureka Xian	T	Alison's	R
Continental	P	Brown Saxon	R
Eureka Clifford	P	Eureka Allen	R
Eureka Duncan	P	Eureka Helen	R
Eureka Jenny	P	French Rocambole	R
Eureka Rowan	P	German Brown	R
Eureka Veronica	P	GSF65	R
Floha	P	Italian Purple	R
Georgian Crystal	P	Kiev	R
GermanPorcelain	P	Kilarney Red	R
German White	P	Korean Purple	R
Great Northern	P	Marino	R
Mennonite	P	Salt Spring Select	R
Moravia	P	Slovak Mountain	R
Music	P	Spanish Roja	R
Northern Quebec	P	Ukrainian	R
Susan Delafield's	P	Ukrainain Hot	R
Darwin	PSM	Eureka Danaerys	SS
Eureka Amie	PSM	Nootka Rose	SS
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Persian Star	PS		
Vekak Czech	PSG		
Elephant	E		
Jumbo Elephant	E		
Key to Type T...Turban P...Porcelain PSM...Purple Stripe Marbled PSG...Purple Stripe Glazed PS....Purple Stripe Art... Artichoke R...Rocambole SS...Silverskin E... Elephant C...Creole		Seed Garlic Prices 1-5 bulbs: \$4/bulb 6-49 bulbs: \$3.50/bulb 50+ bulbs: \$3.00/bulb	

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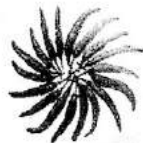
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The best recipes, garlic tips and ideas

Garlic Soup with toasted bread for a hearty meal

There's nothing quite like a bowl of hot soup to warm the cockles of your heart when you come in from the freezing cold on a blustery winter's day. The best soups are those made with garlic. This recipe makes the soup into a hearty full meal by adding garlic toasts and eggs.

Ingredients:

6 1/2 cups water	8 slices French baguette
4 cloves minced garlic	1 garlic clove, cut in half
1 bay leaf	2 large eggs, beaten
a few sprigs of fresh thyme	1 tbsp. extra-virgin olive oil
Salt to taste	Ground pepper to taste
1/2 cup pasta, any kind	2 tbsp. chopped fresh parsley
1 cup frozen peas	Grated Parmesan cheese

Method:

Bring 6 1/2 cups water to a boil in a 3 or 4-quart saucepan. Add minced garlic, salt, bay leaf and thyme. Cover and simmer 15 minutes. Taste and adjust salt. Remove bay leaf, and fresh thyme sprigs. Add pasta to pot. Stir, cover and simmer about 5 to 10 minutes until al dente, depending on pasta type. Stir so that pasta doesn't stick to the bottom of the pot. Add peas and simmer 5 minutes.

Lightly toast baguette and rub toasted slices with cut garlic clove. Put 2 pieces in each bowl. Beat together eggs and olive oil. Temper the eggs by spooning some of the hot soup into eggs and stir together. Turn off heat under soup and slowly stir in tempered egg mixture. Sprinkle. Ladle soup into bowls over bread, sprinkle pepper, parsley and cheese on top and serve.

Some more tips on using garlic in the kitchen

1. Roasting garlic is one of the most delicious ways to enjoy it. Roasting mellows the pungency of the bulb and releases the sugars, giving it a rich caramel flavour. To roast it whole, slice off the top of the bulb just enough to expose the flesh, drizzle it with olive oil, season with salt and pepper and wrap with foil. Bake at 350F for approximately 40 min. Cool it a bit, squeeze the bulb and the roasted cloves will pop out.
2. Use it in recipes whenever possible, not only main course dishes but also for breakfast and desserts.
3. Eat it raw for greater health benefits. With the right seasonings, adding raw garlic to recipes adds fragrance and taste.
4. If raw garlic does not appeal to you, crush it in a press, let sit for 10 minutes, add olive oil and heat to just the point where the olive oil starts to bubble. That is enough to drive off excess odour and mellow the burn or "heat" of the raw garlic.
5. Never burn it. Burnt garlic is bitter with an unpleasant taste. To prevent burning your garlic when cooking in a frying pan, always add it at the end of your process.
6. Don't overuse it. If there's too much in the recipe, it overwhelms the dish, masking the other flavours.

Dangerous garlic in the kitchen

I have long railed against the bad practice of growers selling dirty garlic. This rant continues to be necessary to try to educate growers in order to stop the spread of soil borne diseases and especially the pest, the Stem & Bulb Nematode, major threats that are destroying the garlic industry.

It's not only gardeners that need this advice, but cooks, too. One of our readers reminded me of the risks of poisoning in the kitchen and sent me this link for an article in Western Living Magazine entitled, *Garlic: "One of the most dangerous ingredients in your kitchen"*.

<http://westernliving.ca/food-and-wine/garlic-one-of-the-most-dangerous-ingredients-in-your-kitchen/>

For those with Internet, the article is worth reading. Well-known chef Julian Bond warns of the dangers of both salmonella poisoning from sprouted garlic and the risk of botulism from garlic.

