



# THE GARLIC NEWS

Connecting the Canadian Garlic Network!

Issue 30 Winter 2011-12

## Making garlic products in your home kitchen

Add to your enjoyment of garlic by making some easy garlic products at home by freezing, drying, pickling or preserving. Here are a few ideas to try.

### Dried or dehydrated garlic

Dried garlic is becoming increasingly popular as a ready-to-use garlic flavouring for kitchen use. Start by peeling some fat garlic cloves, slicing 1/8" thick and drying them either in a low-heat oven or a kitchen dehydrator. You can store the dried garlic flakes in an airtight container or grind them into a garlic powder or garlic pearls. Another way is to press or puree the garlic, dry it under low heat and then grind it into a powder. Make only enough to last until the next garlic crop as the dried garlic loses flavour.

### Garlic salt

Garlic salt is one of the most versatile garlic products for your kitchen or table and quite easy to make. Using a food processor, finely grind two parts salt to one part fresh peeled garlic cloves until the salt is well soaked with the garlic moisture. Sea salt is best as it provides added minerals. Dry in a low-heat oven or dehydrator.

When thoroughly dry, usually about 5-7 hours, grind it to a fine texture and bottle it in shakers with a closable top.

### Pickled garlic cloves

Garlic may be pickled sweet, sour or virtually any way that you would make any pickle or relish. You can use cider vinegar or regular pickling vinegar depending on the recipe you choose. Although very tasty, pickled garlic loses many of the health benefits of fresh garlic as the vinegar inhibits the production of allicin. To prevent discoloration of the cloves, blanch them in boiling water for a minute or two before starting the pickling process.

### Peeled garlic cloves

Because peeling garlic is a messy business, cooks like to have a supply on hand for ease of use. This is at best, a very short-term way to keep garlic. Once you peel the cloves, soak them in household vinegar to kill bacteria, drain and refrigerate. Use within a week as the garlic loses flavour and starts to spoil. Keeping garlic cloves in oil is not advised due to the risk of botulism poisoning.

## Freezing garlic

You can freeze garlic in several ways. Cleaned, whole bulbs can be stored in Ziploc bags in the freezer. Use immediately once you take them out and do not re-freeze. Peeled garlic cloves may be frozen in olive oil, being careful to soak them in vinegar for an hour before freezing. The third way is to make a puree of garlic and olive oil (again, vinegar-treating them first) and fill ice cube trays with the mixture. One or two cubes give you enough garlic for many recipes.

Like any processing method, freezing causes a loss of flavour so use fresh garlic as long as possible before resorting to the frozen kind.

## Garlic Jellies

These are truly a delicacy and our very first issue of the Garlic News carried the recipe for **Mary Lou's Original Garlic Jelly**.

We've republished this classic on the recipes page so that you can try it. You can also make many variations of it with a little trial and error; Garlic & Jalapeño, Garlic & Red Pepper, Garlic & Horseradish and more. Garlic jellies make delicious hors d'oeuvres served over

cream cheese on a cracker, can be used as a glaze on hams and roasts, and can even be served on toast for breakfast!

## What about garlic scapes?

Yes, garlic scapes can be processed just like garlic cloves. They can be dried into a powder, made into a garlic scape salt, pickled both sweet and sour, pureed with olive oil and frozen, and even used to make a garlic scape jelly.

## Use fresh garlic

Make your garlic products with fresh garlic, soon after harvest. When its getting old, dried and bitter, no process will restore its fresh, sweet flavour. When doing some later in the fall or winter, use the freshest you can find.

Processing garlic by drying, freezing or pickling will add variety to your garlic choices and help you keep it longer. However, there is a loss of garlic flavour with any process so use fresh garlic whenever you can.

Some of our favourite ideas are repeated in this Issue along with a listing of past recipes in the Garlic News.

*Editor*



BUY LOCAL, BUY ORGANIC, BUY CANADIAN

IT MAKES HEALTHY BUSINESS SENSE



# The Garlic News

Connecting  
The Canadian Garlic Network  
Issue 30 Winter 2011-12

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*Back issues to complete your set are available.*  
Advertising inquiries welcome.

## ABOUT THE GARLIC NEWS

The *Garlic News* is a non-profit membership newsletter produced in print copy. Started in 2004, it carries on from where its predecessors, the *Garlic Newsletter* and *The Voice of Garlic* left off. It is distributed by mail to members. The *Garlic News* uses a newspaper column layout and larger print size for easier reading. The wider margins and 8 1/2 x 11-size paper are enable growers to save copies in a standard 3-hole binder. Back issues are available both in single copy and 1-year sets.

## 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. The Editor reserves the right to refuse advertising, subscriptions or material submitted for publication where, in his sole discretion, such inclusion would detract from the worth of the publication. Articles should be no longer than 400 words. B&W pictures preferred. Contents copyright © 2011-12 Paul Pospisil. No part of this publication may be reproduced or duplicated without the written permission.

**Deadline for Spring 2012 Issue is March 5.**

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**: Membership/Subscription Form, Garlic News, 2011-12, 8<sup>th</sup> year**

## Changes in the taxonomy of garlic

The mystery of garlic continues to fascinate scientists and researchers. The more they learn, the more they define the new facts. Thus, the taxonomy, or identification of garlic types is changing from year to year. From a simple start of just "hardneck" and "softneck" garlic cultivars, the early '90s saw the classification change to five main Varieties: Porcelain, Purple Stripe, Rocambole, Artichoke and Silverskin, with a variable number of "sub-Varieties". These were identified in Ron Engeland's book, *Growing Great Garlic*, and served garlic growers well for over a decade. However, new research in the '90s and the start of the 21<sup>st</sup> century used more sophisticated laboratory techniques and challenged the earlier classification of garlic. Now, it is recognized that there are many more Horticultural Groupings or Varietal Groups. Ted Jordan Meredith has sorted through the research and documented that no less than 11 distinct groupings exist - Artichoke; Asiatic; Creole; Glazed Purple Stripe; Marbled Purple Stripe; Middle Eastern; Porcelain; Purple Stripe; Rocambole; Silverskin; and Turban. These are well identified in "the Complete Book of Garlic", published in 2008. This classification will continue as the growers' "bible" until overtaken by more recent research. The new 11- Group classification is already showing up in seed garlic lists and will affect other areas of the garlic growers' world as well. I am in the process of revising the Garlic Judging Standard to take into account the grouping of garlic cultivars into the 11 currently recognized Horticultural Groups as well as updating garlic planning charts. Editor



## Notes from our garlic patch

### A winter scene that makes country living such a joy

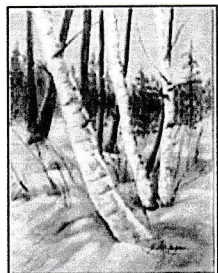


*This young buck came several times over the Christmas period to dig out seeds below the bird feeder. He was about 25 feet from our front door and stared back as we watched him from the window, running away only when I came outside. A magnificent animal!*

**Thank you for your support** More of our members sent extra \$ to help with publication costs. Thank you to these friends for their support:

Christina Pechloff  
Kenneth Young

### Greetings for the new year 2012



*Painting by Jean Finlayson  
Railway Creek Farms*

We received many Christmas and New Year's greetings from you by mail, phone and email and tried to answer each one of you personally. If we missed yours, here's a common wish to all our garlic friends for 2012:

*May your garlic crop bring you  
satisfaction,  
good health  
and a bit of wealth, too!*

### Your 2012 garlic calendar

A Garlic News calendar is included with this issue. Take it out, place it in your gardening book, and circle important planning dates like farmers' market opening date, scaping, harvesting, and anything else. Please note that Canadian holidays are already circled – remind the weeds to stay down on those dates!

### Garlic Field Day at the Small-Plot Garlic Variety Trials

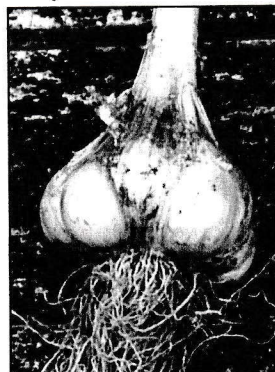
**Advance notice:** Our 13<sup>th</sup> annual Garlic Field Day is coming up on Sunday June 24.

## The strange behaviour of garlic – fall emergence

I had several calls this past fall about garlic emerging shortly after planting. What caused it? Was it due to the extended, warm fall weather we had that stayed right into December? Who knows? Generally, garlic needs a period of chilling, brought on by the fall frosts, in order to break dormancy and start growing. I rather believe that it's the obstinate nature of this plant, breaking all the rules just to spite you!

