



# THE GARLIC NEWS

Connecting the Canadian Garlic Network!

Issue 46 Winter 2015-2016

## Planning Your Garlic Market Garden

In Issue 43, we covered an Acre of Organic Garlic. Since quality organic garlic is not a stand-alone crop, it is best and most profitably grown in rotation with other market garden vegetables. Continuing from the one acre idea, follow these planning steps to get into the business of growing garlic for profit in a market garden:

- Think quality, not volume. Bigger is not better in garlic or other vegetables, for that matter. It's the excellent condition of the garlic bulbs; their lack of damage and disease and the care in preparing them for market or storage that define quality.
- Start your planning and site preparation a year ahead. Soil building and weed control are vital to success.
- Make your Business Plan and write it down.
- Decide on how big you want the final operation. Set a 5-year target; for example, you may want to have an acre of garlic at the end of five years.
- Make your site plan, identifying the land you will need at the end of five years and sketch in the plots for the intervening years. Remember that an acre of garlic will require 4 acres of land for a 4 year rotation, 5 acres for a 5 year rotation and so on.
- Plan your selection of vegetables and cover crops to grow in the rotational plots and include them in your Business Plan. Select crops that best extend sales and mature to spread harvest workload.
- Identify your resources; labour availability at planting and harvest, land plots, water source, equipment on hand or essential to buy, sources of organic manure and mulch, harvest shelters, curing sheds, storage facilities and the little things like hand tools.
- Estimate your likely sales of both garlic and the other crops for each year of your plan.
- Don't forget the workload of the other crops to grow in the rotational plots. They will require work, too.
- Set realistic 5-year expansion targets for planting. As an example, your business plan may call for 2000 garlic plants the 1st year, 4000 the 2nd year, 8000 in year 3, 16,000 in year 4, and 20,000 in the 5<sup>th</sup> year.
- Start small. It is better to start with a few hundred grown well, rather than planting a large field and being overwhelmed by the immensity of the work involved when it's time to harvest the crop. Expansion will come quickly enough.

- Start off with diversity, not monoculture, both in the garlic and in the rotational crops that you will grow.
  - Select garlic cultivars from several horticultural groups. Buy seed stock from a reputable local grower, not from the supermarket! Use quality seed for a quality crop.
  - Include your own learning process in the business plan. It takes considerable knowledge and experience not only to learn how to grow garlic well but how to develop your business and market while learning.
  - Find a mentor experienced in growing garlic. It will save you a lot of grief.
  - Develop your techniques as you learn -- growing, care, scaping, harvesting, curing, and marketing.
  - Remember quality in all aspects of the operation. Make top quality your trademark, your reputation.
  - Become your own marketer and sell direct to consumers, not to middlemen, for maximum returns.
  - Consider all the marketing approaches; farm gate sales, farmers' markets, coops, CSAs, mail order sales, and even a limited amount of wholesale garlic to restaurants and specialty food stores.
  - Investigate and plan on Value Added garlic as well, such products as garlic braids, garlic powder, prepared garlic foods and condiments, etc. These can multiply your sales and profitability.
  - Develop your markets as you expand. Put repeat customers ahead of new buyers.
  - Your own seed is the best seed. Include growing your own seed as part of your crop. Save part of your crop each year for replanting and develop techniques for disease control by regular bulbil planting.
  - Keep good records so you know what and how you're doing.
  - Don't let greed blind your common sense. Garlic can be a profitable crop but it's not a get-rich-quick scheme. It's the total market garden sales, not only the garlic that will bring financial success.
  - Be conservative in all forecasts to avoid disappointment.
  - Set your own prices to make a profit and don't get into a price war with your neighbour. There are no winners, only losers, when you start to cut prices.
- Good luck in growing great garlic organically and profitably. *Editor.*

**BUY LOCAL, BUY ORGANIC, BUY CANADIAN**

**IT MAKES HEALTHY BUSINESS SENSE**



## The Garlic News

### Connecting

#### The Canadian Garlic Network

Issue 46 winter 2015-2016

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Payment by cheque, cash or PayPal.

Advertising: see rates in Directory pages.

### 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/](http://www.garlicnews.ca/) or,

[www.rasacreekfarm.com](http://www.rasacreekfarm.com)

### The E-Garlic News

The E-Garlic News is available by Email.

Download size is approx. 5 MB. Inquire.

### Editorial Policy

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**Deadline for spring 2016 Issue is Mar 1**

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*Winter is the best time on the farm to catch up on those jobs that just don't seem to get done in the busy planting, growing and harvest season. As well as doing maintenance and repairs on farm equipment, why not take the time to build some of those gadgets or other items needed to plant, weed, harvest or cure your garlic? You'll be glad you did when next summer rolls around.*

**Our NEW Email Address:**  
[garlicnews@kingston.net](mailto:garlicnews@kingston.net)

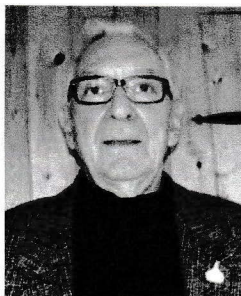


## Notes from our garlic patch

### Garlic News

A big “thank you” to the following members 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!**



**Wayne Davey    Bernie Karschau    Patrick Lamb**  
**Mark Liznick    John Mills    Stuart Wood**

### Using the Garlic News in Your Field or Garden

The Garlic News is not a glossy gardening magazine. It is a working textbook of practical information for growers and gardeners. Articles and letters are selected to be of practical use in your field, garden or kitchen.

First, get a 3-ring binder to keep your issues conveniently ready to use. You'll notice that the inside margins are a little wider. This is so you could use a 3-hole punch without cutting into the text. Even better, buy some top-loading plastic sheet protectors, one for each page. These are available in stationery shops and cost only pennies each. This way, you can keep the pages protected from dirt and water when using it in your garlic patch. Use tabs on pages or articles that you refer to the most often.

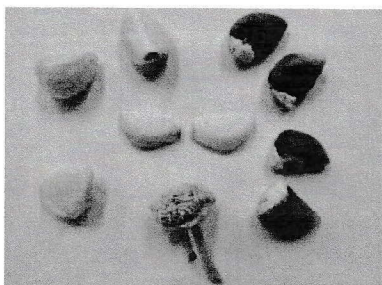
Keep all issues in the binder along with your garlic growing records and any other articles or information. You'll have your information all in one place, convenient for use, indoors or out.

*Note: If you have all issues back to Issue #1, you'll likely need two of the 2-½ " size binders to hold them all.*

### 2015 Garlic Crop everywhere: Fungal Diseases Thrive

Many reports from growers across Canada indicate that 2015 was a bad year for fungal diseases in garlic, with strains of fusarium and botrytis being most prevalent. Why?

The fungal disease pathogens exist in most soils worldwide and normally cause only minimal crop damage. Fungal diseases thrive in the right conditions of moisture and temperature and more so when plants are weak. *Fusarium decay in bulb of Siberia*



When conditions are right, the disease thrives. Some plants die, others produce smaller bulbs and sometimes, only a few cloves in the bulb decay.

### What can be done about fungal diseases?

Good organic practice is the key; crop rotation allows disease pathogens to die off when host plants are not there; a healthy soil with lots of compost added is full of beneficial organisms that combat harmful pathogens and it provides the best defence against plant diseases; and, plants grown in rich soil are healthier and much more able to resist disease.

Building organic soil is a better solution than wasting money on one-shot pesticide ‘solutions’ of dubious value.

There is one other factor to consider for those growers with a choice of soil and site selection on their land. If possible, select a southern facing gradual slope having well-drained sandy loam. Growers with such ideal conditions experience fewer problems.

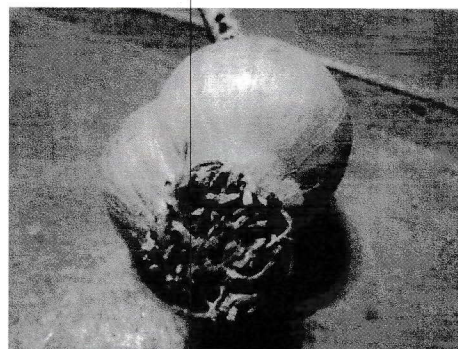
And, for obvious reasons, don't use diseased bulbs for planting. If the bulb wrapper feels soft or loose, there's a good chance that some of the cloves are diseased. A good practice is to rejuvenate planting stock regularly by growing out bulbils in clean soil.

What about “certified disease-free” seed garlic for planting, a recommendation often repeated by some researchers and government folks? Well, in 25 years, I have been unable to locate a single garlic source selling such a mystical product. If any of our readers know of such a supplier, I would be pleased to hear about it and share it with others. \*

*\* Editor's note: There is an exception. For several years, the Ontario government labs used the tissue culture method of growing disease-free Music garlic for members of the Garlic Growers Association of Ontario (GGAO). This program is not available to the larger farm community.*

### Rounds and 2-clove bulbs

Another phenomenon in the 2015 crop observed by growers was a greater than usual number of rounds and bulbs with fewer cloves, especially in the Porcelains.



*2-clove bulb of a Porcelain cultivar*

This is generally attributed to a shorter growing season or other stresses that tend to force the garlic into rushing to maturity before being fully developed.

*Thought for today: You have two hands, one to help yourself and one to help your neighbour. Garlic Guru.*



## A clove here and there

### Hottest summer and warmest August on record

According to the weather network, August in western Canada was the hottest in 136 years while the east had a cool summer and normal August.

### A "super El Nino"

El Niño 2015 is "too big to fail". It is in full swing and strengthening, and the pattern is expected to peak sometime in late fall or early winter and then slowly weaken through spring of 2016.

What will this mean for winter across North America? This coming winter will not be nearly as cold as last winter but will bring an increased risk of ice storms, especially from eastern Ontario to southern Quebec. It could surpass the intensity of the 1997 El Niño. Remember "Ice Storm 98". It was caused by the last "super El Nino".

### Organic Notes

Changes to The Canadian Organic Standards

The revised Canadian Organic Standard is expected to be released Wednesday, November 25.