Most cooks are aware of the hazards of botulism, a potentially fatal illness from bad food. This pathogen is caused by a toxin produced by the bacterium *Clostridium botulinum*, found in all soils around the world. It can be brought in to the kitchen with soil on dirty garlic bulbs.

Botulism poisoning causes weakness, blurred vision, feeling tired, trouble speaking and in extreme cases, the person dies.

Please, don't stop eating garlic. Just don't bring dirty garlic into the kitchen. Don't buy it, don't harvest your own as dirty garlic, and don't turn one of the most health-giving of vegetables into a poison. Just learn how to do it right. Editor

Garlic for health

100 grams of garlic has 150 calories, 33 grams of carbs, 6.36 grams of protein. Garlic also contains Vitamin B1, B2, B3, B6, folate, Vitamin C, calcium, iron, magnesium, manganese, phosphorous, potassium, sodium and zinc.

The sulphur-containing compound, *Allicin*, created when fresh garlic is crushed or chewed garlic, has anti-bacterial and anti- properties, and research shows that it may help prevent some forms of cancer and heart disease as well. Each small clove is a powerhouse of flavour as well as medicinal properties.

Many people use garlic for simple remedies such as easing the discomfort of colds and flu, as an antibiotic on cuts, removing insect stings, cleaning the skin, fungal infections and relieving skin problems like eczema.

As research into the medicinal properties of garlic confirms some of the centuries-old practices, health professionals as well are recommending the consumption of garlic as an essential part of a healthy diet. The preventive benefits of garlic are equally as important as cures or remedies.

Quick remedy for splinters or slivers

Place a piece of cut garlic over the splinter, cover with a bandage, and voila! Bye-bye splinter.

More Garlic Recipes & Ideas

Taste tests by Peter Barthel

In issues 50 & 51, we carried the results of tastings carried out by Peter on 20 garlic cultivars from his 2016 crop. The chart below gives the results of the same 20 garlic from the 2017 crop plus 4 more new ones that he grew.



Peter Barthel

Partial Table of Garlic Flavours From 2017 taste tests conducted by Peter Barthel				
	Cultivar	Taste	Hotness	*Flavour
As	Asian Tempest	8	5	
Cr	Burgundy	7.5	5	
R	Carpathian	8	6.5	
	Chinese White	6.5	6.5	
R	German Red	8	5.5	
R	Killarney Red	8	6.5	7
P	Leningrad	6	6	
P	Music	7.5	6.5	7
P	New Siberian	6.5	6	7.5
As	Pyong Yang	8	5.5	6
T	Red Janice	6.5	6	
MP	Red Russian	7	7	6
R	Russian Red	7	8	6.5
G	Red Rezan	7.5	6	
PS	Shvelisi	7	7	6.5
MP	Siberian	7.5	5	7.5
SS	Solent Wight	7.5	6	
P	Tallin	8	6.5	
P	Yampolskij	6	5.5	7.5
P	Zemo	8.5	4	
P	Armenian	7	7.5	7
R	Marino	7.5	6	7
Art	Simonetti	8	6.5	
Art	Wettergren	8	5	6

* flavour of the peeled cloves heated in the oven for 20 minutes at 350°F (175°C).

Code for Horticultural Groups

Art Artichoke
As = Asiatic
Cr = Creole
R = Rocambole
P = Porcelain

G = Glazed Purple Stripe
PS = Purple Stripe
MP = Marbled Purple Stripe
SS = Silverskin
T = Turban

Summary guide to numeric ratings in chart. See page 14 of Garlic News #50 for more detailed definitions.

Range: 1 = worst, 9 = best.

TASTE: from 1 (very bad or inedible) to 9 (full, strong & lasting garlic taste).

HOTNESS: from 1 (lack of heat, unpleasant, biting & bitter) to 9 (too hot for raw but very good for sautéing, baking, cooking).

Flavour: from 1 (least flavour) to 9 (best flavour).

Baked Escargots in Garlic

While searching the web for Peter Barthel's garlic from Tallin (see chart at left), I came across the Balthazar Garlic Restaurant in Tallin, Estonia. This well rated gourmet restaurant features garlic recipes, of course. One such delicacy is baked escargot in garlic butter. It's handy to have a special escargot gratin dish (we bought a set while living in Belgium many years ago and got a lot of use from them over the years) but if you don't, you can improvise. A great idea for entertaining over the holidays.



Ingredients:

Escargots:

3 tbsp. butter
4 oz. finely minced shallots
36 snails, removed from shells & rinsed
1 large garlic bulb, peeled finely chopped
sea salt and freshly ground pepper
fresh parsley, chopped
fresh tarragon, chopped (optional)
2 loaves French bread cut into thin slices

Garlic and Parsley Butter:

1 lb. butter, soft
2 tsp. fine sea salt
1 tsp. freshly ground pepper
fresh parsley, chopped

Method:

Preheat the oven to 350 degrees F.

For Escargots: Melt the butter in a sauté pan over low heat and add shallots, snails and garlic. Slowly sauté for 10 minutes. Season with salt and pepper, and stir in parsley. Set aside and let cool.