### True garlic seed trial started again

A few years ago, I tried forcing garlic to produce true seed and had no success so I dropped it from my tasks. Well, encouraged by **Ted Jordan Meredith**, I started it again and will continue. It's the method where you slit open the spathe and pluck out the immature bulbils to enable the flowers to develop. I started a bit late with some spring planted Czech Broadleaf, produced what appeared to be seed (looked almost like onion seed), and planted it. No luck on germinating it. Oh, well, "if at first you don't succeed, - - ." If Ted persisted and got the beauty he describes below, surely I can as well. Editor.



Ted Meredith's photo of a true seed-grown garlic from the parent, Porcelain "Krasnodar", that was started from true seed last year, grown to a large round, harvested in August, then planted again in the fall. This bulb is virus free and 2 ½ inches in diameter ---quite large for me---most of my garlic doesn't get very large. This is by far the best results from seed, but some

others have done well too. Growing from seed offers us the prospect of not only preserving genetic diversity, but also enhancing and expanding it---something that garlic is surely in need of after all the years of essentially vegetative reproduction. Anyway, I thought this might further spur your interest in growing garlic from seed. I am learning as I go along, and it's been fun. The results so far seem quite encouraging. **Ted.**

### How much freezing can garlic take?

Here's an interesting question to which I have yet to find a definitive answer. We mulch under a long-standing belief that plants must be protected from extreme cold, yet there is little scientific data to back it up. This fall, I have surface planted some garlic cloves in a shallow pot, set them on top of the ground without mulch, and hope to keep them free of snow so they can be exposed to say, minus 25 deg C over the winter. In the spring, we'll see if they emerge.

*If anyone has good data on the cold survival of unprotected garlic, I would be interested in hearing from you. Editor*

*One generation plants the tree; another gets the shade.  
Chinese proverb*



## How to use mustard as a nematode suppressing crop

By: Paul Pospisil

Mustard as a plough down green manure is an integral part of the annual cycle of preventive control of the Bulb & Stem Nematode in our Beaver Pond Estates garlic plots. The pest first arrived in Music garlic from three different sources in the fall 2005 planting of the Garlic Trials. When lab tests in 2006 confirmed the presence of the nematode, a Nematode Suppressing Green Manure Trial was conducted in 2006-2008. The trial using mustard demonstrated that the Bulb and Stem Nematode was eliminated or reduced to below measurable values in soil lab tests. At the time, we could locate only common yellow mustard, as there appeared to be no Canadian sources for the preferred oriental mustard. Since then, we located a Saskatchewan source for the oriental mustard, Cutlass, and are using it in place of common yellow in the preventive control.

### Pest management using cover crops - the theory

Brassica and mustard cover crops grow rapidly in the fall and have good biomass production and nutrient take-up. They are attracting renewed interest because of their pest management characteristics. Most Brassica species release chemical compounds that may be toxic to soil borne pathogens and pests, such as nematodes, fungi and some weeds. The mustards usually have higher concentrations of these chemicals. They release biotoxic compounds that act against bacteria, fungi, insects, nematodes, and weeds. They are mowed and incorporated into the soil to maximize their natural fumigant potential. The fumigant chemicals are produced only when individual plant cells are ruptured by cutting or crushing the leafy growth.

Pest suppression is believed to be the result of glucosinolate degradation into biologically active sulfur-containing compounds called thiocyanates.

To maximize pest suppression, incorporation should occur during vulnerable life-stages of the pest. Since the Bulb and Stem Nematode is most active both in early spring and late summer, planting and plough down should be timed for April-May and again in August-September.

### Cover crops at Beaver Pond Estates – the practice

Mustard is planted every year in two of the three rotation plots, the one where the garlic was just harvested and the one that will be planted the coming fall.

a. **Post-harvest planting.** As soon as the garlic is out of the ground, the old beds are tilled to destroy weeds and turn under any mulch residue. Another tilling a week or so later and mustard is planted, using a simple broadcasting method. The seed is raked over, and if the soil is very dry, watering over the next 2 or 3 days will cause sprouting. The August crop grows very quickly and is ready to turn under in a month or less. To prevent a mustard weed problem, the mustard is chopped before the flowers go to seed.

For breaking down the mustard, we tried two methods of chopping it; first, using a sickle bar mower at different heights, making several passes; second, shredding it with a whipper snipper (grass whip).

The whipper snipper, although taking longer, does a better

job. It is important to chop the plants well in order to release the glucosinolate as well as to speed up the composting.

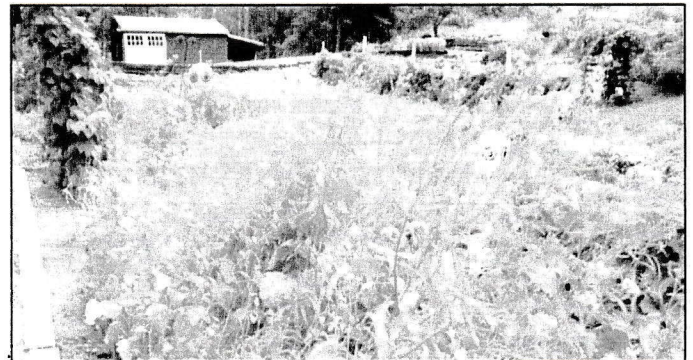


### Chopped mustard ready to till in the Small-Plot Garlic Variety Trials

The shredded mustard is then roto-tilled in and packed down. Another tilling a week later and a second crop of mustard is planted as there is ample time before freeze up to do it once again.

You may well ask, why bother after garlic harvest when you won't be planting in the same plot next year? Well, in our organic rotation, the garlic is followed with annual vegetables and flowers the following year. In the event that some undetected nematodes were in the soil, they could well resume their life cycle in other hosts such as beets, gladioli or other plants. It's just a precautionary practice.

b. **Mustard in the new beds.** The plot where garlic is to go in the coming fall is treated with several plantings of green manure crops. The April planting is mustard, followed by two or more plantings of buckwheat. The final planting in August or September is again mustard for a final nematode fumigation. After the mustard is tilled under, the soil is left for 2-3 weeks to enable the green matter to break down.



*A small patch of the tall brown mustard being grown for seed.*

### Checking for Bulb & Stem Nematode

The stunting and dying of patches of garlic can readily be observed and indicate possible infestation of the crop. Sending plant samples to a pathology lab to determine if the cause is fusarium or the nematode is a necessary follow up. Even if there is no indication in the plants, soil samples are annually sent to the labs for a nematode check. In the five years since starting regular use of mustard, there has been no indication that any nematodes survived. This provides the confidence that regular use of mustard as a green manure is a practical organic solution to controlling the Bulb & Stem Nematode.

*Seniors' moment: Don't let aging get you down. It's too hard to get back up!*



## We get calls and letters

### More Misleading Garlic Sales

**Paul Gearing of Gearing Farms** called to say that he spotted organic garlic in Freshco under the label "Ontario Garlic". On closer examination, the garlic label had "Product of Mexico" on the other side.

*Editor: Thank you, Paul. We live in a period of history when scams and other forms of cheating seem to run rampant – just think of the thousands of telephone solicitors, letter and email scams that people receive daily. Buyers should carefully read all labels, and if no label exists, ask for the produce manager. Your money counts and if you are careful not to get caught, the scammers will soon dwindle away.*

### Voles in the Garden

**Marion Clermont of Iroquois, ON** called to ask if the voles eating her vegetables would also damage her garlic. They were managing to catch some with mouse traps baited with peanut butter but didn't seem to be winning.

*Editor: I haven't had any vole damage the garlic but it's always possible that they may dig out the cloves and store them. The mousetrap with peanut butter is a proven organic control. Most pesticides that will kill voles are unsuitable for garden use. Since their paths are above ground, just put the trap across their pathway and they'll eventually stop to smell it*

### Garlic pride from Birch River, Manitoba

**Marilyn Shimkus**, honey and garlic producer, sent this: "Dear Paul; While at the Swan River Farmers' Market, I met the "Garlic Girls" from San Clara with their seven varieties of garlic along with their garlic braids, pickled scapes and jellies. I have never seen such a lovely variety and such large bulbs. These girls make us proud of our homegrown, healthy products, and in this day and age, we need the healing powers of garlic. (Also, they twigged my memory that I hadn't renewed my Garlic News. I seem to be overly concerned about the *Hereafter*. I go into a room and wonder what I'm here after?). **Marilyn.**

*Editor: You are right to be proud of quality garlic. Let's all do it!*

### Tilling up a new garlic patch

**Stan Faust of Quesnel BC** lost a whole row of garlic last year so he tilled up a new patch of ground and worked in steer manure. He bought new seed garlic and planted it, using his newly made 8-hole dibble. He wondered if he could add both more manure and extra nitrogen fertilizer on top of the beds after planting.