### Good and Bad Quality Garlic

Walking through a farmers' market, I noticed a vast difference in garlic quality at various stalls. Vendors of badly harvested and damaged garlic were the most vocal in proclaiming the superiority of their garlic; top quality garlic spoke for itself.



## Wagar Oogarah Farm 2015 Crop Report

Dorothy Oogarah reported that Argentine #4 & Luciano's Sicilian had a large percentage of rounds this year. Again Porcelains had a high percentage of 2 clove bulbs, 41%. This was less than last year's showing of 76% for 2-clove bulbs. Maybe next year will be the "charm" and the number of 2's hopefully diminishes!

A great majority of my bulbs were starting to rot. Too much rainfall in June? Only about half the crop is saleable.

Again TT5V came out at the top of my list. Here is the crop summary by size:

Cultivar	% Rounds	Average Size	
<u>Turban</u>			
Argentine #4	34%	Large Tube	
Luciano's Sicilian	18 %	Extra Jumbo	
(Grown from rounds, average size was Colossal)			
TT5V	0.4 %	Extra Jumbo	
<u>Creole</u>			
Burgundy	18 %	Extra Jumbo	
Cuban Purple	0	Small Tube	
Rose de Lautrec	0	Jumbo	
<u>Artichoke</u>			
Endurance	1.9 %	Large Tube	
Wettergren	2.1 %	Super Jumbo	
Sicilian Gold	2.1 %	Jumbo	
<u>Rocambole</u>			
Yugoslavian	0	Extra Jumbo	
Reliable	0.7 %	Jumbo	
<u>Silverskin</u>			
F40 Sovereign	0	Giant	
<u>Marbled PS</u>			
Siberian	0.7 %	Jumbo	
<u>Porcelain</u>			
	% 2-clove	% 3-clove	
Millar	14 %	52 %	Extra Jumbo
Chiloe	55 %	28 %	Extra Jumbo
Majestic	46 %	40 %	Jumbo



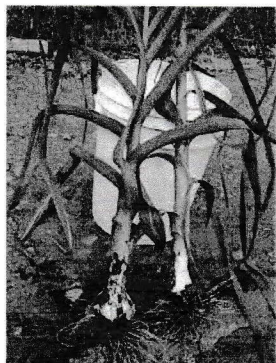
2 and 3 clove Porcelains in 2015 harvest



## We get calls and letters

### Spring planting garlic not maturing

**Roger Beck of Valemount, BC**, asked: What do I do about the fact that my garlic has not yet formed bulbs (on September 17)? Can I leave it in the ground for next summer? If so, do I need to cut the tops off? Should I hope for more growth before our usual hard frost at the end of September?



This garlic was planted on May 3-5. Scapes have only recently begun to form on the Fish Lake number 3 and the F30. I removed the ones that were of significant size yesterday, but didn't wait for a full curl. No scapes have yet appeared on the Russian.

*Editor: It seems that your Zone 3 climate provides too short a growing season for spring planting of garlic. Let it continue growing, as the early frosts in late September or October shouldn't hurt it and it has a good chance of coming to maturity yet this year. Leaving it in the ground over the winter isn't likely to produce good results. Any bulbs that have formed will merely go dormant over the winter and the next spring, each clove will start growing. You wind up with a cluster of tiny bulbs from each bulb left in the ground, not a very good crop. Fall planting is a better option in your region. For the F3, if you harvest and dry it even in late October, you can break it into cloves and plant them, any time before the ground freezes hard.*

### When to plant?

**Terry Cunningham of White Lake, ON**, wrote on September 30: Soon time to plant but last year I planted some in the spring as well and it turned out better than what I planted in the fall. I didn't weed the fall planted garlic very well so I guess it's not a true comparison. **Terry**

**Sabile Fityani-Trimmm** asked on October 1: I live in the Ottawa area. I noticed frost this morning. Is it time yet to plant garlic?

*Editor: We usually plant around mid October. Frost doesn't affect the garlic (until the ground freezes hard and then you can't plant it). I have successfully planted as late as 14 December with excellent results and many growers leave the planting till November. Later is usually better than earlier.*

### Thought for the day:

*A fine is a tax for doing wrong. A tax is a fine for doing well.*

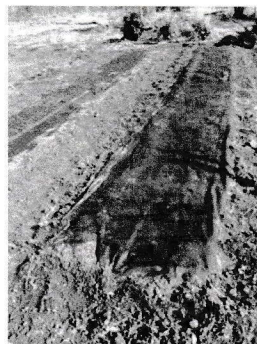
### Planting soft cloves

**Pam Graham of Guelph** asked: I bought garlic to plant a few weeks ago. I am just taking the bulbs apart to plant today. Two of the varieties have gone soft. Should we still plant these soft cloves?

*Editor: Soft garlic is usually OK. It happens from storage temperatures. Sometimes, you might find a disease like fusarium. Smell the bulb. If it smells rotten, discard it. It doesn't hurt to peel the loose wrapper to inspect it. Just be careful not to cut or bruise the flesh of the clove. If it's nice and clean, you can plant it. If the bottom is decaying, that's fusarium and its decayed the root buds at the base of the clove. They won't produce good plants.*

### Planting under cloth

**Carolyn Smith of Roblin, ON** sent this idea: Growing less and less every year. Still trying to do a better job and prefer quality to quantity. The pictures show three beds that I have raised and covered with black cloth purchased at Costco. It does weep moisture through when saturated but stops weeds. Should help hold moisture in and no competition weeds for garlic. Cut X slots every six inches to plant garlic then covered with



more soil over X spot. Rain should run off cloth initially and weep down through holes in cloth. Have filled paths in-between garlic with leaves and stuff raked up from forest that adds humus to the soil! Still might throw some straw over top for winter but not sure that it is necessary. Will sacrifice cloth and dig like hell in July. Planted Silverskin in the middle of beds because they are dug up last.

*Editor: I'll be interested in how the cloth affects the garlic. You may find that it heats, rather than cools the soil as dark colours absorb the IR rays from the sun more than light colours; at least, that was my experience when doing trials with plastic mulches for vegetables in the early '90s.*

**Carolyn Smith** wrote again: Garlic is up, November 22. The Sicilian is looking good and some of my Australian stuff is coming up too. Too bad winter has to take over. I have now mulched with lots of straw. Never tried growing garlic under cloth before.

**Kevin Craigen of Napanee** asked: Hi Paul, just wondering what kind of straw you use for insulation of the garlic, wheat or oats. Which is better?

*Editor: Hi Kevin. I try to get wheat straw, if possible but it's very hard to get in this area. It is generally the best. Usually, I have to settle for barley or oats as these are more commonly grown here. They generally have more seed left on them than wheat and cause a bit of a weed problem.*

(More letters continued on page 18, 19 and 20)



## Ail Quebec News

### Nematode and virus free - and the learning goes on

By: Jean Lafontaine

In last issue I wrote about a few thousand pounds of *certified and regenerated* garlic seeds some 20 Quebec garlic producers had ordered from France. Did it mean that we were to become forever dependent of the French for our planting stock? NO! I did I write then, it simply meant that we wanted to learn. Indeed we learn.

At first sight the French garlic that was delivered to us at the end of September looked great.

Only with a closer look did our learning start. Bruises, mostly mechanically inflicted, were on many of the bulbs.



Photo credit Anouk Préfontaine

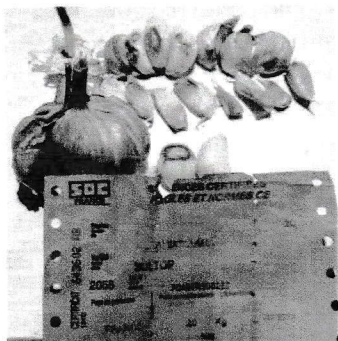


Photo credits Sylvain Gendreau

Worse, further investigation revealed numerous brown spots on most of the cloves white flesh, even on the small middle ones that could not have been hurt in the cleaning or grading process. Gee, thought those of us who had lost part of last summer's harvest to fungal diseases, that's pretty scary!!! Of course samples were rushed to the lab and here's what the reports said: no nematode and no virus among the 8 main types they had been tested were found in the French garlic. Only *Fusarium sp.* was found.

When questioned, our French interlocutor said that's nothing to be afraid of, since 99% of all cultivated soils are already infected with *Fusarium*, so according to him, it's only a case of rotation as usual. He went on to remind us that he grew up on a garlic farm and later on turned it into its actual 300 tons annual production, with customers all over the world. I suppose he meant to reassure us.

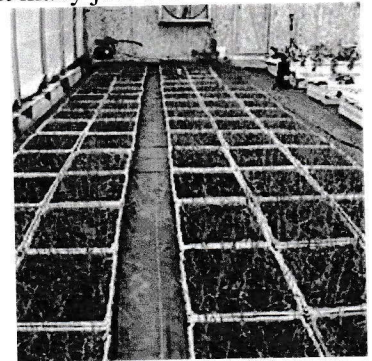
As for Marie-Pascale Beaudoin, the MAPAQ counselor who, by making the first contact with the French garlic seed producers had initiated the whole thing, she confessed having been surprised by the «quality» of the French garlic, adding that the previous year French samples planted here had produced nice and clean bulbs, even though the lab had found some *Fusarium* in them too at the time, suggesting that we should simply wait and see.

Flabbergasted?

The learning goes on.

### Back To Option # 2, growing from bulbils

Every year more producers become interested with growing bulbils as an alternative to buying or keeping part of one's harvest for planting stock, but many just don't know how to do it when it comes to grow them in large numbers. Yet our experience with the French garlic motivated some of us to give it a try for an experiment. Whatever the result, there will be some learning.



Bulbils in the greenhouse

Photo: Denis Dalpé June 2, 2015

As far as I know, Denis Dalpé was the first one here to try growing a few thousands of them in containers inside a greenhouse. They were planted in October 2014 and in the spring of 2015 when it became clear that some had not survived to the winter – planning to keep them there for two consecutive growing seasons, until they produce a bulb.