For Garlic and Parsley Butter: Mix together the butter, sea salt, pepper, parsley, garlic and tarragon in a blender until very smooth. Place 1 snail in each hole of the gratin dishes, and then cover with garlic and parsley butter up to the brim. Top each snail with a slice of bread. Bake about 7 minutes or until the butter is bubbling and the croutons are golden brown. Serve and enjoy! 36 escargots as appetizers will serve 6 people

Reminder: the 10-minute rule

Garlic's health benefits are released when the clove is crushed and then left to sit for 10 minutes prior to cooking. Chopping or crushing releases an enzyme that converts compounds to allicin. Next time you cook with garlic, try the 10-minute rule.

Trial of Garden Mats for weed control in garlic

1st trial using plastic mulch

In fall 2016, I started a trial using perforated plastic mulch in an effort to reduce the weeding workload in the garlic patch. (See page 3, Issue 50 for report on fall 2016 planting).

I bought two 100' long by 48" wide rolls of All-In-One black UV resistant plastic. This product, sold by Flora Flow, is made with an integrated irrigation hose and has 4 rows of 2" diameter holes spaced at 6" apart.

The mulch was installed on two of the eight raised beds. The plastic mulch had to be held down with both ground staples and weighted down with boards and the have the edges buried in dirt to prevent the wind from lifting the light plastic and ripping it out of the ground.



Planting the garlic was no different. I used a sofa leg dibble to make the holes, Mary Lou dropped the cloves in and I filled the holes with compost. A light covering of straw mulch went over the plastic.

The following spring, after a very harsh winter, it was observed that the garlic under plastic emerged a few days earlier than the other beds. No doubt, the black plastic gathered more heat from the sun.

During the growing season, no weeds came through the plastic. A few sprouted out the 2" holes next to the garlic but it was quite simple to walk along the beds and pull the few that made it.

Mary Lou was ecstatic! Since she inherits the lion's share of the weeding, her workload was significantly less. That settled it. We would plant the trials in future using perforated mulch! However, there was a down side to the plastic. 2017 was a cold, wet spring and summer. Since plastic does not "breathe", the moisture caught under the mulch can do damage by creating a wet, damp environment. When the plastic was lifted, there was actually a layer of moss on the soil surface. Whether or not this contributed to more fungal disease could not be determined as we had not planned for this eventuality. Thus, we did not have similar groups of cultivars both in straight soil and under plastic. That is left to a future comparison trial.

The trial was mostly successful. It achieved the aim of dramatically reducing the workload of weeding.

Plastic is far from an ideal material for use in the garden. While it does suppress weeds, it has serious problems. It catches readily in the wind, ripping it and extra measures must be used to hold it down. It is not reusable as it rips when lifting it. And, since it does not breathe, it creates damp conditions underneath encouraging fungal growth.

2nd trial in fall 2017 using "Garden Mats"

My search for a suitable weed suppression fabric began in earnest. I bought several types of landscape fabric, hoping that one would be suitable but to no avail. Trying to cut planting holes in the fabric resulted in ragged edges that would unravel and interfere with the crop.

Garden Mats

Then, I discovered that our daughter Catherine was already using a promising fabric mulch that was precut with 3" holes. She had bought it on one of her trips to the U.S. It was called simply "Garden Mats" and was the brainchild of an inventive Vermont gardener, Peter Comart. I called Peter to get the dirt on the mats. Peter had started with a tough, woven polypropylene landscape fabric and cut holes of different sizes at different spacing to suit various vegetables. The hole edges were heat "cauterized" to stop fraying, making the mats reusable for many years. The weave allowed water penetration and breathing, helped to preserve soil moisture, prevented erosion and stopped weeds from coming through.



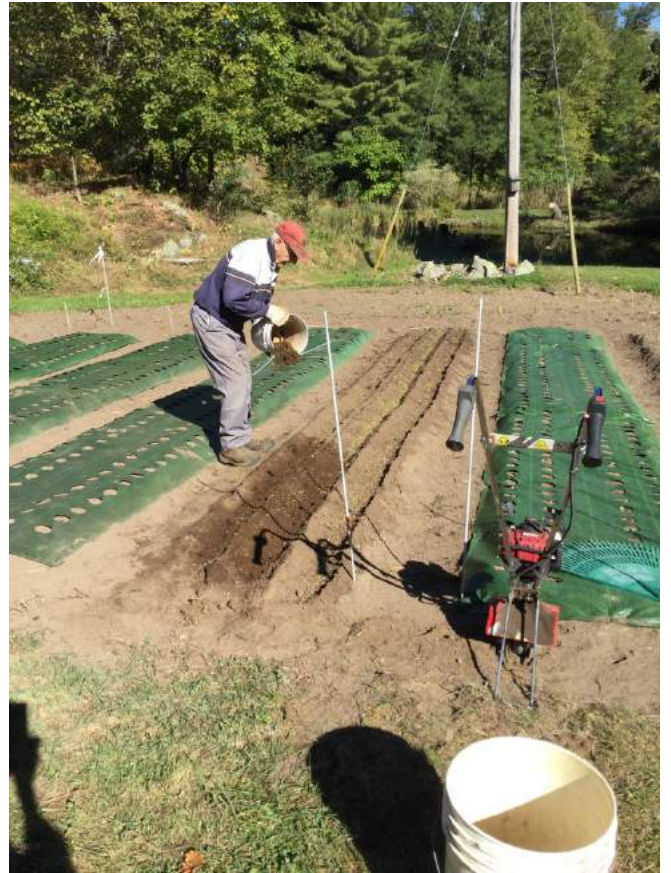
The 48" wide mats came in various precut lengths and hole sizes for gardeners. The 3" diameter hole at 6" row spacing was near-perfect for garlic, allowing room for growth and large enough to allow pulling the mats off before the garlic harvest. Peter was conducive to custom making other patterns of hole size and spacing for commercial growers. The big advantage was that Peter was willing to ship to Canada (but, alas, tax-hungry Canadian governments would add that despicable HST as well as collect customs charges, raising the price for us tax-weary Canucks!)