*Editor: Yes to both; but synthetic fertilizers are not organic. If you're not worried about that aspect, sprinkle a little 20-20-20 on the soil and cover with manure. Both will work down into the soil over the winter. Before adding fertilizer, it is prudent to have a soil test done to see if it is really needed. Fertilizer is expensive!*

## Garlic Prices

**Jackie Heim** asked:

My name is Jackie and I got your name from COG. I grow garlic on a small scale and want to start selling what I have but am not really up to date on the current price per pound. What is the going price these days? I'm selling to individuals, so directly to the consumer.

*Editor: There is no "going price". The price depends on your location to a large degree and varies considerably. Urban areas have more yuppies that will pay more; rural areas have a lower price. Quality is a major determinate of selling price. Quality garlic brings top prices while dirty garbage pulled from the garden without care sells for whatever the vendor can get for it. Here are some examples from 2011 as reported by growers:*

*Saskatchewan, Farmers' market: \$8.00 per lb.*

*BC: \$2.00 to \$3.00 per bulb.*

*PEI: \$3.00 to \$3.50 per bulb for top quality.*

*Ontario: SW, field garlic, commercial use: \$4.00 to \$6.00 per lb*

*Ontario: Ottawa (Carp Festival): top quality, \$4.00 or more per colossal size bulb (approx \$15.00 per lb.)*

*: dirty garlic, unfit for use, \$0.75 per bulb*

*: average around \$12.00 per lb.*

*Ontario: Perth Garlic Festival: \$ 8.00 per lb for locally grown,*

*: \$5.00- \$6.00 for trucked-in garlic.*

**Select, clean seed garlic in all cases sells for much more.**

### Dry Soil in Saskatchewan

**Ellie Gerwing of Lake Lenore** asked:

We have a dilemma re garlic planting. Our ground is so dry that it's dust to at least 6-8" down. If I plant garlic into that and considering that the temperature is close to plus 30 deg almost every day, will the garlic sprout into dust and die because of it, or will it remain dormant until it receives moisture? The ground is warm as evidenced by the fact that one cold morning when I opened up a trench with the tractor in the process of digging potatoes, steam (condensation) formed because of the warm ground air meeting the cold morning air. I've never seen it so dry in the fall. Do you have any advice for me in regard to planting this garlic? Should I wait till spring?

*Editor: Hi Ellie. I would go ahead and plant. The cloves will remain resting until the ground chills down enough to cause sprouting at which time the cloves will set roots. By that time, there should be some precipitation, either rain or snow (I would hope). If it doesn't, you may have to load up a tank of water and give the garlic a bit of a soaking.*

*We're having a drought summer here, too, water levels the lowest in years but as fall came around, we had a few days of rain. I plan on planting the week of the full moon, October 12.*

### Rupert's Red Garlic

We call it Rupert's of Madoc, not Rupert's Red. The lady we got it from said her brother picked it up somewhere and has been growing it in a back yard garden in Madoc for years. It's just another garlic that has been renamed!

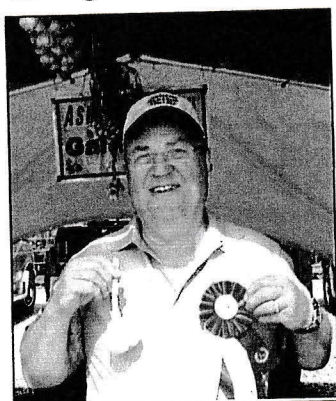
**Ellie Blanchard, Railway Creek Farm.**

*(Letters continued on page 15)*



## A clove here and there

### What goes around, comes around



1<sup>st</sup> prize at the Carp Festival went to Dave Cornell of Ashton Station Garlic for his huge bulb of Sicilian Gold.



Dave thought it fitting that Catherine Cheff share the credit for this fine specimen since he originally got it from her in 2009.

*Editor: Well, when is it coming around to me? I tested Sicilian Gold starting 2005. It did very poorly in the first two years of its trial. I gave some to daughter Catherine and it's been one of her top performers ever since!*

### Humour on the Internet: Frost warning for Smiths Falls - Perth - Eastern Lanark County

Environment Canada issued a frost warning at 5:18 a.m. October 6, AFTER it had already frozen at -2 deg C for several hours. Needless to say, they pulled the warning off the weather network a little later in the morning to save embarrassment, no doubt after getting calls from irate gardeners! The late tomatoes were frozen by then.

### Early Winter?

A storm system that brought record snowfalls to the U.S. and left tens of thousands without power in the Maritimes is hitting Newfoundland with a mix of high winds, snow and rain on Monday Oct 31.

The unseasonable October storm dumped as much as 81 centimetres of snow on parts of the northeastern United States, before surging into Atlantic Canada on Sunday. The last of the Environment Canada weather warnings in the Maritimes had been lifted by 2:15 a.m. AT Monday, but rain, snow and wind were zeroing in on Newfoundland overnight Sunday and into Monday morning.

*Editor: We were lucky here in Eastern Ontario as most of the storms missed us. Aside for a few light dustings of snow, the white stuff held off until Christmas Day. We did have a white Christmas.*

### How will we ever keep up with the demand for garlic?

On Monday, Halloween no less, the world's population will hit seven billion, the UN estimates.

For many, it's a scary number, which is perhaps why UN demographers settled on that particular date. A sly joke, as many observers have suggested. The 21st century is not even a dozen years old and already it has produced a billion extra humans.

Tomorrow's consumer? Some provinces of India have the highest birthrate in the world but that is not the political concern it once was.

Currently, four babies are born every second of every day. *Editor: We can't keep up to the demand for garlic now, so how will we ever keep up if this baby boom continues?*

### Controlling the use of food words

The Food Police, our intrepid Canadian Food Inspection Agency (CFIA) folks, have developed interpretive guidance on use of the word "natural" (in meat and fish). Having royally screwed up the organic thing – it seems they would rather harass Canadian farmers by greater regulation of food words rather than devote efforts to check dubious imports. Here's the gobbledygook, if you can understand it:

"Natural" can generally be understood as meaning:

- A natural food or ingredient of a food is not expected to contain, or to ever have contained, an added vitamin, added mineral nutrient, artificial flavoring agent, or food additive;
- A natural food or ingredient of a food does not have any constituent or fraction thereof removed or significantly changed, except the removal of water; and/or
- A natural food or ingredient of a food that has been produced through the ordinary course of nature without the interference or influence of humans.

*Thankfully, the new guidance does not affect garlic, yet.*

Check the following for the complete bureaucratic nausea: <http://inspection.gc.ca/english/fssa/labeti/natal/instmpanie.shtml>

### Government funding to grow garlic from bulbils?

Would you believe that the taxpayers are actually funding a project by the GGAO to grow garlic from bulbils?

Yes, it's true.

Checking the Agricultural Adaptation Program website, I spotted a project called FIP 1042, Farm Innovation Program, with the summary stating:

"Production of pathogen free garlic seed stock using bulbils - **Garlic Growers Association of Ontario** - This project will investigate how best to grow seed garlic in the field from seeded bulbils, and how to maintain their clean status in the field as long as possible".

*Editor: I wonder if the funding is needed to cover the cost of reading the many reports on the Bulbil Project published in the Garlic News over the past years? Reading can be an exhausting research, you know.*

On that note, do you think government grants to some farmers and not to all are a good idea? The subsidized farmer can cut his selling price below cost. How does that help the hundreds of others who must match the lower, subsidized prices in order to sell their product and lose money doing it?

### Garden Dibber, a.k.a. 'Dibble' or 'Dibbler'

A dibber is a farm tool used to make holes in cultivated soil for planting bulbs and seedlings.

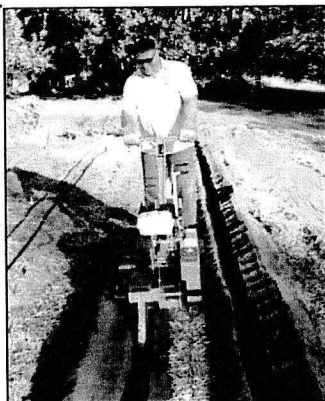


## Fall Irrigation Project

By Dave Cornell

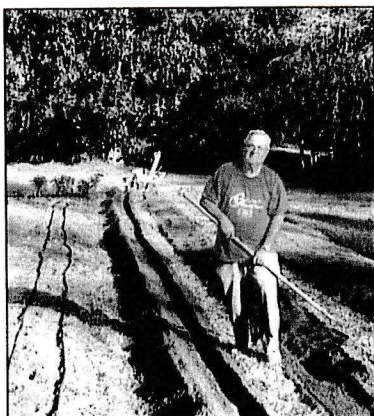
This fall, I had about a 4-week window in which to install a new irrigation system, prior to garlic planting. Total planting this year was 6000 cloves of 24 strains plus French shallots and elephant garlic (I cut back from my 6500 cloves/40 strains last year).