### Bulbils directly in the field

In different regions upon the last weeks, some commercial producers have planted large parcels with bulbils.



Planted in straight rows, using Planet Junior seeders and planning to wait until July 2017 before harvesting them. Depending on what garlic variety they grow, different strategies are chosen.

Weed control between rows

will be done with propane burners, or mechanically. Of course there will also be weeds in the rows: that's part of next summer's challenge. Maybe growing bulbils on a large scale is a well-established practice in the rest of Canada, but for us in Quebec it has yet to be learned.

### Three New Directors Elected At Annual Meeting

The third Ail Quebec annual meeting was held December 3 during «Les Journées horticoles de St-Rémi», a week long agricultural event featuring hundreds of commercial stands as well as many well attended conferences. Ail Quebec members had to make a choice for there were twice as many candidates.



Photo credit Michel E. Tremblay

Elected were Anick Gauthier, Serge Pageau and Sebastien Grandmont joining white haired Denis Dalpé and Denys Van Winden. Congratulations! They will inject a new energy to help us become better and more successful garlic producers.





## Tales of the Stinking Rose from the Wild Rose Country

### Adventures in Fertilizing

By: Liz Tobola

First off, I really like the word *fertilizer*. It has my name in it...Ha!

In the spring I start off poking a hole in the ground then add a little manure before placing a clove. For the last few years I've also been applying an organic foliar spray every other week during plant growth.

I've learned that manure is an excellent first off burst of nutrients for those freshly naked cloves. The foliar spray is like a cocktail of your favourite smoothie exploding again with needed nourishment.

Rotating plots have started to get green manure crops and offer a twofold bonus. First and foremost in my mind is the ground cover suppressing weed growth. Secondly, the soil gets rejuvenated with beneficial nutrients including NPK and microorganisms.

With the soil and weather here in Alberta, conditions plus the hardness of OMA's Gourmet garlic I've learned some tough lessons.

For instance, two years ago I should have discontinued foliar spray as soon as scapes appeared. The bulb had started *growing* and the plant no longer required the extra nitrogen (N). The cooler weather created a condition excellent for botrytis to grow. And spread. The extra N lent a helping hand.

Last year, I moved other cultivars far away from my OMA's Gourmet garlic. I've decided to ban them from close proximity and avoid any calamities they could present. I am sure they have caused me unbeknownst grief while trying to create a sustainable cultivar here at the Aldersyde.

This year marks the 12<sup>th</sup> season of OMA's Gourmet garlic growing here. Chef's rave about its flavour. Even processed to powder, granules, chips or chunks Chefs, rave its flavour. I'm proud of the quality I can produce for my customers. Big or small, they are behind my secret smile as I sweat, swear, sow and all those other chores my babies require.

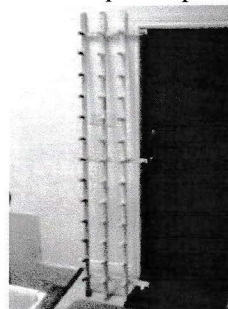
The Andrew Garlic Festival was held again this year on Thanksgiving weekend. They've changed things up this year a bit adding more types of vendors. There are also a lot more folks growing garlic and attending as well. With the long drive (a 9-hour round trip), the increase in garlic vendors and it being Thanksgiving weekend most years I will be bowing out from most of the future festivals. You guessed it, overall this year it really wasn't worth it for me.

Liz can be reached directly: phone: (403) 601-2642, email: OMAGarlic@platinum.ca, or follow on Twitter: @OMAGarlic

## Another Unique Garlic Dibble

By: Robert Boutillier

I think I invented it, but I'm new (so I don't know). I hope it can help someone else. It takes a smaller toll on the back. I can do up the specs better if anyone is interested.

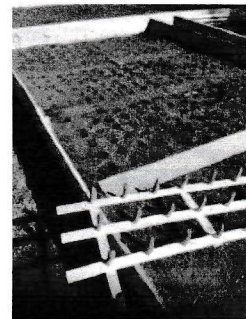


The rig is built from 1x2's and 1" doweling. The dowel point is done on a chop saw, and then the dowel is cut to a 4" length. The spacing is 4" in every direction. I have three beds of 8' x 20'. We do two 'stomps' with the rig, and then leave a space for a pathway. I use a 7" wide board for that.

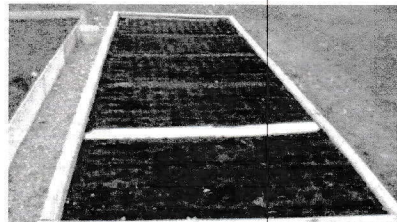
When things are growing, that gives enough room to work in because you are only accessing three rows on each side. Basically, what you do is lay it down, on tilled/loose soil, walk on it, and pull it up, and then plant. Turn it around; line up those little out-rigger guides, walk and plant.



Then we lay down a 7" board that later acts as an aisle, and keep going. When you're done, just do a quick pass with the backside of a rake. The pictures explain it much better.



I planted just one of the beds today. Using this spacing, the rig let me put in 480.



## A list of dibble ideas published in past issues

Editor: Check these past issues for other useful dibble ideas:

- Issue # 1: Sep Bonner's Sofa Leg Garlic Dibble
- Issue #6 & 17: Rotary Dibble from Boundary Garlic
- Issue #15: Dave Cornell's Seed Planting Boards
- Issue #18: Fred Vosper's Salmon Lure Garlic Dibble
- Issue #23: Jeff Greenberg's handy aluminum dibble
- Issue #26: Al Pickett's Monster Garlic Dibble
- Issue #32: Al Pickett's rolling dibber, tiller attached
- Issue #35: Paul Fleming's front-mounted rolling dibble



## When Mother Nature gets playful, farmers get smart

By Julie Fleischauer

A farm is 100 acres of humble pie. For everything you think you know, Mother Nature has three thousand new things up her sleeve, more patience than any farmer alive, and a



workforce of microbe-employees numbering in the trillions. On good days, I love working with Mother Nature, days when I can see this awesome potential for surprise as the best joke the world can play, and just start laughing.

I grow about 100 different garlic strains on my parent's farm, near Gads Hill, Ontario.

For the last two years, planting weather has encouraged us to become creative and organized with our garlic preparation. I used to hold to the Ron Engeland's advice that you shouldn't crack seed garlic apart into cloves until a few days before planting, until that caused a seriously acute workload in 2013. The weather was wet, wet, - finally dry enough to plant, but with rain in the forecast, and I hadn't even started. My planting notes were atrocious that year; many a gap in clove counts and pounds planted. At least I had a map! By the time it rained 1 inch, one hour after we finished, I was just so grateful that we got all 104 garlic strains in the ground.

From some of the most stressful misfortunes can come some of the best ideas though. After 2013, planting garlic changed from me holding a clipboard, running garlic back and forth directing what goes where, so that every two rows of garlic are ready at the same time, for harvesting with our two-row under-cutter (actually a black plastic mulch lifter with the middle cutting blade taken off). I ended up making a lot of decisions in the field, with the constant worry that I would miss writing some of it down. Garlic planting was difficult, rushed, fraught with uncertainty, and fall of 2013 brought all of that to a head.

Now we start cracking a week before we anticipate planting, and I draw up a plan of the whole plot, one that is more accurate because I have time while cracking to count cloves per pound on several strains, and get a good estimate of the space needed.

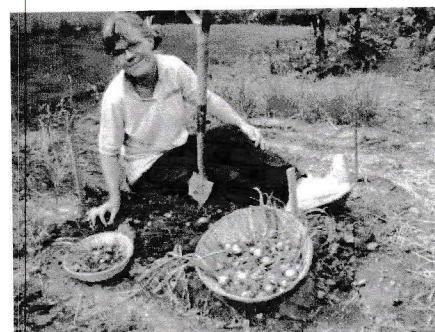
In fall, 2014, we had similar weather conditions, could barely get anyone to help, but with our improved systems, we marathon planted about 27,200 cloves in 0.72 of an acre, in about 2 ½ days, just two people putting cloves in the ground. The soil preparation that went on before planting included application of an organic, biological version of NPK, applied with a seed drill.

The fertilizer was supposed to supplement for the possible lack of available Nitrogen because the clover-alfalfa mix that was planted previously in that field did not break down well in the wet, pre-garlic planting soil conditions. In fact, we had trouble getting our cover crop of clover worked in because it was wet for a long time, and the clover grew taller and more fibrous by the time we disked. All of our cultivations for planting prep were done with on the edge, wet soil.

Working wet soil can lead to problems with soil structure, smearing, and anaerobic composting of soil organic matter; especially clay and clay-loam soils. Although we have no way of knowing for sure, it seems that the mould spores that later affected our 2015 garlic crop were probably birthed in that wet, fall soil. The spores may even have fed partly on the extra nitrogen from our applied fertilizer, a downside we didn't foresee as it was the first time we'd used it on the garlic in the fall, rather than spring.

I always cut my scapes late, for better quality bulbs with longer keeping quality. A benefit of taking the scapes off late is that the scapes hold more energy in the aboveground portions of the plant, keeping the leaves green longer. Our garlic always matures a week or so after other growers are harvesting. When I send out the catalogue in mid August, less than half of the garlic has been trimmed, sorted and weighed.

My inventory is based on estimates, which can be somewhat volatile, given that garlic has a weakness for fungal spores. This year, I called off the catalogue not having a lot of harvested garlic to begin with and not knowing how it might be affected, post-harvest



*Julie, after the harvest!*

and in storage. Since then the garlic has kept very well.