I selected and ordered sufficient mats in convenient 6' and 12' lengths for the fall 2017 garlic planting.

Soil and bed preparations for planting were the same as always, starting a year ahead with successive planting and plough down of cover crops, adding compost, and making the raised beds in August, two months ahead of planting. The beds had to be slightly widened to fit the 48" mats.

The mats were laid just prior to planting. The tough fabric enabled the use of ground staples at 3' spacing to secure the edges. My 6-hole dibbler had to be modified to space the sofa legs 6" apart to fit the precut holes. I dibbled the holes, Mary Lou dropped in the cloves and we both shared the task of filling the holes with compost. Mary Lou can hardly wait for next summer and the promise of a "weeding-free" garden!

Garlic Planting Fall 2017: Garden Mats Trial for weed control



Clockwise starting from upper left: Paul prepares beds by tilling in compost; adding alfalfa pellets; beds ready to plant with Mats pinned down; Mary Lou says, "Planting is all done!"

**REPORT # P-02b-2017: Performance & Yield Comparison of Proven Cultivars 2017 Garlic Main Crop
COMPARISON OF THE BEST of the BEST CULTIVARS in the TRIALS**

Purpose: To determine relative yield and performance of the best 22 proven cultivars from different Horticultural Groups grown in the 2016/2017 Small-Plot Organic Garlic Variety Trials. New strains, Seed Saver cultivars and spring-planted garlic are not included.

Method: Garlic was grown using standard organic methods. Beds were fall-planted Oct 26 - Nov 2, 2016 and hand-harvested July 11 - Aug 1, 2017. Raised beds had double staggered rows, density 3 plants/foot of row (corresponding to 87,120 plants per acre).

Yield* Calculation: Extrapolated Yield = {Avg. Bulb Wt. (grs.) / 1000} x 87,120 x 2.20462 x (100 % less % Loss) = lbs/acre. **Not actual weight but an **estimation** using the GGAO Grade Sizing chart to calculate Harvest Weight**. The actual yield per acre will be different. 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 but not storage losses. Losses reduce yield. Some cultivars produce doubled or tripled cloves resulting in more bulbs harvested than the number of cloves planted.

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

CULTIVAR	Cloves Planted / Wt. grs.	Harvest Date	Bulb Harvest	Harvest Wt. grs. **	Av Bulb Wt. grs.	% Loss	Yield * Lbs/acre	H: S Ratio	Relative Standing in Group
Porcelain - 5 cultivars evaluated,									
Vampire	81/677	23 Jul	81	3563	44.0	0	8449	5.26:1	1 of 5
Millar	34/-	23 Jul	32	1132	35.4	5.9%	6393	-	2 of 5
F30	91/753	22 Jul	77	2632	34.2	15.4%	5554	3.5:1	3 of 5
Musical	43/300	19 Jul	39	1118	28.67	9.3%	4972	3.7:1	4 of 5
Majestic	272/2116	20 Jul	180	5500	20.22	33.8%	2571	2.6:1	5 of 5
Glazed Purple Stripe – 1 cultivar evaluated									
Purple Glazer	43/203	22 Jul	39	1177	30.2	9.3%	5257	5.8:1	1 of 1
Marbled Purple Stripe – 2 cultivars evaluated									
Kostiuk's Russian Giant	93/637	25 Jul	91	4773	52.4	2.15%	10,072	7.5:1	1 of 2
N. Siberian	47/269	26 Jul	46	2133	46.4	2.1%	8715	7.9:1	2 of 2
Purple Stripe – 1 cultivar evaluated									
Persian Star*	47/246	26 Jul	37	1790	48.4	21.3%	7312	7.2:1	Crop Failure*
Turban – 1 cultivar evaluated									
Luciano's Sicilian	67/759	11 Jul	68	4000	58.8	+1.5%	11,467	5.27:1	1 of 1
Asiatic – no cultivars evaluated in 2016-17. All in Seed Saver status									
Artichoke – 4 cultivars evaluated									
Wettergren	57/368	17 Jul	53	3669	69.2	7%	12,365	9.97:1	1 of 4
Transylvanian	86/463	17 Jul	75	5026	67.0	12.8%	11,224	10.8:1	2 of 4
Simonetti	50/188	17 Jul	46	2604	56.6	8%	10,003	13.8:1	3 of 4
Sicilian Gold	100/376	17 Jul	91	4206	46.2	9%	8078	11.2:1	4 of 4
Silverskin – 2 cultivars evaluated									
Silver Rose	40/152	2 Aug	39	1469	37.7	2.5%	7054	9.7:1	1 of 2
F40 Sovereign	28/98	2 Aug	28	1000	35.7	0	6860	10.2:1	2 of 2
Rocamboles – 6 cultivars evaluated									
Marino	26/97	26 Jul	25	976	39.0	3.8%	7213	10.1:1	1 of 6
Kastelic**	68/290	26 Jul	61	2105	34.5	10.3%	5945	7.3:1	2 of 6
Ikeda	42/132	26 Jul	37	1289	34.8	11.9%	5895	9.8:1	3 of 6
Tear Drop	52/192	26 Jul	25	1499	45.4	36.5%	5540	7.8:1	4 of 6
Italian Purple	82/203	26 Jul	50	1863	37.3	39%	4363	9.2:1	5 of 6
Yugoslavian	72/191	26 Jul	48	1487	31.0	33.3%	3969	7.8:1	6 of 6
Creoles - 5 cultivars evaluated									
Burgundy	63/465	11 Jul	64	3000	46.9	+1.6%	9147	6.5:1	1 of 5
Chinook	40/200	12 Jul	42	1705	40.6	+5.0%	8187	8.5:1	2 of 5
Cuban	36/152	12 Jul	35	1173	33.5	2.8%	6263	7.7:1	3 of 5
Rose de Lautrec #2	36/100	22 Jul	32	988	30.9	11.1%	5272	9.9:1	4 of 5
Rose de Lautrec #1	36/108	22 Jul	35	1022	29.2	2.8%	5058	9.5:1	5 of 5