My total irrigation row length in ground is 1000 ft. plus 300 ft. in raised beds. Raised beds were trenched by hand, while the in-ground using a rented trenching machine, both eight inches deep. Instead of using the commercial 1/4-inch drip irrigation hose, I used 1/2 inch weeper hose made from recycled tires.



### Making 8" deep trenches

During my 2011 garlic crop, I experimented with the 1/2 inch weeper on the surface of six of my garlic beds. During the hot, dry weather, I was losing half my irrigation water to The seepage into the soil was not deep enough to reach the garlic roots. I decided to bury the hose eight inches deep and under each double row.



### Dave burying the weeper hose by hand

The 50-foot lengths were cut and joined with 1/2-inch plastic connectors, elbows, T-plugs or with hose ends to cap off the end of each row. The hose was laid in the bottom of the trench. Bone meal, coconut coir and peat moss was then added to the trenches before topping up with soil.

For the largest area, I built a five-tap copper manifold system placed 2 feet above ground at the high end of the sloping rows. Gravity will ensure adequate irrigation of this area. For the remaining rows and raised beds, a separate hose will supply the irrigation water. My water supply comes directly from my well, bypassing the water softener and conditioner.

Total cost, excluding own labour: \$864.00



PDF Product. Double rows of garlic separated by straw paths.

## Al's Garlic Ramblings: Standing up in a Boat

By: Al Picketts

*Editor: I wrote to Al to compliment him on the excellent seed garlic he'd shipped to one of my neighbours, saying, "Was to see Ali Ross the other day and she was planting your garlic. May I offer a heart felt compliment? Your garlic was beautiful. Scrupulously clean, no damage, well harvested and cured. Not even a trace of fusarium or other diseases. I was really impressed. Whatever you are doing, Al, keep doing it. Your garlic is a fine example of how it should be done!"*  
*Al replied in his usual humorous manner.*

Gee whiz, blush blush. Ah trize ma bess, boss. A little makeup goes a long way to hide the bad spots. Please turn off the rain. Record rain in July and August and now I think we're trying to break the October record. Another eight hours and my planting will be done but *I hate to plant while standing up in a boat*. Don't know yet what my final count will be. Please change my ad to NOT read ... "largest collection". I'm down to only about 80 varieties now but what a beautiful 80 they are!

Thank you for the kind words, my friend. They mean a lot coming from someone of your caliber. Sometimes I get volunteers helping me harvest and, believe me, each one gets a quick crash course on harvesting "light bulbs". No banging them together and no tossing them or dropping them. My new wagon has a 2" layer of low-density Styrofoam for the garlic to float on while the wagon bumps along slowly to the *garlickory*. My curing is done indoors with 5 large floor fans on high, 3 ceiling fans on high, and 2 dehydrators on continuous high. Not much chance for mould to grow. I cut the tops down to about 8 to 10 inches above the bulb to have something with which to hang the garlic. I have never found that this shortens the storage life of the garlic but does remove many pounds of wet material that doesn't need to be dried using expensive electricity.

My cleaning tools are a pair of bypass pruners and an array of toothbrushes. I used to use used toothbrushes but found they just didn't do the job like a new one will. I never scrub with the toothbrush; I use it to lift the bulb wrappers near the stem. I also remove as much root as I can even if it means cutting into the stem. I see no place for dirty roots on a clean bulb of garlic. When I package my garlic for shipment I use both tape and glue. You really have to work to open one of my boxes of garlic. I use Styrofoam peanuts, crumpled newspaper and sometimes a material that comes in a sheet and looks like it could be used as quilting material. I don't use bubble wrap except for maybe on the bottom of the box or other plastic foam sheets because they don't breathe and can cause the garlic to sweat and thus mold growth. I put the garlic in either mesh bags or paper bags; both work well. My garlic is always in mesh bags hanging up for storage. I don't let it sit in pails as the bulbs on the bottom of the pail can't get enough air and will sweat and mold. **Al**

*p.s. To put it in perspective, this old codger grows some 35,000 garlic. Now, can you do that and produce top quality garlic?*



# 2011 Toronto Garlic Festival

By: Peter McClusky



The First Annual Toronto Garlic Festival was a resounding success. From the strong garlic sales, to the many delicious dishes prepared by local chefs, and the 5,000 excited garlic lovers who attended from Toronto and the surrounding region, all enjoyed the one-day festival.



*Chef Instructor Anne Sorrenti with young garlic chefs*

Here are a few comments from some of the vendors and customers who attended the September 25<sup>th</sup> festival:

*"I think it will only get busier next year as more people recount the experience and the great opportunity to get great garlic."* Simon de Boer, Langside Farms Limited, Teeswater, ON.

*"We were very busy during the festival with a steady stream of people visiting our stand so we didn't have as much time to actually take in the event but from what we could see it was as close to perfect as you could get."* Dale and Elisa Lukas, The Cobblestone Farm, Paris, Ontario.

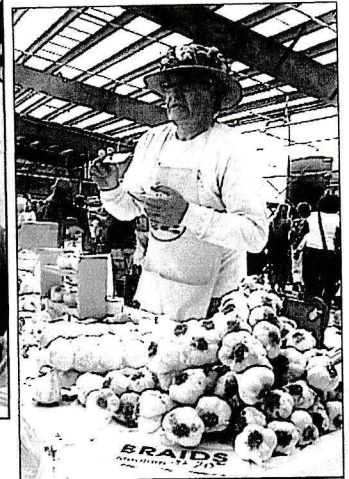
*"Folks really enjoyed the event. The vendors I spoke with were also impressed with the "good energy" at the festival. I did quite well with sales but also had a good opportunity to share and promote awareness of urban/local beekeeping."* Brian Hamlin, Brian Hamlin Natural Local Honey, Toronto.

*"We had a great time walking around. We bought a good supply of garlic, and we also purchased a jar of pickled garlic scapes...we also ran into some friends who were similarly having a great time taking it all in. I'm really looking forward to attending this festival for years to come."* Lysa Lapointe, Toronto resident.



*Robert Litke and garlic lovers*

*Garlic farmer Al Cowan*



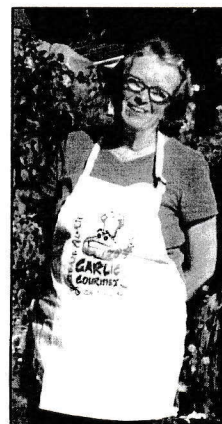
Paul thanks for your support along the way. Thanks also, to the garlic farmers from across Ontario who attended, including members of the Garlic Growers Association of Ontario. I've had some helpful feedback, which will serve to make the 2012 festival bigger, better, and more aromatic.

The date and venue of the 2012 Toronto Garlic Festival will be announced soon. Details can be found at [www.TorontoGarlicFestival.ca](http://www.TorontoGarlicFestival.ca). Contact via Email: [Peterm@TorontoGarlicFestival.ca](mailto:Peterm@TorontoGarlicFestival.ca), or Tel: 416 888 7829.