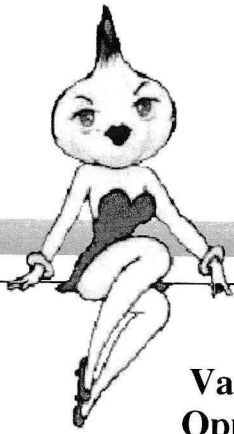
Whatever made it to the barn for drying turned out to be okay; the bulbs were mostly unaffected. Because we were aware of a fungus issue at harvest, we took some extra steps to ensure that the garlic dried quickly. My one-woman crew of engineers (my mother Dianne, who has boundless ingenuity) rigged up trestles and wagons that were equipped with netted bottoms, for airflow. On top of the netting we put various bottomless boxes with solid sides. We laid the freshly harvested garlic plants thickly into these, bulb-down, with leaves out in the sun. The mass of leaves and the solid sides on our boxes protected the bulbs from sunlight, but we were able to use the sun's power to dry and sanitize the garlic leaves and stalks, where the problem was.

I take the approach that plant problems are usually caused by circumstance and nutrition. The soil on our farm, Golden Acres, is naturally low in Manganese, a mould inhibitor. Copper and Sulphur are also important for fungal control, and minerals in the soil can be lost or leached away by excessive rainfall. Lack of sunshine, Phosphorus (ATP), and subsequently low plant sugar levels can also weaken immunity and predispose plants toward diseases, sending polite invitations to all the pests and pestilentials, to come in and feast.

So, when Mother Nature gets playful, farmers get smart. We just have to look at failure as a detour, not a dead end. I hope to learn something from this experience that will improve my garlic next year.

Right now, Mother Nature has the next move, so we'll see!





# Garlic Connections

Start your day the growing way

## Value Added Opportunities Part 3

The third step in exploring value added opportunities is:

**Assessing your idea's business potential.**



The information you gather in this step will assist you in determining whether or not you should continue pursuing your selected best idea or stop going in this direction and find a new idea.

This may seem a rather lengthy process, but the time and planning you put in now, for concrete results, far outweighs the potential loss of time, energy, money/resources, quality of product/service and most of all your customers trust in you and your word.

**Remember...value added must have a future!**

Consider the following four components and answer the two summary questions:

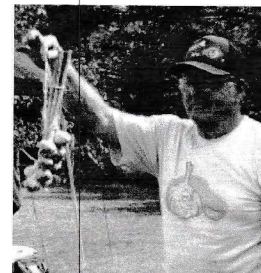
1. Promotional Plan is a mix of all types of communication between you and the customer-what combination of advertising, personal selling, sales promotion or public relations will you use?
2. Marketing-how will I market my idea?
3. Financials-how will I finance my idea?
4. Human Resources-what human resources will I need?

**In summary, after gathering your information ask yourself these two questions:**

1. Would you be better off improving your existing business rather than starting a new value added one?
2. How much money do you need – how much money can you afford to lose?

*A simple example of one garlic growers added value approach:*

*Promotional wearables. On site teaching/demo.  
Knowing personal price point and sticking to it.  
Knowing & cultivating customers for long term sales.*



Charlie Robb

He had little garlic to sell as he was sold out before the fest, but local growers he helped cultivate needed a market place for their garlic. He did his research and followed the advice of other successful, expanding growers and in 2008 established the first Garlic Fest in Haliburton County – now that is value added!

**WATCH FOR THE NEWLY EXPANDED VALUE ADDED 9<sup>TH</sup> ANNUAL GARLIC FEST presented by:**



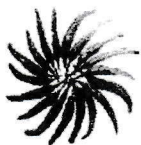
**To contact the Haliburton County Garlic Growers Association: Visit website:  
[www.haliburtongarlic.ca](http://www.haliburtongarlic.ca)**



## THE GARLIC DIRECTORY

Listings of garlic for sale, garlic wanted and anything that garlic growers might want.

**A'Bunadh Seeds (A-boo-nar)**  
Denise O'Reilly, founder



Box 127  
Cherhill, AB T0E 0J0  
780 785 2622  
gardenofeden2010.wordpress.com  
smileyo@xplornet.ca



## Snoetic Farm

Naturally grown seed garlic & bulbils  
Prairie-adapted varieties

Yoenne Ewald, San Clara, MB  
204-937-4827 garlicgirl@snoetic.ca

[www.snoetic.ca](http://www.snoetic.ca)



Jim Capellini  
Lumby BC 250-547-2077  
[www.rasacreekfarm.com](http://www.rasacreekfarm.com)  
certified organic  
Seed Garlic: Bulbs and Bulbils

### On Our Website in 2015

- ✓ Sample Garlic Farm business plans
- ✓ Easy payment: Paypal, check, Interac...
- ✓ 35 Variety from all 10 Horticultural Groups



### Thanks to some of our great members:

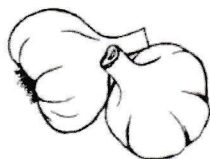
The Garlic News doesn't have its own website but you can find out about it and get membership forms on these member's websites:

[www.garlicfarm.ca](http://www.garlicfarm.ca)

[www.saltspringseeds.com](http://www.saltspringseeds.com)

[www.rasacreekfarm.com/resources/the-garlic-news](http://www.rasacreekfarm.com/resources/the-garlic-news)

<http://www.garlicnews.ca>



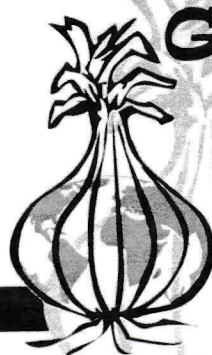
## Boundary Garlic

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phone: 250 449 2152

certified organic seed garlic bulbs  
cultivars of all ten true garlic varieties

[www.garlicfarm.ca](http://www.garlicfarm.ca)

[garlic@garlicfarm.ca](mailto:garlic@garlicfarm.ca)



## Global Garlic

International Garlic Varieties  
Grown Locally

Daniel Hoffmann : 647-388-7444

[www.thecuttingveg.com](http://www.thecuttingveg.com)



James & Janice Jones  
email ~ [bigassgarlic@hotmail.com](mailto:bigassgarlic@hotmail.com)

Dorset, Ontario  
705-766-2748

## Railway Creek Farms

Elly Finlayson  
Madoc, Ontario  
613-473-5174

Original source for Mennonite porcelain  
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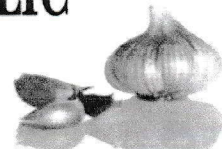
20 kinds of garlic to choose from for seed or table.

Our farm is as Natural as Nature intended!

## GAGETOWN GARLIC

7 Peters Road,  
Gagetown NB  
E5M 1A9

(506) 488 6183/ email: [venbureau@gmail.com](mailto:venbureau@gmail.com) / Facebook



*Think about it.*

*If local garlic is to compete on the Canadian market, it must compete on the basis of higher quality, as it just cannot compete with the cheap imports on price. Dirty or badly presented garlic just doesn't make it.*



## MORE GARLIC DIRECTORY

Directory Listings, Garlic or Garlic Products for sale, Want Ads, Boxed Ads, Grower Information

al@eurekagarlic.ca



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*Many Varieties - No Chemicals*

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www.thecuttingveg.com. Contact Daniel Hoffmann, daniel@thecuttingveg.com. 647-388-7444,

### Garlic News 2015 Advertising Rates

**Business Card:** \$50.00 per year of 4 Issues

**Box Ad:** \$50.00 per column inch or 5 lines, per year.

**Directory listing,** For Sale or Wanted: 5 lines \$30.00 per year, extra lines, \$10.00.

**¼ Page ad:** \$30.00 per issue, \$100.00 per year

**Full Page Ad or flyer insert:**

\$100.00 per Issue,

\$175.00 for 2 Issues

\$300.00 for 1 year of 4 Issues.

Contact the editor for group and other rates. garlicnews@kingston.net.

*Your ad includes referral service to customers looking for garlic at no additional cost to you.*

*A business card on display year round keeps your farm in the mind of the buyer, every time they see the page.*

*Back Issues of the Garlic News available, both loose copies and attractive bound, plastic covered, one-year sets. Make a great gift. Contact the editor.*

**Contact the Garlic News:**  
garlicnews@kingston.net.

**Organically Grown Elephant, Music & Ivan garlic.** Will ship fresh and seed garlic. Simon de Boer, Langside Farms, Teeswater, ON. Ph. 519-357-1919. Email: sbdeboer@hurontel.on.ca.

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www.newoxleygarlic.com  
jackie@newoxleygarlic.com

**GARLIC ROSE FARM**  
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Naturally grown garlic and bulbils.

*We are nematode-free.*

Over 21 strains available

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*All strains still available except for Artichokes.*

First paid orders are first filled.  
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3223

(Quebec) Canada (English or French)

### THE GARLIC PRESS

*Newsletter of the Garlic Seed Foundation*

Now available in electronic format.

Go to website: www.garlicseedfoundation or Email Bob Dunkel at gardunk@yahoo.com

### The E-Garlic News

The Garlic News is now available by email in electronic format. Advantages:

Read it on your computer; print off only those pages you want. Save on paper & reduce mail. Receive it faster. Pictures in full colour.

"E" version is about 5 MB on average.

**Garlic for Sale:** Featuring 'the original Big Ass Pickled Garlic' & assorted garlic products, will ship. Music garlic in season. See facing page. Ph. 705-766-2748. Email bigassgarlic@hotmail.com.



**Railside Gardens Garlic:** Music garlic and garlic products. Check our website or call. Laura & Tyler Duchek, 4 miles north & 1/2 mile east of Esterhazy, SK. Ph.306-745-3515. Email: l.t@sasktel.net

Website: www.railsidegarlic.com.

**Salt Spring Seeds** on Salt Spring Island carry a great line of heirloom & heritage seeds including garlic. Dan Jason, 250-537-5269, or email dan@saltspringseeds.com. Website: www.saltspringseeds.com

**The Garlic Garden.** Fresh garlic and garlic products. Darrel & Anna Schaab, Box 1727, Yorkton, SK, S3N 3L3.

Ph. 306-786-3377, Email thegarlicgarden@imagewireless.ca.