Comments: 2017 was a challenging year; winterkill from the midwinter thaw; a damp & cold spring and summer resulting in greater than normal incidence of fungal diseases. The hardnecks, especially the Porcelains, suffered the greatest crop losses. The Artichoke cultivars again performed the best of all, demonstrating adaptability to performing well under adverse conditions. They produced the largest bulbs and largest yields. **The best overall performer in the 2017 crop was the Artichoke "Wettergren", producing the largest bulbs and the largest estimated crop.**

*Persian Star is crop failure due to root decay caused by fungal disease. Bulbs were unsuitable for market.

**Kastelic is unallocated to Group and has temporarily been placed with Rocamboles until a better identification is made.

There was no sign of re-emergence of the Bulb & Stem Nematode. Leek moth emergence was late and it appeared that only a few survived the adverse winter weather. There was virtually no post-harvest damage.

Overall, the harvest rated as poor.

We get calls and letters

Harvest Report on Spring Planting Trial

Mark Liznick of Connaught, Northern Ontario, near Timmins reported: I harvested 2100 bulbs from five types. The Music did not seem to do too well. It may have something to do with the soil. I had removed some Manitoba Maple from where the Music was planted so the "shed" from the maple may have retarded the growth. The Russian, Kostiuk's, Hungarian and Elephant all produced well. All 2100 grew and there is seed for next year. We plan to plant October 10 and harvest 10 months later on August 10. Keep up the great work. *Nazdrowie!*

Editor: Thank you, Mark. The Porcelains appeared to do very poorly in many regions this year, likely due to a combination of winter weather and a poor growing season. That could account for Music's performance. Other Horticultural Groups appeared to do much better with the Artichokes again doing the best.



Abiotic Damage to Garlic

Daniel Hoffmann of The Cutting Veg & Global Garlic

asked: This year, I noticed a few cloves that had gone bright yellow on the wrapper. The cloves under the wrappers were perfect. Can you identify what the cause of the bright yellow wrapper from the picture?



Editor: Hi Daniel

I haven't seen exactly this condition although I've encountered other odd colours of both the wrappers and the flesh of the cloves. It usually occurs when you have very hot days during harvest in a year & the lead up is cooler. The sudden heat has an effect on the maturing garlic. I'm not sure of your harvest but we had an extremely hot few days during our harvest July 18-20. The temperature jumped to the 30s. In its extreme, the garlic will experience "Waxy Breakdown". The cloves become translucent and the garlic is unattractive for use. It's not infectious being an abiotic condition but simply causes changes in appearance.



Dean Robinson of Niton Junction, AB wrote: Hi Paul. just received my first ever copy of the Garlic News. Sorry to read about the crop losses (in Alberta). I had my best ever in 7 years of planting. Thanks so much. Dean.

Editor: Hi Dean. Great! Always good to get good news. Crop loss Reports are still coming in. Here's a recent one from Grande Prairie a bit NW of you:

"Our harvest was definitely down this year. Many Albertans suffered loss of 80% & more".

So, remember to thank Mother Nature for sparing your crop!

Best crop of garlic, ever

Doug Goodfellow, Perth, ON reported: Thanks for the update. I have had the best crop of garlic ever, winning at local fairs, big jumbo size. Such a large crop. Giving away to neighbours. Thanks, Doug.

p.s. Maybe you need better land?