*Photo credits: Peter McClusky, Toronto Garlic Festival*

## Aprons a big hit at the festival

*From: Elizabeth Murphy*



Hi Paul! Thanks so much for the picture in the Garlic News. The aprons were a big hit at the Toronto Garlic Festival. The bags were good too but the aprons stole the day! Hope to hit the festivals next year! Liz  
[www.envirothreads.com](http://www.envirothreads.com)



## Healthy Foods and their beneficial effects on your health

Apples	Protects your heart	Prevents constipation	Blocks diarrhea	Improves lung capacity	Cushions joints
Apricots	Combats cancer	Controls blood pressure	Saves your eyesight	Shield from Alzheimer's	Slows aging process
Artichokes	Aids digestion	Lowers cholesterol	Protects your heart	Stabilizes blood sugar	Guards against liver disease
Avocados	Battles diabetes	Lowers cholesterol	Helps stops strokes	Controls blood pressure	Smooths skin
Bananas	Protects your heart	Quiets a cough	Strengthens bones	Controls blood pressure	Blocks diarrhea
Beans	Prevents constipation	Helps hemorrhoids	Lowers cholesterol	Combats cancer	Stabilizes blood sugar
Beets	Controls blood pressure	Combats cancer	Strengthens bones	Protects your heart	Aids weight loss
Blueberries	Combats cancer	Protects your heart	Stabilizes blood sugar	Boosts memory	Prevents constipation
Broccoli	Strengthens bones	Saves eyesight	Combats cancer	Protects your heart	Controls blood pressure
Cabbage	Combats cancer	Prevents constipation	Promotes weight loss	Protects your heart	Helps hemorrhoids
Cantaloupe	Saves eyesight	Controls blood pressure	Lowers cholesterol	Combats cancer	Supports immune system
Carrots	Saves eyesight	Protects your heart	Prevents constipation	Combats cancer	Promotes weight loss
Cauliflower	Protects against Prostate Cancer	Combats Breast Cancer	Strengthens bones	Banishes bruises	Guards against heart disease
Cherries	Protects your heart	Combats Cancer	Ends insomnia	Slows aging process	Shields from Alzheimer's
Chestnuts	Promotes weight loss	Protects your heart	Lowers cholesterol	Combats Cancer	Controls blood pressure
Chili peppers	Aids digestion	Soothes sore throat	Clears sinuses	Combats Cancer	Boosts immune system
Figs	Promotes weight loss	Helps stops strokes	Lowers cholesterol	Combats Cancer	Controls blood pressure
Fish	Protects your heart	Boosts memory	Protects your heart	Combats Cancer	Supports immune system
Flax	Aids digestion	Battles diabetes	Protects your heart	Improves mental health	Boosts immune system
<b>Garlic</b>	Lowers cholesterol	Controls blood pressure	Combats cancer	Kills bacteria	Fights fungus
Grapefruit	Protects against heart attacks	Promotes Weight loss	Helps stops strokes	Combats Prostate Cancer	Lowers cholesterol
Grapes	Saves eyesight	Conquers kidney stones	Combats cancer	Enhances blood flow	Protects your heart
Green tea	Combats cancer	Protects your heart	Helps stops strokes	Promotes Weight loss	Kills bacteria
Honey	Heals wounds	Aids digestion	Guards against ulcers	Increases energy	Fights allergies
Lemons	Combats cancer	Protects your heart	Controls blood pressure	Smooths skin	Stops scurvy
Limes	Combats cancer	Protects your heart	Controls blood pressure	Smooths skin	Stops scurvy
Mangoes	Combats cancer	Boosts memory	Regulates thyroid	Aids digestion	Shields from Alzheimer's
Mushrooms	Controls blood pressure	Lowers cholesterol	Kills bacteria	Combats cancer	Strengthens bones
Oats	Lowers cholesterol	Combats cancer	Battles diabetes	Prevents constipation	Smooths skin
Olive oil	Protects your heart	Promotes Weight loss	Combats cancer	Battles diabetes	Smooths skin
Onions	Reduce risk of heart attack	Combats cancer	Kills bacteria	Lowers cholesterol	Fights fungus
Oranges	Supports immune systems	Combats cancer	Protects your heart	Straightens respiration	
Peaches	Prevents constipation	Combats cancer	Helps stops strokes	Aids digestion	Helps hemorrhoids
Peanuts	Protects against heart disease	Promotes Weight loss	Combats Prostate Cancer	Lowers cholesterol	Aggravates Diverticulitis
Pineapple	Strengthens bones	Relieves colds	Aids digestion	Dissolves warts	Blocks diarrhea
Prunes	Slows aging process	Prevents constipation	Boosts memory	Lowers cholesterol	Protects against heart disease
Rice	Protects your heart	Battles diabetes	Conquers kidney stones	Combats cancer	Helps stops strokes
Strawberries	Combats cancer	Protects your heart	Boosts memory	Calms stress	
Sweet potatoes	Saves your eyesight	Lifts mood	Combats cancer	Strengthens bones	
Tomatoes	Protects prostate	Combats cancer	Lowers cholesterol	Protects your heart	
Walnuts	Lowers cholesterol	Combats cancer	Boosts memory	Lifts mood	Protects against heart disease
Water	Promotes Weight loss	Combats cancer	Conquers kidney stones	Smooths skin	
Watermelon	Protects prostate	Promotes Weight loss	Lowers cholesterol	Helps stops strokes	Controls blood pressure
Wheat germ	Combats Colon Cancer	Prevents constipation	Lowers cholesterol	Helps stops strokes	Improves digestion
Wheat bran	Combats Colon Cancer	Prevents constipation	Lowers cholesterol	Helps stops strokes	Improves digestion
Yogurt	Guards against ulcers	Strengthens bones	Lowers cholesterol	Supports immune systems	Aids digestion



# THE GARLIC DIRECTORY

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



## Boundary Garlic

Henry Caron & Sonia Stairs  
Box 273, Midway BC V0H 1M0  
phone: 250 449 2152

certified organic seed garlic – bulbs and bulbils

www.garlicfarm.ca

garlic@garlicfarm.ca



James & Janice Jones  
email ~ bigassgarlic@hotmail.com

Dorset, Ontario  
705-766-2748

## Twin Meadows Organics

Garry & Wendy Lowe

Certified Organic Garlic – Bulbs and Bulbils

Box 926, McBride, BC V0J 2E0

Phone: 250-569-7810

Email: info@twinmeadowsorganics.com

www.twinmeadowsorganics.com

www.organicgarlicbc.com

Plant Bulbils in the Spring!



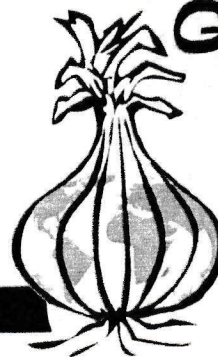
## Croydonview Farm

589 Croydon Rd., RR#1 Roblin, ON K0K 2W0

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## Global Garlic

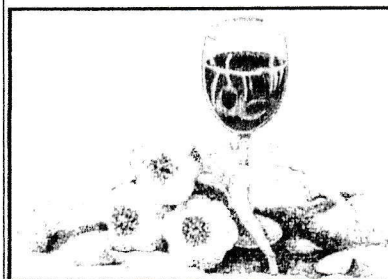
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Al Picketts

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ashtonstationgarlic@gmail.com

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## MORE GARLIC DIRECTORY

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

**Garlic Seed Stock for Spring planting:** \$5/bulb + shipping (early March). Purple Glazer, Northern Quebec, Spanish Roja, Georgia Fire. Sorry, OMA's Gourmet Garlic is sold out. Please email (preferred) or call Liz Tobola: [OMAsGarlic@platinum.ca](mailto:OMAsGarlic@platinum.ca) 403-601-2642

**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](mailto:thegarlicgarden@imagewireless.ca).

**Garlic & Saver Seeds for Sale:** Grown sustainably, all natural, environmentally responsibly. Email or write for listing & prices. Denise O'Reilly, Hill & Dale Farm & A'bunadh Seeds, Box 127, Cherhill, AB. Ph. 780-785-2622. Email: [smileyo@xplornet.ca](mailto:smileyo@xplornet.ca).



**Present your organic garlic in style in an organic cotton garlic bag.** Contact Liz Murphy at Enviro-Threads, 30 Simcoe St. S., Lindsay, ON, K9V 2G4, 705-328-2644. See article in Garlic News Issue #10 Email [enviro-threads@sympatico.ca](mailto:enviro-threads@sympatico.ca).

**Pro-Cert Certified Organic Music.** smaller quantities of others, will ship. Simon de Boer, Langside Farms, Teeswater, ON. Ph. 519-357-1919. Email [sbdeboer@hurontel.on.ca](mailto:sbdeboer@hurontel.on.ca).

**Certified Naturally Grown garlic:** Music, Spanish Roja, Yugoslavian, German White, Chesnok Red, Czech Broadleaf, New York White. Blue Marsh Farm, NS. Ph. 902-945-2729. Email: [barbara@bluemarshfarm.ca](mailto:barbara@bluemarshfarm.ca) website: [www.bluemarshfarm.ca](http://www.bluemarshfarm.ca)

**Organic Garlic from the Cutting Veg:** Persian, Israeli, Yugo, Tibetan, Ukrainian, Korean, Chinese, Salt Spring, Russian. [www.thecuttingveg.com](http://www.thecuttingveg.com). Contact Daniel Hoffmann, [daniel@thecuttingveg.com](mailto:daniel@thecuttingveg.com). 647-388-7444, business card facing page

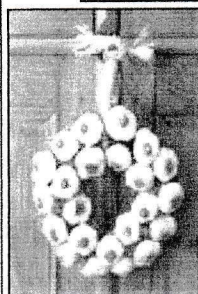
**Garlic for Sale:** Featuring 'the original Big Ass Pickled Garlic' & assorted garlic products, will ship. Music garlic in season. See facing page. Ph. 705-766-2748. Email [bigassgarlic@hotmail.com](mailto:bigassgarlic@hotmail.com).