*Do you really believe that you can harvest a good crop from poor seed?*

### Why Grow garlic from bulbils?

- Diversify into more cultivars
- Rejuvenate planting stock
- Inexpensively multiply seed
- Grow nematode-free garlic seed
- Reduce incidence of diseases

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**Bulbils for Spring 2016 planting.** A limited quantity still available. Tested and proven in the Small-Plot Organic Garlic Variety Trials. Grow your own nematode-free garlic seed stock from bulbils or diversify your crop at low cost.

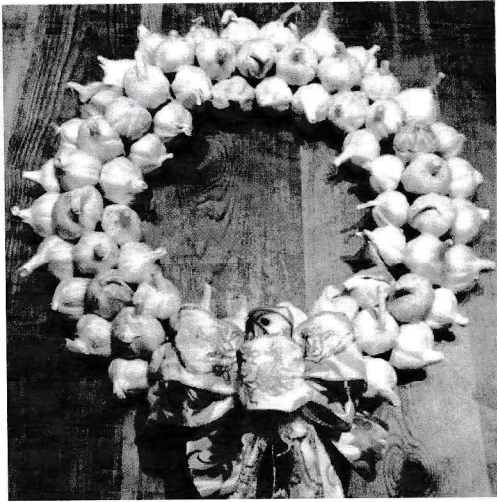
Ph. 613-273-5683.

Email: garlicnews@kingston.net

**BUY LOCAL, BUY ORGANIC, BUY CANADIAN IT MAKES HEALTHY BUSINESS SENSE**



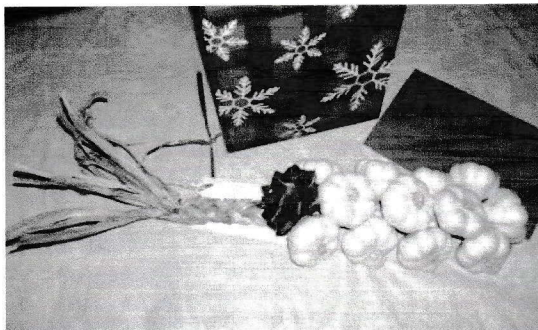
# Wishing you a very Merry Christmas and a Happy New Year 2016



*Mary Lou & Paul, at the Garlic News*

## Using your Christmas garlic braid

*From the Garlic Guru's kitchen*

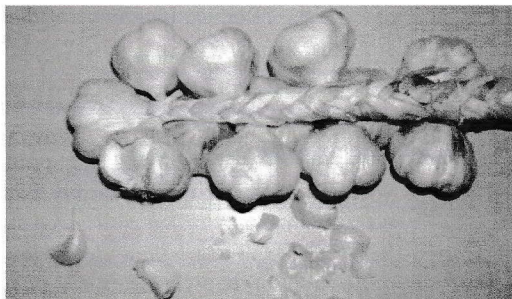


So you received this lovely garlic braid as a special Christmas gift. It's just too beautiful to eat so you decide to hang it up as a wall decoration.

No! No! No! Garlic is food. You eat it.

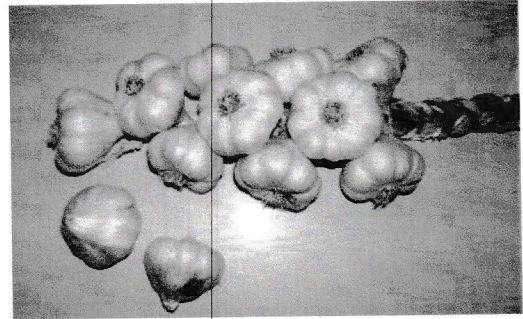
Here's how to have your braid and eat it, too!

1. Turn the braid over and work from the back.



If you need just a clove or two, just pluck them from the back of the bulb. Hang the braid up now and enjoy it (while using it at the same time for delicious flavour).

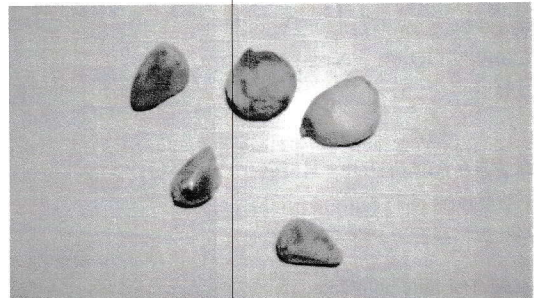
2. If you need more garlic, pick a couple of bulbs and clip them off. I like to work from the bottom of the braid but it's your choice. Just clip the stems short enough so that the braid still looks good from the front.



3. Keep removing bulbs, as you need them until you are down to the last bulb. You still have something to remind you of the tastiest Christmas present ever.

4. A braid of 12 should last you 12 weeks if you follow the recommended rule of a bulb per week for good health.

5. Here's what happens to that lovely garlic if you leave it hanging on the wall instead of using it.



You wind up with dried out cloves that are not fit for use and your gift of garlic goes to waste.

## Garlic Tea to head off that cold

This fall has been bad for a difficult strain of cold going around. Be prepared, with garlic, of course.



There are many recipes for that garlic-laced hot toddy for colds but here's one that I like; a couple of crushed garlic cloves, a teaspoon of honey, a dash of cinnamon, nutmeg and ginger, a bit of butter, pour on boiling water, breathe in the garlic

and sip while hot.

Take at the first sign of a cold to head it off. If the cold sets in, take several times a day to break up the congestion and ease the throat.

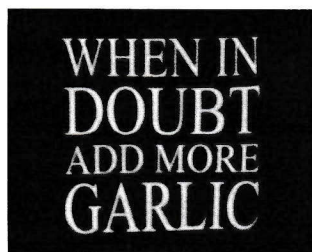


## More garlic recipes

*From the Garlic Guru's kitchen*

### Munchies and treats for the holiday season

All those treats you buy to have sitting around in little dishes may be very appetizing but are tough on the post-Christmas waistline. Why not make your own so you can control the calories and add the health promoting benefits of garlic at the same time. Here are some ideas for low-cal munchies.



### Baked garlicky potato chips

This one is a sure hit with your holiday munchers.

#### Ingredients:



#### Method:

Start by peeling garlic cloves, crushing them with a garlic press and place in glass dish while you slice the potatoes. Small, white potatoes are best. Slice them very thin into chips, about 1/16" thick. Next, add olive oil to the crushed garlic, adding salt (optional) and some dried oregano or rosemary to the mixture. Coat the potato slices in the garlic oil mixture and spread evenly on the stainless steel pizza pan.



Bake in preheated oven at 375 deg. F for 25 minutes or until chips are crispy. Remove and serve hot. Or, pat dry with paper towel to remove excess oil and serve cold as you would ordinary chips.

These can also be served as potatoes with a meal.

### Celery sticks with garlic scape spread

Wash some celery and cut into 3" long sticks. Stand them in drinking glasses with a bit of water to keep them fresh.

Keep these in the frig for instant snacks.

Next, take some of your frozen Basic Garlic Scape Spread (recipe on page 13, Issue 12), thaw and mix with some low cal cream cheese to make a garlicky spread.

When ready to serve, spread a bit of the cream cheese spread on the celery sticks and put out in place of mixed nuts. Delicious.

### Crunchy garlic cloves

Place some peeled garlic cloves coated with olive oil and a sprinkling of dried oregano on a pizza pan and bake at 375 deg. F for 25 minutes or until they start getting crisp.

Remove, cool, pat with paper towel to remove excess oil and serve in place of peanuts. As an option, salt may be added to the oil to get a zingier taste.

### Spicy Garlic Pita Chips

This recipe can readily be modified to make more or less chips depending on the number of munchers.

#### Ingredients:

- 6 large pita breads
- 2-3 heads garlic peeled and crushed with garlic press
- 6 tbsp. butter
- 4 tbsp. olive oil
- ½ tsp. cayenne pepper
- ¼ cup grated Parmesan cheese

#### Method:

Preheat oven to 350 deg. F.

Melt butter and oil in saucepan; add crushed garlic and cayenne and heat over low heat for 2-3 minutes.

Separate pita bread into two halves so that each half has a rough side and a smooth side. Brush garlic mixture on each rough side. Sprinkle Parmesan cheese on top.

Cut each pita into small wedges. Bake pita on cookie sheets for about 15 minutes or until pita is lightly browned.

Serve hot, or cool and serve later as crunchy snacks.

### Garlic News Cookbook Recipe Contest

Members are invited to enter our Garlic Recipe contest. The contest will run for 12 months. The best two original recipes each quarter will be published in the Garlic News. The top three recipes sent in over the next year will be featured, along with their creators, in the Garlic News Cookbook to be published in early 2017.

Recipe categories: Appetizers, Main Courses, Desserts, Snacks & Condiments, and Roasted Garlic. Please use the Garlic News format (as above) to submit your recipe. You may enter two recipes per category for a total of 10 maximum. No recipes pulled off the Internet, please.



## Our Featured Garlic Grower from Ontario Wagar Oogarah Farm, Centreville, Ontario

By: Dorothy & Viren Oogarah



*Dorothy & Viren at their farm*

In the spring of 2013, our local Grassroots Growers in Tamworth sponsored a guest speaker, Paul Pospisil. As Viren and I enjoy gardening, Paul's encouraging and informative talk, was a great hit with us. The garlic-growing bug bit us! It has been a fascinating journey and bit-by-bit, we are learning more each day.

We decided that if we were going to grow garlic, we would make every effort to do it "right" and organically. We live on a small piece of farmland inherited from my father encompassing about 72 acres. It has been 'farmed' by a tenant farmer. 56 acres are north of the Lake Road and 16 acres are south of the road bordering Camden Lake. In 2010, we gave our son the 56 acres north of the road so that he could build a home on it and we kept south of the road with the original farmhouse and barn.

We chose to use the field south of the house next to the swamp to grow garlic. This field turned out to have heavy clay and a lot of rocks. We have become expert rock-pickers! In the spring of 2013, we ploughed up about 1/5<sup>th</sup> of an acre and grew three crops of mustard & buckwheat before finally tilling for the October fall planting of garlic.