Editor: Thank you Doug. I was judging at the Perth Fair and checked the vegetable display afterwards. Congratulations! Your garlic looks good.

Many regions in Ontario, Quebec, western Canada and even NB had crop disasters this year due to the whims of the weather. See reports from across Canada in the last issue of the Garlic News. Drop in to Barnabe's Independent and see the local garlic from the Perth area in the produce department. Pretty sad, but that's what most of the "good" local crops were like this year.



Garlic in supermarket: Chinese on left, local garlic on right.

Recalling your farm, consider yourself lucky to have elevated, sloped land that drains well and was able to produce despite torrential rains that drowned out less fortunate people. Unfortunately, people can't buy all the good land in PEI & NS to try for a region that might have better weather!



Forcing true seed experiments?

We get questions about forcing true seed in garlic. If you have been successful in producing seed, having it germinate and grow, readers would love to hear about it. Please send in a short report to share your findings.

The method is described in Ted Meredith's Blog, Garlic Analecta. Editor.

More calls & letters

Early garlic emergence in the fall

Richard Beaudette, Ottawa, ON, asked: I was taking a turn through the garden today, and noticed some garlic up about three inches. On October 17, I planted the Chinook I got from you and promptly forgot about it and all the rest until I would look forward to seeing it poking out of the ground come spring. Imagine my surprise when I saw those lovelies standing up so proudly after less than three weeks! I'm not sure how they will fare over the winter. Have you had any experience like that, and what was the outcome? Is there anything I can do (except maybe a lot of mulch over them) to help ensure their survival?

Editor: Hi Richard. Fall emergence is an occasional but not rare phenomenon. It mostly occurs with Turbans or Asiatics. I hadn't encountered it with the Creoles before but we are into a strange weather year. Early emergence is the breaking of dormancy caused by the cooler temperatures in the fall, a necessary step in the growing cycle. In most cultivars, you don't see that its happened because the garlic has only set roots but hasn't poked the little sprout above ground. To protect the little sprouts from shredding by the November & December winds and blowing ice, you should toss on a little extra straw mulch. The garlic is hardy enough so that it will survive the winter OK. It's the prewinter wind damage that does the harm. Paul

Early planting to avoid disease?

Bernard Smyth, Perth, ON, asked: I found the News on this year's crop very informative and concerning so I do have a question.

What is the earliest time in this area that I can plant fall garlic? Mid-October?"

My garlic crop was basically OK but for the first time I think I had nematode damage to Chiloe and Leningrad -slightly yellowish and translucent and root damage. This happened even though I planted in a new plot, so I will have to get the mustard, and I am using another new plot this year. I'm going to cut the buckwheat and mustard today. My concern is that some of my garlic has rotted very quickly, the Artichokes and some Rocamboles. Part of this is my fault. I did pick it at the correct time, but I left it hanging too long in my garage during the heat wave. I have my seed planting stock in mesh bags now and in the coolest part of my house, and it looks OK, but I am worried that it might go off; hence I would like to get the cloves in the ground asap.

Any suggestions on planting dates and what happens if this crazy weather stays warm would be much appreciated.

Editor: Hi Bernard. Earliest planting? The mid October period for this region is used because it gives a good compromise. If you plant earlier, you risk garlic emergence and above ground growth before winter sets in. That can result in the November winds shredding the young plants, sapping much of their energy. If you plant too late, you risk the ground being too frozen to plant, a situation that occurs when winter comes on early.

So, you can plant earlier than mid-October but you take a risk. Garlic rotting? Sounds more like fungal disease rather than the nematode. With the cold spring and wet summer, fungal diseases of all types were common in garlic crops this year.

If so, the disease is in the garlic itself and planting it early won't make any difference. (If it's the nematode, they are in the seed bulbs so I wouldn't plant them in any case!)

The nematode and fungal diseases are both seed-borne and soil-borne. Thorough cleaning of bulbs at harvest time stops the spread of soil-borne disease but once the cloves are infected, they will carry the disease in planting. References are attached.

Further question on hot water treatment

Thank you for sending these references on the Nematode Strategy and Fungal diseases. One of the strategies that your article mentions is 'hot water treatment of cloves before planting'. Did you cover this technique in the Garlic News?
Bernard.

Editor: The hot water treatment is covered in Issue #29 as well. I have never tried it myself because Dr. Crowe admits that it is only partially effective as a seed treatment. Bulbils provide a much better approach to nematode-free seed garlic.

Planting immature bulbils?