**Garlic for Sale:** from Frenchy's Acres of Lafontaine ON. Featuring 14 varieties. Shipping within Canada. Chemical free. Jerome & Cora Charlebois. Ph: 705-533-4927. Email: [frenchygarlic@gmail.com](mailto:frenchygarlic@gmail.com)

**Salt Spring Seeds** on Salt Spring Island carry a great line of heirloom & heritage seeds including garlic. Contact Dan Jason at 250-537-5269, or email [dan@saltspringseeds.com](mailto:dan@saltspringseeds.com). Website: [www.saltspringseeds.com](http://www.saltspringseeds.com)

**Organically grown garlic for sale:** Over 10 strains available including our Mennonite. Ph. Elly Blanchard, 613-473-2889 or email [railwaycreek@gmail.com](mailto:railwaycreek@gmail.com). Website [www.railwaycreekfarms.com](http://www.railwaycreekfarms.com) to order and descriptions. Will ship small quantities.

**Certified Organic Garlic from the 2011 Eastern Ontario Garlic Champions:** Russian Red, French Rocambole, Georgia Fire, Georgia Crystal, German Red, F4 Italian Red. Certified organic by Pro-Cert Canada. David & Miguel Hahn, Forest Farm, Godfrey, ON. Ph. 613-273-5545. Email [dhahn@rideau.net](mailto:dhahn@rideau.net). Website, <http://forestfarm.wordpress.com>.



**Hill and Dale Farm**  
[hillanddalefarm.wordpress.com](http://hillanddalefarm.wordpress.com)  
Box 127, Cherhill, AB, YoE oJo  
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Offering garlic- 20 varieties and farm products including A'bunadh Seeds - Heirloom & open pollinated short season seeds.

**Bulbils:** Grow your own nematode-free garlic seed stock from bulbils. Order no later than June 1 as scapes are removed soon after. Small-Plot Garlic Variety Trials, certified organic. ph. 613-273-5683 Email: [garlic@rideau.net](mailto:garlic@rideau.net)

*The epidemic spread of the Bulb & Stem Nematode has brought home the old adage, "you reap what you sow"*

## ROCKFIELD FARM DRAFT HORSE WORKSHOP

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## Garlic recipes: Some favourites for making garlic products in your home kitchen

### Mary Lou's Original Garlic Jelly

*Mary Lou Pospisil developed this recipe for the 1<sup>st</sup> Glorious Garlic Festival held in Perth, August 16, 1997. It has been featured at festivals since that time and is still as popular as ever. It is offered here for you to try for yourself.*

#### Ingredients (for six jars):

¼ lb peeled garlic cloves      2 cups white vinegar  
One 3-oz. pouch of liquid Certo      5 cups sugar

#### Method:

In a food processor, blend garlic and ½ cup vinegar until smooth. In a 6-8 quart saucepan, combine garlic mixture with remaining ingredients and bring to a boil, stirring constantly. Quickly, add Certo, return to a boil and boil hard for 1 minute, stirring constantly. Remove from heat and immediately fill hot, sterilized 250 ml jars with jelly mixture, leaving a ¼ inch headspace. Wipe jar tops and threads clean. Place hot lids on jars and apply screw bands firmly. Check snap lids for pop down when cool.

### Pickled Garlic

#### Ingredients:

2 cups peeled garlic cloves  
1 ¼ cups vinegar  
¼ cup sugar  
½ tsp pickling salt  
½ tsp peppercorns  
½ tsp mustard seed  
1 bay leaf

#### Method:

Combine all ingredients except garlic, boil for 2 minutes, add garlic and boil for 2 more minutes. Bottle in sterilized jars and seal. Makes 7-8 small jars.

### Making Garlic Powder

*From the Garlic Guru's kitchen experiments*

Garlic powder is made from dried garlic cloves, ground finely into a powder. Use as many as you think you will need for a winter supply.

#### Preparation:

You will need a Food Dehydrator (or, an oven that will go down to about 140 deg F), a clean coffee grinder and some sealed jars shakers to store the garlic.

#### Method:

Crack the bulbs into cloves and peel them to remove the clove wrappers. Cut them into 1/8" slices and put them on the drying trays. Slow dry for 8 hours, then, turn off the heat, and let them sit overnight to finish drying. When the flakes are dry and brittle, grind them in a household coffee grinder. Place in sealed jars with at least one shaker for

#### Alternate Method:

Chop cloves in a food processor and spread on drying trays. Slow dry for 8 hours, then, turn off the heat and let sit overnight to finish drying. When dry, break into pieces and grind in a household coffee grinder. Place in sealed jars with at least one shaker for ready use  
The chopped cloves ground more easily and made for a lighter powder. The sliced cloves seemed to dry harder and tougher. When I sampled them, there was no apparent difference in taste. Both were very powerful, much stronger than commercial garlic powders.

### Garlic Scape Powder

Follow the Alternative Method from the recipe above to make Garlic Scape Powder. Drying time may be a bit less.

#### Variations:

Mix with fine sea salt and other herbs or spices for a spice powder to use for flavoring your favorite dish. I added some scape powder to my homemade garlic sea salt for a super strong seasoning.

### Freezing Garlic: Pureed in olive oil

Garlic may be frozen in ice cube trays for convenience in cooking. Although it loses some flavour, it's better than the imported garlic. If you have garlic that is unlikely to keep well over the fall and winter, it's better to freeze it. Frozen puree can be used for stir-fries, in soups or stews or in any recipe calling for garlic to be cooked.

#### Method:

Crack garlic bulbs into cloves and peel them to remove the clove wrappers. Soak in household vinegar for 1 hour, drain, and dry. Place in food processor, cover with olive oil and puree until oil and garlic form a liquidy paste. With a spatula, scrape puree into ice cube trays and place in freezer. Use by popping a cube out of the tray.

### Frozen Scares

Prepare scares by washing and removing seedpod end and cutting into size needed. Put in freezer bags of convenient size and place in freezer. No blanching needed. Keeps one year.

### Freezing Garlic Scares: Basic Garlic Scape Spread

Finely chop washed and cleaned garlic scares in a food processor. Slowly blend in extra virgin olive oil until it forms a smooth mixture. Scrape into ice cube trays or it can be frozen in plastic containers. Use immediately after removing from freezer and do not re-freeze.

#### Food is the most powerful medicine available

*"The small, diverse family farms are our pharmacies, food is our medicine." Rosemary Kralik, Maberly, Ontario*



## More garlic recipes and ideas

### De wine chicken

By: Frances Legault

#### Ingredients:

1 lb. skinless, boneless chicken breast halves  
1-cup buttermilk  
½ cup flour  
1 tbsp paprika and garlic pepper mixed  
2 tbsp butter  
4 cloves garlic, minced  
½ cup sun-dried tomatoes, chopped  
1-cup chicken broth, divided  
1-cup of white wine  
1-cup sliced mushrooms  
1-cup heavy cream  
1 tbsp of cornstarch  
Garlic pepper to taste  
2 tbsp vegetable oil  
2 tbsp chopped fresh basil  
8 oz. dry fettuccini pasta

#### Method:

Soak chicken in buttermilk (or 1 cup of milk and 1 tbsp vinegar) for a few hours. In a large saucepan over low heat, melt 1 tbsp butter & oil, add garlic cloves and cook for 30 seconds. Add the tomatoes, mushrooms, ¾ cup of the chicken broth and wine. Increase to medium heat and bring to a boil. Reduce heat and simmer, uncovered, for about 10 minutes or until the tomatoes are tender. Add the cream with the cornstarch and bring to a boil; stirring. Simmer over medium heat until the sauce is thick enough to coat the back of a spoon. Set aside.

Mix the flour, paprika & garlic pepper and then dredge the chicken on both sides. In a large skillet over medium heat, warm 1 tbsp oil and butter and sauté chicken. Press on chicken occasionally with a slotted spatula. Cook for about 8 minutes per side or until the meat feels springy and is no longer pink inside. Transfer to a board; cover and keep warm. Discard the fat from the skillet. In the same skillet, over medium heat, bring ¼ cup chicken broth to a boil; stirring the pan juices. Reduce slightly and add to the cream sauce; stir in basil and adjust seasonings to taste. Meanwhile, bring a large pot of lightly salted water to a boil. Add fettuccine and cook for 8 to 10 minutes or until al dente. Drain, transfer to a bowl and toss with 3-4 tbsp of the sauce.