Our seed order from Paul included three Turban varieties – Argentine #4, Luciano's Sicilian and TT5V, one Purple Stripe, Siberian, and three Porcelains – Majestic,

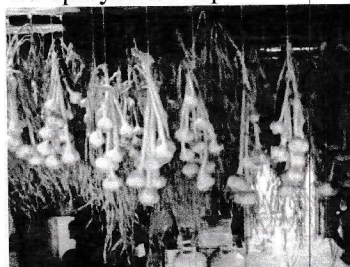
Millar, and Chiloc, a total of 965 cloves.

Our harvest in July 2014 and 2015 produced a lot of rounds from Argentine #4, and Luciano's Sicilian, and also a high percentage of 2-clove bulbs from the Porcelains, probably due to the cold spring weather for both years.

We did not sell any of our 2014 crop but used it all for seed.

In addition we ordered three Creole varieties, Rose de Lautrec, Burgundy, Cuban Purple, the Silverskin F40 Sovereign, two Artichokes, Wettergren & Sicilian Gold, two Rocamboles, Reliable & Yugoslavian. Instead of seven cultivars, we now had 16 cultivars! Our total to plant for 2014 was 3515 cloves.

Spring of 2015 produced a bumper crop of Leek Moth, which did a lot of damage to the garlic. On Paul's advice we sprayed a couple of times with BtK.

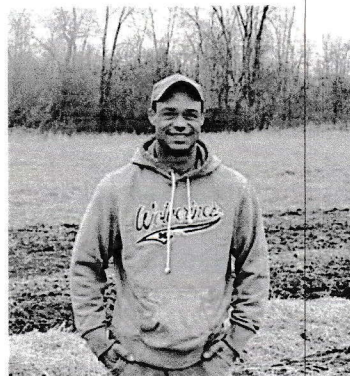


After curing for 4-6 weeks using fans and dehumidifiers, we attended two garlic festivals and two farmers' markets.

We placed an advertisement in a local

paper as well as erected a sign at the end of our driveway advertising garlic for sale. Our best overall performer for the past two years has been the Turban cultivar, TT5V.

Fall 2015 we have planted the same cultivars as last year, in addition to Transylvanian (Artichoke) and Marino & Deerfield (Rocamboles) for a total of 19 cultivars. We also have a few Rocambole bulbils that are in their third year of planting. With so many different varieties we are hoping to have some garlic with a longer storage period.



The 'garlic bug' has also bitten our son who planted 460 cloves this fall as a first planting.

*Jesse Oogarah in his planted and mulched garlic field'*

Our ultimate satisfaction came when a lady stopped to buy garlic and thanked us for growing it. She realized that it entails a lot

of work!

Thank you Paul for coming to Tamworth to speak about garlic and for your encouragement along the way!



Editor: You can contact Dorothy & Viren by phone at 613-378-6125 or email [vireno@mycando.ca](mailto:vireno@mycando.ca)



# Garlic & Garlic Products from Eureka Garlic, Kensington, PEI

## Seed Garlic for Fall Planting Cultivar List

Variety	Type	Variety	Type
Eureka Clayton	T	Khabar	PSM
Keeper	T	Vekak Czech	PSG
Morado Gicante	T	Persian Star	PS
Shangtung Purple	T	Kettle River Giant	Art
Eureka Xian	T	Portugeorge	Art
Continental	P	Sicilian Gold	Art
Eureka Clifford	P	Transylvania	Art
Eureka Duncan	P	Alison's	R
Eureka Jenny	P	Brown Saxon	R
Eureka Rowan	P	Eureka Allen	R
Eureka Veronica	P	Eureka Helen	R
Floha	P	French Rocambole	R
Georgian Crystal	P	German Brown	R
German Porcelain	P	GSF65	R
German Stiffneck	P	Italian Purple	R
German White	P	Kiev	R
Great Northern	P	Kilamey Red	R
Magical	P	Korean Purple	R
Malpasse	P	Marino	R
Mennonite	P	Mountain Top	R
Moravia	P	Salt Spring Select	R
Music	P	Slovakian Mountain	R
Northern Quebec	P	Spanish Roja	R
Polish Hardneck	P	Ukrainian	R
Polish Jenn	P	Ukrainian Hot	R
Susan Delafield's	P	Eureka Danaerys	SS
Eureka Dan's Russian	P	Nootka Rose	SS
Darwin	PSM	Silverskin	SS
Eureka Amie	PSM	Elephant	E
Eureka Judy	PSM	Jumbo Elephant	E
Eureka Kim	PSM	Cuban Purple Creole	C
Eureka Myrtis	PSM		

### 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

### Fall Seed Garlic Prices

1-5 bulbs: \$4/bulb  
6-49 bulbs: \$3.50/bulb  
50+ bulbs: \$3.00/bulb

**Attention, Market Gardeners!!**

## *Garlic Products at Wholesale*

***"Let my business help your business"***

*I make a nice selection of value-added garlic products that I offer in bulk quantities at wholesale prices. These sell well at events & farmers' markets and it can save you a lot of time. You just package them into retail packs.*

*The following products are available at a new, lower price:*

### **Dehydrated Garlic Products**

*Garlic Powder, or,  
Garlic Pearls* 5 lbs. for \$250.00

*Garlic Scape Powder, or  
Garlic Scape Soup Beads* 5 lbs. for \$200.00

### **Eureka Black Garlic**

*Prices: 50g bag, \$5.00  
: 1/2 lb. bag, \$17.00  
: 1 lb. bag, \$30.00  
: 4 lb. bag, \$100.00  
: 50 lb. tote, \$1250.00  
(Shipping included in tote price)*



*Order products now for quick delivery. Garlic will ship after the harvest. Al*

To contact Al Picketts, phone 1-902-836-5180 or Email [al@eurekagarlic.ca](mailto:al@eurekagarlic.ca)



# **Trial Results from the Small-Plot Organic Garlic Variety Trials, Maberly, Ontario** **2015 Harvest of the Porcelain 'Majestic' – Breakdown by Bulb Size & Number of Cloves per Bulb.**

Planted Seed Size & Avg. weight	Super Jumbo			Extra Jumbo			Jumbo			Giant			Large Tube			Medium Tube			Small Tube			<1.5"	Total bulbs	Total cloves	Avg. cloves /bulb		
	# cloves /bulb			# cloves /bulb			# cloves /bulb			# cloves /bulb			# cloves /bulb			# cloves /bulb			# cloves /bulb			#cloves /bulb					
# cloves per bulb→	2	3	4	5	2	3	4	5	2	3	4	5	2	3	4	5	2	3	4	3	4	2	3				
<b>Rounds av. wt. 11.2 grs</b>																											
# bulbs	0	0	0	0	0	0	5	0	0	3	11	0	0	2	2	1	1	4	4	3	4	1	0	0	41	124	3.02
<b>LT 2cl av. wt. 11.0 grs</b>																											
# bulbs	0	0	0	0	0	7	3	0	5	18	6	0	9	9	1	0	2	4	0	1	0	1	0	0	66	159	2.4
<b>LT 3cl av. wt. 8.2 grs</b>																											
# bulbs	0	0	1	0	0	0	0	0	0	14	4	0	4	9	2	0	7	3	0	1	6	5	1	0	58	169	2.9
<b>Giant av. wt. 9.3 grs</b>																											
# bulbs	0	0	0	0	0	0	0	0	1	12	9	0	6	14	2	1	11	3	0	1	2	0	0	0	62	183	2.95
<b>Giant 2cl av. wt. 13.6 grs</b>																											
# bulbs	0	0	0	0	0	3	3	0	0	3	3	0	0	0	0	1	0	0	1	0	0	0	0	0	14	50	3.6
<b>Jumbo av. wt. 10.9 grs</b>																											
# bulbs	0	0	4	0	0	5	13	0	0	4	20	0	0	4	5	0	0	4	0	0	0	0	0	0	59	133	2.25
<b>EJ av. wt. 10.4 grs</b>																											
# bulbs	0	0	1	0	0	2	6	0	0	4	8	0	0	4	1	0	0	6	0	0	2	0	1	0	36	124	3.4
<b>Total All</b>																											
	6	0	0	17	30	0	6	58	61	0	19	42	14	2	21	24	5	6	14	7	2	0	1	1	336	942	2.8

## **Comments:**

These results were an observation noted from the trial comparing different sizes of bulbs used for planting stock.  
 In this region, Porcelain cultivars normally produce bulbs averaging 4 cloves.

In 2015, 3-cloves bulbs were predominant in the harvested crop; 158 of the 336 bulbs or 47 % of the crop were 3-clove bulbs; the more "normal" 4-clove bulbs made up only 35 % of the harvested bulbs. Smaller bulbs had a larger proportion of 2 and 3-clove bulbs while bulbs Jumbo or larger had more 4 clove bulbs.

The reduced numbers of cloves per bulb in this example were typical of Porcelain cultivars in the 2015 crop. This phenomenon is attributed to the shortened growing season resulting from a late spring.  
 Neither planted clove size and weight, nor the configuration of the planting stock seemed to make no difference to the harvest bulb configuration.  
 One can conclude from this that growing season length and weather, rather than planting stock is the cause of fewer cloves per bulb.



## Garlic Report from Thunder Bay, Ontario

By: Renata Thiboutot

We are an 18-hour drive from Ottawa, 12 hours north of North Bay, and an 8-hour drive from Winnipeg. In the heart of the boreal forest!

I'm sending a blurb and some photos from my garlic experiences. I started growing garlic in 2005 after I ate my neighbor's homegrown garlic. From first bite I knew I had to try growing the garlic! I was hooked right away. Over 10 years we have gone from planting 100 plants to over 25,000. It is not a cheap and easy crop to grow and I am trying to refine my record keeping to make sure I know my cost of production, and performance yields.