Richard Hennick, Scarborough, ON, wrote: I have been growing garlic for several years in my backyard in Scarborough. This year, I harvested 41 heads, mostly started from selected cloves from last year's harvest, along with some from store-bought Ontario organic hardneck. This year I decided to conduct an experiment, following the intriguing suggestion in Ron Engeland's book about extending the storage life of bulbs by leaving the scapes in place as long as possible. I left seven plants to fully develop their scapes and umbels. By coincidence, the seven plants all turned out to be Purple Stripe or Marble Purple Stripe, judging by the 270-degree scape loop and the number of cloves. I am storing those heads under identical conditions to a "control" group, which had their scapes removed normally. Incidentally there was no noticeable difference in bulb size between the two groups. I cured the mature umbels on their stems along with the bulbs. I want to grow them following the article that you wrote for Canadian Organic Grower in 2010. The bulbils range in size from short-grain rice to wheat grains. About one-third of the bulbils had vivid purple stripes or patches after harvest. The remainder are plain white and smaller. *Would I be correct to assume that those white bulbils are immature, and therefore probably not worth growing on? In other words, should I only bother planting the bulbils that have colour showing?*

Editor: Well done on bulbil growing! Bulbils will give you an improved garlic, nematode free and much reduced in disease. Yes, you have deduced correctly. The larger colourful bulbils will give you greater success. Bulbils are squeezed in the umbel and some develop better than others. They are the ones to plant. While the smaller pale ones may sprout and grow, they will produce weaker plants and of consequence, smaller rounds.

Cultivars of the Porcelain Group which generally have 100 to 200 or even more tiny bulbils in each capsule. When grown, only about a quarter or a third will develop. You are wise to discard the smallest ones and plant only the largest.

More calls & letters

Leek Moth in storage garlic?

Bob Boutillier, Acton, ON, wrote: I had a surprise the other day when I was getting ready to plant. At harvest time, I inspected/sorted all my stock and held back what I needed for fall planting. Then, in early September, I broke my planting stock into cloves and was very careful with my inspection. Those I hung in mesh bags and left hanging in my garage. The other day when I started planting I came across several with moth damage. Several being about 50 out of 2,000. I didn't find any actual critters, just marks that they had been there. I immediately discarded them.



I started thinking about prevention though. I went back through my editions of Garlic News and came across issue 47 and the topic of pheromone traps in April to know when the moth

arrives. I didn't see any info about where to purchase the traps though. Can you direct me?

Also, I grow everything 4 raised beds about 20' x 8'. My thought is that once the arrival is detected, I could tent each garden with a fine mesh to block the moth access. I haven't had much luck finding mesh in that size. Any thoughts on where I might find something a supplier like that?

Editor: Three points in reply:



1) the damage on that picture looks more like mild fusarium damage and not leek moth. While leek moth larvae hatching in storage garlic is not uncommon, the damage usually shows up as one or more pinholes through the wrappers and below them, when you crack the bulb, chewing damage of the clove(s) and the tell-tale leek moth droppings.

This is what the bulb looks like (see the little pinholes?)

2) Sources for pheromone traps and lures:

Cooper Mill in Madoc:

Contact: John Hastings, ph. 613-473-4847

Website: www.coopermill.com/

Write: Cooper Mill Ltd. RR 3, Madoc, ON, K0K 2K0, or,

Solida, in Quebec:

Contact: Marc Charbonneau, ph. 418 826-0900

Email: info@solida.ca. Website: www.solida.ca

3) There are a couple of ideas for covering garlic. The 1st, floating row cover, sometimes called Reemay. Sold by most seed companies. Check seed catalogues. It's very light. My trials with it found it was not successful as it rips and shreds in the wind.

I also did trials with a heavier material called ProtekNet. More successful, it's a durable, reusable material but quite expensive. Look back in Issue 24 for the trials report on both. To do the trial, a roll of ProtekNet from a firm called Dubois Agrinovation, cost over \$1000. I still have some left and could sell you enough to try a bed. A support frame is needed. Dubois also sells



ProtekNet in 50' tunnels for about \$300.

ProtekNet on left, wind-damaged floating row cover on right.

Bob, again

At least I now know that I wasn't going blind during my sorting. I have very little leek moth infection. My challenge now will be how best to work with the soil. As I mentioned, the 4 beds I use are all raised. I don't have the room to add more beds and these 4 give me just enough product for my small client base. Combined, that makes it difficult to do the crop rotation that I should be doing. It all started as a hobby and has grown about as large as I want it to be. I think my plan will be to do a soil rotation instead. Each year, replace all the soil in one garden. At least that way, each bed will still have a quasi 4-year cycle. Thank you again. Boy, that netting sure is pricey!

Editor: Hello again, Bob. Yes, row cover is pricey, making it a high input cost for material cost and added labour required.

You might want to rethink the number of beds vs desired crop size. Soil replacement may not be the answer. In organic practice, it's not only garlic rotation that's needed but the other rotational crops that should cycle through the soil as well as well as the need for growing green manures (cover crops) for microbe activity.

If you don't have more space, perhaps cutting back on crop size may provide a better solution. Growing less but better-quality garlic and charging a bit more can yield the same dollar returns. However, that approach may not apply to Music. The price on that cultivar is steadily dropping again while other cultivars keep attracting top prices in a growing niche market. (Music in local food stores has dropped to a low of \$5.99 /lb. retail, not very attractive for the grower! Music alongside Chinese "rooster" garlic in the local Independent hardly moves while customers find the Chinese garlic cleaner, cheaper and more attractive and buy it. This trend is on the increase as more growers sacrifice quality in order to grow greater volumes of low grade garlic).