Cut each chicken breast into 2 to 3 diagonal slices. Reheat the sauce and add the chicken. Transfer the pasta to serving plates, top with chicken and serve.

#### Kitchen Hint

Garlic or onion smell on your hands? Rub your fingers on stainless steel – the sink, faucet or a pan. Goodbye smell. Or, if the coffee pot is on, wash hands with coffee grounds.

## Making garlic sea salt using fresh organic garlic

From the Garlic Guru's kitchen experiments

In Issue 14 Winter 2007-08, I described a home recipe for making Garlic Powder from garlic cloves. I have also made Garlic Salt using fresh garlic cloves rather than merely mixing garlic powder with salt. The purpose was to retain the health giving properties of allicin. Editor.

**WHEN IN  
DOUBT  
ADD MORE  
GARLIC**

This recipe uses 1-cup of garlic cloves to 2 cups of sea salt.

#### Preparation:

You will need a food processor and an oven that will go down to about 140 deg F, and some top sealing salt shakers to store the garlic salt.

#### Method:

Crack the bulbs into cloves and peel them to remove the clove wrappers. Put 2 cups sea salt and 1 cup garlic cloves in the food processor and run until garlic is completely chopped and absorbed by the salt. Spread on drying tray, slow dry for 8 hours, then, turn off the heat, and let sit overnight to finish drying. Break salt cake into pieces and run in processor until the salt is of the right consistency. Place in sealed jars with at least one shaker for ready use.

**Optional:** Add fresh oregano, summer savoury, or herb of your choice to give a finer flavour to the garlic salt.

### Recipes for Making Home Garlic Products in Previous Issues of The Garlic News

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## A Garlic Planting Plan for Beginning Organic Market Gardeners

: Condensed from a talk by Paul Pospisil

*The plan assumes that the gardener has spent two or three years growing garlic to gain familiarity with the characteristics and vagaries of this unique vegetable and a firm grasp of organic practices. The decision to become a market gardener requires both a good knowledge of gardening and a bent for marketing. It is a decision not to be taken lightly and a Business Plan must be prepared, discussed with experienced market gardeners and put to paper as a living document.*

1. Business Plan: Start by making an outline Business Plan. The Plan starts with marketing. The first thing is to determine is whether or not there is a market. Is there a farmers' market nearby, are you on a busy road that attracts buyers or, where else could you sell your vegetables?

2. Set your target. When will you start selling and how large an operation would you like to aim for in future? A good Business Plan should set a five-year growth target.

3. In your Plan, identify your resources, both those needed and those on hand. Labour availability at harvest time, land acreage, soil quality, water sources, equipment, sources of seed, organic manure and mulch, buildings for harvesting, curing and storage and a list of essential smaller items.

4. Select a preliminary list of vegetables to grow. Garlic is not a stand-alone crop and should be grown in rotation with other vegetables and/or cover crops, for both economic and organic reasons.

5. Choose your land site. If you have lots of acreage, decide on the location and size of your land to use for rotation plots. Let us say that your final target calls for three acres of vegetables, one for garlic, one for vegetables and one for either legumes or green manure cover crops. Divide your field or garden into three equal, one-acre parts. Call them Plots A, B & C. If you wish, you can use a four or five-year rotation but three is the minimum.

6. Starting Plot Size: Measure off each acre with a 50' x 50' Plot, or a size that suits you. This is enough to start with for the first year. Experienced gardeners with adequate resources can start with more. You will be enlarging the Plots in subsequent years so take this into consideration.

7. Soil Building a Year Ahead: Prepare your soil in all Plots starting at least a year ahead of first planting. Never assume that you can merely plough up a meadow and plant. That's a sure-fire recipe for failure. You need to improve the soil texture and fertility. Till the soil, add compost and composted manure, plant legumes or several plantings of green manure cover crops to till under, and, MOST IMPORTANT, KILL OFF THE WEEDS! Legumes restore nitrogen to the soil and harvest early so they should be one of your green manures. Follow them with a cover crop like buckwheat to plough down before garlic planting time.

If nematodes are a problem in your soil, include mustard in your green manure cover crops rotation.

8. Organic Certification: Start organic right from the start and make application for certification. Don't leave it till "later". Certification takes time and so does the organic learning process.

9. Crop Rotation: When all is ready, plant Plot A to garlic the first fall. The next spring, plant Plot B to legumes like peas and beans, and C to other market vegetables (lettuce, spinach, radish, green onions, beets, carrots, summer turnips, baby potatoes, early tomatoes, and other high-demand vegetables requiring the least space). The 2<sup>nd</sup> year, garlic goes to Plot B, legumes to C and the others to A. The 3<sup>rd</sup> year, garlic follows legumes in Plot C, legumes to Plot A and others to Plot B. Continue rotating crops every year.

10. Garlic Planting Stock Calculations: Buy only enough garlic the first year to plant Plot A.

a. For a 50 x 50 plot: Make 10 raised beds, 36" wide with 24" walkways between x 3 rows per bed = 1500 feet of row. Use raised beds for all crops. The reward is bigger harvests.

b. Cloves needed: Porcelains @ 2 cloves per foot of row = 3000 cloves. This will give you 3000 plants next year. Others @ 3 cloves per foot = 4500 cloves.

c. Bulbs needed: Porcelain @ 4 cloves per bulb = 750 bulbs. Rocamboles and Purple Stripes @ 7 cloves per bulb = 650 bulbs. Softnecks @ 9 cloves per bulb = 500 bulbs. For subsequent years, save 25 % of your crop for replanting, more if you are increasing the quantity planted.

11. In the 2<sup>nd</sup> and subsequent years, you will enlarge your Plots to grow more of everything, not only garlic. Follow the same preparations as you did for the first 50' x 50' plots. Your sales will give you an indication of how much you can sell the following year, thus, how much land you need.

12. Know about garlic and diversify your garlic crop. Grow at least one cultivar from each of the main Horticultural Groups as a self-education program. When you sell direct to consumers, you want to know about all garlic, not just one cultivar. Consumers have personal choices and expect you to answer questions intelligently.

13. Quality is of utmost importance. While garlic can be a profitable crop for market gardeners, it's not a get-rich-quick scheme. Don't grow any more than you can handle to produce a quality product at harvest time. It takes a lot of work to grow it well, harvest, cure and prepare it and, take it market. A quality product requires quality work, lots of it!

14. Business Plan: Keep good records so you know how you are doing. Review and adjust your Plan every year, based on sales. Develop your market garden and garlic business over five years as you develop your market and customer base. Don't grow any more than you can sell. Garlic grown in balance with other market vegetables is a satisfying, profitable venture. Above all, remember quality.



## More calls and letters

**7000 bulbs in the ground.** Carole Campbell of Dundas, Ontario wrote to say they had 7000 bulbs in the ground for 2012 as garlic was becoming popular in their area. The garlic is mulched with goat manure, alfalfa, and lots of leaves. She finds the Garlic News very helpful and asked to keep new hints coming.

**The Cutting Veg in the GTA will have 40,000 bulbs next year!** Daniel Hoffmann said; "In addition to planting our staple favorites, including Persian Garlic, Tibetan, Korean, Israeli, Sicilian, etc, we are adding four new varieties to the mix this year: Portuguese, Hungarian, German, and French Pink. In all, we will be planting 20 varieties, originating from all over the world. Our goal is to plant 40,000 cloves this fall, which will turn into 40,000 bulbs next summer!"

*Editor: Daniel's collection sells under the name, "Global Garlic". See his ad in the Directory pages,*

## Fall emergence of garlic

**Alice & Jim Izatt of Horndean, Manitoba:**

We planted our garlic a few weeks ago around the same time as other years. We noticed that the garlic is starting to come up. Will this hurt our crop? Will it still grow in the spring? We have had much warmer temps this year.

**Annelies Davis of Hamilton, Ontario:**

I purchased some of your rare garlic like the Creoles and one called Kathmandu. This latter one concerns me. I planted the garlic varieties a bit late about a week after the 15th of October and I noticed that Kathmandu has already sprouted up out of the ground about 2 inches. It has been a very mild November here in Hamilton, Ont., but now it is freezing and snow today. Is this going to harm this garlic that is growing up already and is there anything I can do to save it?