**Crop devastation in 2012.** My whole harvest was ruined. Yellowed plant tops, no skins on the bulbs, beautiful, skinless bulbs. It was a horrible year and we learned how to dehydrate garlic very quickly and turned a small outbuilding into a dehydrator to get it done in large quantity. I first thought it was botrytis. The following winter I spoke with a farmer a 2-hour drive to the south of us, in Minnesota about the garlic devastation. It turns out all the garlic growers from Wisconsin through Minnesota had their garlic crops wiped out. It is a phytoplasma that is carried by leafhoppers, and is introduced into a plant when the leafhopper feeds. Garlic plants are normally not affected because the leafhoppers generally prefer other types of plants. Because of the mild winter the garlic sprouted earlier than usual, and the leafhoppers migrated earlier than usual. There was little else to feed on at the time of their arrival so the leafhoppers fed on the garlic and infected it with the Aster Yellows disease. Articles on Aster Yellows from 2012 can be read here.

<http://plumcreekgarlic.com/phytoplasma/>

<http://forums2.gardenweb.com/discussions/1471642/minnesota-garlic-crop-wiped-out>

**Our way of planting garlic.** We use raised beds, and have a heavy clay loam soil. We use a bed maker to make the raised beds. After the beds are prepped, we get the waterwheel planter going. We don't use the water function of the water wheel when planting garlic. The wheels mark the beds with a 12" space between 2 rows, a 6" space between plants. Two people sit behind and lay out garlic for planting. Two or three more people come along behind and plant the laid out garlic. It took five of us 123 hours total to break and plant about 26,000 garlic this year. We are moving to mechanical cultivation and less hand weeding. I would appreciate any advice on mechanical cultivation of garlic.

**Bulbils.** The third thing I would like feedback on is the growing out of bulbils. This year we planted about 75,000. I have never had great success planting bulbils before due to weed pressure. This year we have opted for planting them into 72's trays for seedlings. We used a potting soil, seeded the trays, laid them into a trough in the raised beds, and then covered with a potting soil and vermiculite mix.



The whole thing was then covered with a sheet of agribon for weather and wind protection. We plan to harvest the bulbils close to the garlic harvest next summer 2016.

The plan is: The bulbils will be dried and replanted in the fall. \*\*\* We would like to plant the bulbils with out drying first, directly from the seed trays into a fresh bed in late August or early September. Is there a reason that this is a horrible idea?

**Harvesting.** The fourth thing we do that has changed in the last two years to improve our efficiency is our harvest. Moe is excellent at improving labour intensive jobs (where I create labour intensive jobs!). This is what our garlic harvest looked like this summer:

1. Trim the leaves to 12" approx. with a 3PTH lawn mower on the back of the tractor.
2. Run an under-cutter under the garlic to loosen it from our very strong clay soil.
3. We pile the garlic along the beds, quality controlling as we go so that undesirable garlic is not going into the drying area.
4. Pick up the garlic and put it into the drying bins.
5. Stack the bins in the dryer and turn it on for 2-5 days.

The dryer system is made of a propane furnace that blows air under the bins. The bins are built on pallets with screen on the bottom. The bins are sealed with greenhouse plastic taped on top, sand bags on the bottom. The air is forced from below the bins up through and out the top. The 2015 garlic harvest was fastest ever into the bin and on to dry by 5 pm.



The drying area is in a small simple hoop house type structure on skids, with silage plastic on the floor. The most time consuming part in the fall is the top and root trimming and cleaning dirty papers.

We welcome all recommendations to our processes to make our garlic practices better. I have only noticed leek moth damage on one or two heads in the past two years, and we don't

have the nematode problems that many of you are dealing with in Southern Ontario.

We have always used Boundary Garlic in BC as our seed supplier as required. This year we have included Rasa Creek as a supplier also.

*Renata may be contacted at:*

*Mile Hill Farms, Box 637, Kakabeka Falls ON, P0T 1W0  
Phone (807) 939-7514 Email: milehillfarms@tbaytel.net*



## More calls & letters

(Continued from page 5)

### When to plant my garlic?

**Lynn Archbold of Guelph, ON**, asked on October 17: Not so sure about the weather though. Snow!!!! And very cold here today and I don't have my garlic in yet! Hopefully there will be some good weather to plant in the next week or so. When do you usually plant?

*Editor: We usually plant around mid October or later. We've started, got about 1/2 planted but it turned cold, so being fair weather farmers, we'll finish it during the next sunny stretch.*

### 3<sup>rd</sup> Garlic Growers Workshop at Rasa Creek Farm

**Jim Capellini of Lumby, BC** advised: We've got our 3rd Garlic Growers Workshop of the summer happening this weekend, October 3. Each one has been sold out a month ahead of time, with a cap of 20 people per workshop. They've been fantastic, with lots of enthusiastic, and now trained and hopefully realistically oriented, garlic newbies and expanding farms.

*Editor: Well done, Jim! You're doing a great job of spreading the gospel of garlic. Keep up the good work. For our members, the Rasa Creek website contains a wealth of sound growing information.*

*Check it out at: [www.rasacreekfarm.com](http://www.rasacreekfarm.com)*

**A new grower, Gary Mead**, asked a number of questions: I am attempting to grow garlic in container troughs this year and after the planting the cloves, placed a thin layer of leaf mould over the top of the surface followed by mulch. Is adding the mulch now, in autumn is a good idea or, have I made a mistake and don't really need to mulch garlic?

All I have to hand this year for the mulch is chopped up straw, which I mixed with a few handfuls of dried grass clippings and shredded newspaper. If mulch should be added, is this combination okay to use on garlic? Should the autumn mulch be removed in spring and, if so, should this be early spring e.g. March/April time? If it should be removed, is this because harmful bacteria can accumulate in the mulch or, is it to allow light and heat to initiate top growth?

If the autumn mulch should be removed, how long should I give it until I apply spring mulch?

Would the spring mulch be better as just a combination of straw and newspaper rather than addition of grass clippings at this stage?

Finally, if we get a lot of rainfall during autumn/winter and or snow, should I protect the garlic with cloches or, would the mulch offer adequate protection?

*Editor: Mulching garlic for winter is a good practice. Depending on your winter weather, if you get a mid winter thaw followed by a hard freeze, it could winter kill your garlic. Mulching helps to prevent that happening.*

*In the spring, just push the mulch back from the row of plants to let the sun warm the soil. Don't remove it completely.*

*Your winter mulch can continue to be used as summer mulch for preserving moisture and keeping the soil cool. There is one exception to the summer mulch idea. In years with a lot of rainfall that keeps the soil too wet, you have to remove the mulch to allow the soil to dry out. Otherwise, you risk decay when the soil is constantly wet. Fortunately, those kinds of years don't happen too often.*

*I don't recommend using a cloche over garlic. It will do the wrong things. Use the cloche on other vegetables, like tomatoes, in the spring to provide a little greenhouse for more heat in the cool weather.*

*Tomatoes need a lot of heat. Garlic doesn't.*

*You may face another risk, though. If your troughs are above the ground, the sides are exposed to severe cold. The plant roots do not have the usual warmth from the deeper soil as they do when they are in the ground and are subject to abnormal freezing. This can kill them. You might consider burying your troughs in the ground for winter. Either that or surrounding them with tightly packed bales of straw for insulation to protect the exposed sides. Trust this helps.*

### Squirrels!

**Annelies Davis of Hamilton, ON**, asked: I have a problem. Squirrels are digging up all the potted bulbils I planted. How do I stop them from killing my bulbils? I am getting a bit flustered here. **Annelies**

*Editor: They are one of the worst garden pests and there is really no kind way to discourage them. As much as they are cute little animals, the best method is trapping them with rattraps baited with peanuts and peanut butter. You have to kill a lot of them though because they breed and multiply like crazy. You can try covering your bulbs with a wire mesh held down tightly so they can't get under it. It's a lot of work but it may save most of your bulbils. If they dig out your cloves or bulbils, they just bury them somewhere else so you may find a lot of rogue garlic around next summer.*

**Annelies**, again: I am grateful for your advice. I will try the wire mesh to stop them before trying to kill them.

### The wonders of Javex!

**Kate Middleton of Burks Falls**, asked: A friend mentioned something to me last night that I found surprising--putting bulbils in bleach before planting. I've never heard that before--have you? I've planted thousands with no problems with disease, only this year, I had it on three of my Music bulbs. I want to mention this on my blog, so wondered what you thought.

*Editor: I know that some growers try to remove diseases by bleaching. Well, the bleach may kill the soil-borne bacteria carried in any dirt on the surface of a bulb but it won't touch the bacteria, viruses or fungal diseases that are "seed-borne" or inside the cloves themselves. I guess its much like trying to wash away the flu when you're sick!*

*If you want to learn more about diseases affecting allium, the best source is the "Compendium of Onion and Garlic Diseases", published by AP.*



## Still more calls and letters

### Leek Moth and other garlic questions

**Margaret Fowler**, a self-proclaimed “aspiring young gardener” asked the following questions (editor’s replies are shown in italics):

Please keep in mind that I plant my garlic in three 4 x 8 foot beds and rotate them to a new bed each year.

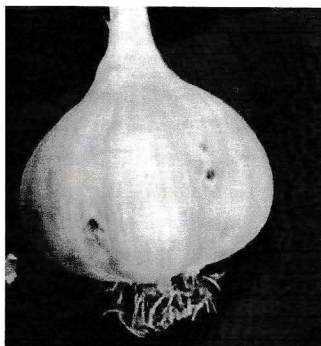
Q1. Considering the fact that I indeed had leek moths this past year, would you recommend that I take a one year break from planting anything from the allium family (i.e. all onions, leeks, garlic) in the hopes of deterring them from my garden?

*A1. It wouldn't make any difference. The leek moth is in your area and will find you again when you plant onions, leeks or garlic.*

Q2. If my garlic is currently being stored in a barn, can the leek moth worm if still present in the garlic spread to non-affected garlic and essentially ruin the entire crop?

*A2. You probably brought some leek moth in with your garlic. If so, they are breeding, laying eggs and producing those little worms that do the damage. Inspect your bulbs and look for these little pinholes.*

*That means that the worm has bored into the bulb. Peel off some wrappers, find the damaged clove and remove it - it will likely have started to decay and the decay can spread to the good cloves. The rest of the bulb should be OK.*



Q3. Is the worse fate for my existing garlic and onions that they just may not store well or is it possible for the worm to live and spread damage in my root cellar?