Bernie Karschau, Elginburg, ON, reported: A quick update. My garlic was generally good with somewhat smaller bulbs than last year. The wet weather caused the weeds to really take off. Harvest was delayed to the beginning of August. I had a bit more winterkill than normal but have seen no evidence of nematode damage or leek moth damage. The demand for local garlic seems to remain robust as I have sold out earlier than normal.

More calls and letters

A Rocambole called Music?

Anna Schaab, Yorkton, SK, asked: I had a customer wondering if our Music Porcelain garlic could be a Rocambole since the bulbils on some were quite large. To my knowledge, I didn't think there was a Rocambole variety of Music. Is there? And can there be a variety of bulbil sizes with the Music garlic?

Editor: Hi Anna. It doesn't sound feasible. I'm not aware of a Rocambole sold under the Music name. I've tested about 10 different versions of "Music" but all were from the Porcelain Group. Music invariably has 100, 200 or more tiny bulbils in the bulbil capsule. Occasionally, if the scape is left on and the plant goes to full maturity (all leaves dead), the dominant bulbils will squeeze out the weaker ones and you get fewer (50-70) but larger bulbils, almost as large as rice kernels. It's more likely that another clove was accidentally planted with the Music.

Continental, also called Musical

Dorothy Oogarah, Centreville, ON, asked: A friend of mine has been extolling the virtues of her Continental bulbs so perhaps I should try growing some. Do you have any Continental (Musical) Porcelain bulbs for sale? Just let me know if you have any. I would like some if available, and I will mail you a cheque.

Editor: Sorry, our Porcelains, including Musical, had disastrous results from winter kill this year so I haven't any Musical for sale. If your friend can spare you a bulb or two, ask if she'll part with some. It's an excellent cultivar. Here's my short description: "The tallest of the Porcelains. Produces huge bulbs. Consistent performer for over 20 years. Originally called just "Continental". Sourced from Charles Temple."

Green Garlic



André Potvin, Kedgwick, NB, asked: What is the problem with this green on the garlic? Do you think it can be a result of not planting deep enough?

Editor: Hello André. It's simply an abiotic condition, not a disease. The tip greening is caused by chlorophyll, the same thing that causes the leaves of trees to turn green. It's usually the result of either too much fertilizer or too

much exposure to sun.

Chlorophyll is harmless so the garlic is OK to eat or plant. I've seen this occur quite often with cultivars of the Porcelain Group. Yes, it's quite possible, especially if the top of the bulb is exposed or barely covered with soil. While onions can be exposed (they also develop green on the tops of the bulb), garlic should have 2-3 inches of soil over the seed clove when planting.

Joining Ail Quebec

Guillaume Frappier-Richard, Frelighsburg QC, wrote: Hi Paul, it is Guillaume. I came with my friend Maxime and Sandrine to the gathering (Field Day) at your place a few months ago and I've been wanting to keep in touch to thank you and your family for your warm welcoming, your open sharing and the beautiful inspiration. I'm putting the intention to become more knowledgeable and sharing around garlic. I'm going to join Ail Quebec in a few weeks. I'm also going to start doing some bulbils this year, as a test and to do some spring planting. A big part of that comes from you so thank you again.

Editor: Hi Guillaume. I am pleased to see that you are going to experiment with garlic. You will appreciate membership in Ail Quebec. The president, Serge Pageau, came with a team of growers to our Field Day in 2016 so we have a good communication. Look up my article on Growing Garlic from Bulbils on the Internet. Good luck!

Should I expand?

Tyler Morgan, Lakefield, ON: I was just wondering if you suggest growers where I could buy more seed. I was considering Eureka Garlic from PEI. I want to grow even more garlic than what I was planning. I have 340 cloves, 210 from you and 130 from this year's crop. I was thinking of growing double of that, if not more to sell and give away to others. I am going to make a Dibbler for planting.

Editor: Yes, I caution new growers not to expand too fast. There is a learning curve that is quite often skipped in the enthusiasm to grow more. Planting is the easiest part. Its dead simple by comparison with harvest. Care of the crop and proper harvesting is where to major work comes in. That said, if you are determined to plant more, yes, I would recommend Al Picketts from Eureka Garlic. He is honest and fair and to the best of my knowledge, has not had problems with either the Stem & Bulb Nematode nor diseases I have never had any complaints about his garlic. Don't go over 1000 at the very most.

Lab tests confirm

Hanna Faustino wrote: My husband and I started with purchased garlic seed from Daniel (The Cutting Veg) in 2015 so this will be our third-year planting garlic. We would like some advice on managing stem and bulb nematodes and/ or basal plate rot. Out of the 800 bulbs we harvested this year, 30-40 had been infected with what looked like destroyed root plates. Would a hot water treatment work in this case?

Editor: The symptoms for Stem & Bulb Nematode damage and fungal diseases are often similar. Looking at them doesn't tell you much. Before you start trying any treatments, you need to get samples of both diseased bulbs and soil a pathology lab for examination. Once its diagnosed it and you know, then and only then should you proceed with treatment.

Hanna, again: We received our lab results and it is negative with the Bulb and Stem Nematode.