*A3. If you have them, they will live and multiply in your storage area.*

Q4. After attending the Verona festival, I burned most of the affected leaves, stalks, etc. but not the garlic. Before this I had taken at least a wheelbarrow’s worth of scraps to the back of our property, well away from my garden. I will never compost these scraps, but I am wondering if I should retrieve them and burn those as well? Do you believe this is necessary?

*A4. Its probably too late. Any eggs would have hatched by now and started the cycle again.*

Q5. Because I rotate beds, should I still plant the cover crops you mentioned (mustard seed, buckwheat) even though my garlic won't be planted in those beds the following year?

*A5. Cover crops are used to enrich the soil, regardless of what you are planting and, in the case of mustard, to control the Bulb & Stem Nematode. Plant them, and add compost as well, on a regular basis.*

Q6. Do you think it is too cold for my garlic to be stored in an unheated barn right now (October 2) or would it be time to move them to the root cellar? Or if that is too difficult to answer, do you know the optimum temperature at which garlic should be stored?

*A6. I would move it indoors now. When the temperature drops to around 40-45 deg F (7-8 deg C), the cold triggers the garlic to start sprouting. We've had those temperatures already. Sprouting garlic doesn't last and tastes bitter.*

*Optimum storage temperatures: High, around 60 deg F. (15 deg C). Your cold room is a good spot. Low temperature storage is just below freezing, minus 2 to 3 deg C (you need a freezer for this). Storage life depends not only on temperature but also on variety and can vary anywhere between 5 months to 12 - 14 months.*

Q7. My garlic has always been planted in 3 beds (only garlic). However, I have always planted my leeks, onions, shallots, etc. in various beds - I often intersperse them and edge my beds with them. Considering I do have leek moths in my garden, would you suggest that I dedicate only ONE bed to alliums as opposed to spreading them around? In other words, would there be any benefit to me doing so?

*A7. I don't think it matters to the leek moth whether you concentrate your allium crops or separate them. The adult moth flies some distance so it will find them anyways. Some large growers use their leeks as a “trap crop” and plant them around their garlic. The leek moth prefers leeks (thus, the name) so most damage occurs to the trap crop and less to the garlic. For a small garden, I don't think it makes much difference.*

*You might consider using your garlic beds for other crops in rotation, for example, lettuce & spinach in one, peas & beans in another and garlic in the 3rd. Rotation is healthy for the soil and with quick growing crops like these, you still have time to plant a crop of mustard/buckwheat after your vegetables are harvested and the residue turned under.*

**Steve Hardiman of New South Wales, Australia**, wrote: Paul, thank you for the Garlic News. It's been very helpful to read stories and opinions from other farmers; I'm still very much a beginner. The article on growing from bulbils was really good.

I just finished harvesting and hanging up my crop for the year. Is there any chance you could give your opinion on the plants in the two photos I have attached? The plant seems to have some kind of problem and the leaves start to die where they connect to the stem, Let me know if you can help. Regards, Steve.

*Editor: Hello Steve. Thank you for the kind words about the Garlic News. I, too, learn a lot from other growers each year. Your pictures. The damage looks very much like the early stages of either a fusarium or a botrytis disease. There are many versions of both and often, the symptoms look similar so it's hard to tell just by looking. The only sure way of knowing is to have samples tested in a plant pathology lab. Fortunately, Australia has a good agricultural program and they have pathology labs in both Orange and Menangle. You can go directly to these labs or locate your local government agronomist who can guide you (sorry, I don't have a list of your agronomists so you have to search the phone listings yourself). The labs usually do both soil and plant samples.*

*I would recommend that you do this because you can nip it in the bud if you catch it early and save your future crops.*

**Steve** again. I dropped off a sample to Menangle that day.

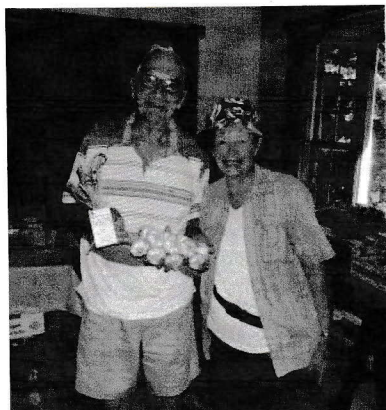


## More Calls and Letters

### Sandy Kell, Lake Cowichan, BC visits the Beaver Pond



Kim Hay



Sandy Kell and garlic guru Paul

**Kim Hay, Yarker, ON,** wrote: Hi Paul. Is Tuesday or Thursday a good day to come up to Beaver Pond for a quick visit? Sandi Kell is down from BC, and she would like to come up. She had written you a few weeks ago.

*Editor: We had a short but lovely visit talking garlic.*



### Denise in Alberta sending news

Yes, it's true. I am alive. I am writing now, sending in a few notes on the year's production as I recall them in amongst the many convoluted memories of 2015. What a busy season! I think there is a lesson in spreading ourselves thinner than a dieter's salad dressing; however, this is what happens when you take a full time job besides trying to run a farm and several related businesses.

My training is as a forester. As we'd put in an underground root cellar for the seeds, potatoes and garlic drying, it was necessary to go back to work to pay for it. So I took a job that allows me to be outside every day. Working with trees gave me the opportunity to become a Certified Arborist, which I just completed! It was also a year for helping our daughter put a roof on her earth bermed, post and beam straw bale infill off-grid house. Some pictures are on her website [dependenceday.wordpress.com](http://dependenceday.wordpress.com).

I was also part of a cross Canada peer group discussions about Organic Seed production in Canada. I wish we had more regional events and garlic shows like you guys in Ontario! But this was a great group and I was happy to be involved.

So, it was a busy time. I planted 3200 cloves of 15 varieties in the fall of 2014 and mulched for the first time instead of spring planting, knowing my time was going to be limited. I also planted 6 varieties of Jerusalem Artichokes. I had gotten large square bales of straw from a neighbor cheap. He did not need them anymore for his son's hockey skating rink (he used them as the boards and flooded over plastic in the middle). Alberta cold winters make that possible! I took flakes of the straw and they covered the rows perfectly. I plant rows with 5 cloves wide per row, spaced approximately the size of the finished head between each clove, so that varies with each variety.

Among the varieties is some local Hutterite Purple, which makes at least a 3" finished head without any watering throughout the season. I have Jim Kastelic's garlic, my Gido Krupa's garlic from the Ukraine, Mrs. Luchka's garlic (Sicilian type head), and Mr. Les Pudar's garlic (local large headed, white Rocambole type). I keep adding to my collection as I find local garlic enthusiasts and other sources.

Other varieties I have acquired are Dan's Russian, Dan's Sicilian, Early Portuguese Softneck, Ukrainian Hot, Baba Franchuk's, Hutterite White, Mennonite, Russian Red, German Red, German White, Purple Skin and Pink Skin softneck (not sure of variety), Silverskin Early, Porcelain, Racey, Ukrainian Mavniv, Polish Jenn, California Organic Sicilian, BC Giant Sicilian, Jumbo Organic Sicilian, Korean Purple, Purple Glazer and that's all I can think. Is that 15 or 50 varieties?

We had a drought, **grasshopper filled year**. I am so glad I mulched!

Mulch was removed April 9, and some of the sprouts were just 3". It snowed and the temperature dropped, but the garlic did fine. We got about 2-3" of rain in April, and about 2" in May and then nothing in June, nothing in July to speak of, and nothing in August until the 16th. Scattered showers all through the end of August into September and then the rain started coming. We had huge cracks in the ground, and that must have been where the grasshoppers came from! Ha!

Grasshoppers began emerging in May and June. I have never seen so many different kinds. I counted 15 different variations in color, patterning and characteristics. My chickens could not keep up, though they tried, and only around the house until the coyotes moved in for the chickens. The garlic was grown at my mom's fallow garden just down the road. The hoppers were the worst at the edges of the garden.

They mowed the potatoes by the middle of June to the point where the stems were stubs. They ate all the carrots, all the watermelon to nubs of stems and all the beans. Most of my crops that I grow for the seed were demolished. We spread diatomaceous earth whenever we could and it did some of them in. I do not like to disrupt the flow of nature, be it good or bad, but it was frustrating. At the end, I was squishing a few. My mom cannot stand them, so she was guardian.

And at the end of the season, they **began to eat the greens on the garlic** and even the onions. It seemed they liked hot peppers more than the sweet peppers. It was a strange year. With no rain, the garden remained relatively weed free, which helped the plants to grow well in spite of the drought and I am so, so glad I mulched. I moved the big sections of straw off the garlic in April and used it to put between the rows of garlic, and was happy I did. Harvest was a full month and a half ahead of schedule, even in a normal year of fall planting. Many of the varieties were heading in June. I harvested the majority in July and they dried superbly, as we had the heat and desert humidity. I would estimate of 3200 cloves, I harvested 3120 heads, about 310 lbs. of garlic. Average head size seemed unchanged which was amazing and the bulbs were uniform and healthy. I will be planting mustard in the beds next year to keep the stock disease free. In the fall, I was trying to finish my daughter's house roof so the garlic planting didn't start until November 9! Who ever heard of that in Alberta? The ground was not frozen. People were harvesting grain until the end of November! All in all harvest was good considering the drought. Got the last garlic in the ground with the help of my girls on November 16 and mulched by the 20th. We did not get a good ground freeze until after. It was a year of all things in their own time.

I did plant 3 of the largest gardens I ever had, got them all weeded and harvested, helped my daughter on my days off with her house, got a good harvest, all seed in and accounted for, and at times I thought I should panic because it seemed I would not get everything done. I am so grateful and happy!

After planting out again (3200 or so again), I have many varieties left to sell to local chefs, when I get the chance!! I applaud all the garlic growers in Canada and looking forward to next year.

**Denise O'Reilly, Cherhill, Alberta.**