**Jane Kalbfleisch-Wilson of Toronto, Ontario:**

Hi Paul. A few of my garlic have sprouted. What will happen to their spring growth?

*Editor: Hi Alice & Jim. Will it hurt the crop? Well, it's not an ideal situation; I've had garlic emerge before freeze-up. The tips froze off but the following spring, it grew. I would think you should be OK. Just spread some mulch over it so it doesn't winterkill.*

*Hi Annelies. Quite a number of cultivars from the Asiatics, Turbans and Creoles break dormancy and start to grow before freeze-up. I must confess that I do not know why. This does not appear to hurt them providing that you use normal winter mulch protection. I look forward to your report on Kathmandu after harvest next summer. It's a really fascinating cultivar.*

*Hi Jane. With a lengthy fall this year, garlic hasn't gone to sleep and some has emerged. Mulch it to cover the spears so they don't shred in the cold winds. They'll continue growing in the spring.*

## Nematode Concerns

**Francis Finneran of Pawtucket** wrote; "On the bulb and stem nematodes: As you do, I grow the yellow mustard (Brassica Juncea) as a green manure. On the new garlic varieties I buy at all the garlic festivals I go to, I have a mixture that I soak them in for 24 hours. It is made from taking the yellow mustard plant, roots, and all. I cut up the plant and put it in a food processor with some water. If it kills them, I do not know but I just do it any way. Then just before I plant, I soak the garlic in alcohol for about 10 to 15 minutes. Do you know the killing zone of the yellow mustard and what is the planting rate for it to work?"

*Editor: For all new garlic cultivars, I've started growing them for bulbils in pots, separate from my others the first year. This is a safeguard to prevent importing diseases and pests like nematodes. I then harvest the bulbils and grow the sample from those. It adds a couple of years to doing the evaluation but I can't afford to risk destroying my collection, having already had a couple of bad experiences with infested garlic brought into the trials. I swear by mustard, yellow or brown, as a preventive measure - this year I'm trying the oriental mustard "Cutlass" as it has more leaf structure than yellow and so should contain more of the fumigant allyl isothiocyanate. I plant and till under two crops immediately after harvest and two or three crops in the new plot the summer before planting. That seems to have been very successful in preventing a re-emergence of the nematode. You can never be sure because the accuracy of soil tests is very poor. No planting rates for mustard have been established that I'm aware of. Our government researchers have just started trying the system - they still favour promoting very expensive chemical soak methods so the organic approach takes a back seat. For a pre-planting soak, I've been trying common broadleaf plantain - none of our researchers here have tried the system but it appears to have a 100 % kill rate compared to only 50 % for the hot water method. So far, I haven't had any infested cloves to try but have been using it as a precautionary treatment just in case. Our nematologist says that mustard does not work as a soak because the nematicide works as a fumigant.*

**Angie Koch of Fertile Ground CSA, asked:**

I'm an organic vegetable grower near Waterloo. I had some nematodes in my field this year - not a lot of damage, but enough to know they were present in higher numbers than usual. I'm aware of the Garlic Growers' Assoc's water bath heat treatment advisory, but I don't feel at all confident in my ability to maintain 120F reliably for 20 minutes to pull off the treatment safely. Anything else you're aware of that might help reduce the nematode population before I plant?

*Editor: Hi Angie. I agree on the difficulty of the hot bath method. There is another method using Broadleaf Plantain as a soak for cloves - apparently, it had a 100 % kill rate as compared to 50 % for the hot water method but OMAFRA won't look into it. See attached paper on Plantago from the 1995 Insuenza-Valenzuela research in Chile. Don't forget that treating the cloves alone won't get rid of them. They are likely in your soil and on any tools that you used in that soil so they'll come back anyways unless you look at treating both the soil and the seed.*



## Still more calls and letters

**Becky Hughes, Head of the Northern Horticultural Research/SPUD Unit**, provided this clarification on nematode soil tests carried out at Guelph:

There has been some confusion about soil testing for stem and bulb nematode. For \$45/sample the Pest Diagnostic Clinic will count the number of nematodes in the genus *Ditylenchus* species (spp.), as it is difficult to distinguish the stem and bulb nematode from other nematodes in the same genus. Most of the other *Ditylenchus* nematodes live in soil and feed on fungi. Their populations are usually very low. Select the site with the lowest *Ditylenchus* spp. counts. The economic threshold for stem and bulb nematode or *Ditylenchus* spp. is 100/kg of soil. Avoid using soils with counts above that level or implement a management strategy.

## Growing garlic for 30 years

**Wayne Davey of New Liskeard, Ontario**, wrote: I have been growing garlic for over 30 years and I think I have learned more in the last few months with your publication than in my last 30 years of trial and error. Keep up the good work. I will be calling soon with a lot of questions, not only about garlic. Keep well, God Bless, **Wayne**.

*Editor: Thanks, Wayne, and I appreciate your wise advice, too.*

## Fusarium

**Katherine O'Brien wrote from Nova Scotia**, asking:

My name is Kate O'Brien. I've had the pleasure of interning with Andrea Berry at Hope Seeds this season. We're sitting down with some fusarium affected garlic seed and wondering what to do. Not all the cloves are visually affected. Some look fine when peeled. We're hoping to find some tried and tested way of cleaning these cloves and then planting them in bins with sterilized soil. Are you aware of any cleaning methods? Compost tea? Hot water bath? Do you think it's worth it or would you just recommend getting new seed?

*Editor: Fusarium, in its many forms, is here to stay, at least in the current growing methods. Clean seed sounds great but the disease is soil-borne as well as seed-borne so you'll infect your clean seed by planting in infected soil. I'm afraid that you won't readily find a solution to eliminating the problem. Hot water baths are of limited use. Non-organic chemicals have only a partial success rate. Even bulbil growing is only a temporary solution as the bulbs re-infect. My best advice: Select the cleanest cloves, discarding the obviously diseased ones, and plant them in rich soil. Healthy plants will resist the disease better than those under stress. If Mother Nature smiles a benevolent smile, no climatic stresses should occur to cause a breakout of the disease. p.s. If you peel the cloves, be sure not to break the waxy surface under the clove wrapper. Tiny cut allow the entry of pathogens.*

## DNA Testing of Garlic

**Liz Tobola of Aldersyde, Alberta** asked: Any idea where one might get garlic DNA testing? I tried Guelph lab but they said no.

PDF Pro Trial

*Editor: Hi, Liz. DNA testing? At this time, forget it. It's not available and if it was, likely cost prohibitive. See Gayle Volk's article Issue 20 Fall 2009. As a top garlic researcher in the USA, she was able to use only groups of genes (commonly called isozymes). Biogenetic Services in the USA does some in case you want to see what they offer. In Canada, it's only available for paternity tests. Now, what has your garlic been up to?*

## Elephant Garlic at the fair?

**Vicki Jensen of Rockwood, Ontario** asked:

I've noticed at some local Fall Fairs that the garlic entries and winners look a lot like Elephant Garlic. Either that or Music on steroids. They are huge. I've always been under the impression that Elephant Garlic is not really true garlic, but more a member of the leek family. The winning entries seemed like bigger are better. Non-winning entries were smaller, yet uniform in size, nice skins etc. and were "true garlic". Am I misguided or missing something? I've always been very proud of the Music I grow, for many reasons, but it would have been dwarfed in size. Should Elephant Garlic be included in garlic competition at the Fairs, or are the local judges not well enough informed?

*Editor: If Elephant is entered in the garlic class at a country fair, the judge should merely put it aside and not judge it. It should be entered in the leek class. Garlic is *allium sativum*. Elephant garlic (a misnomer) is *allium ampeloprasum*, a leek of the Giant headed sub group. It is no more a garlic than *allium giganteum*, the tall flowering *allium* found commonly in flower gardens.*

*The judge would be wise to check their plant identification. They are not always well informed. Publication 34, the OHA Judging Standard, contains only a rudimentary description of garlic.*

*By all means, bring it to the attention of the Director in charge of the vegetable competitions. I would be pleased to send them a copy of the complete Judging Standard for Garlic.*

## Growing Garlic in Containers

**Caroleigh Wehking of Cambridge, Ontario** asked:

Is it possible or at all desirable to grow garlic in containers? We have some concerns about our ground soil and plenty of compost to put into our containers. Our garden is pretty protected. I'm not sure what this means in terms of freezing and thawing.

*Editor: Yes, you can grow in containers but it will not be very satisfactory. The garlic has deep roots, sometimes up to 18 " and needs room to spread as well so you could only have one plant in a large (3-4 gallon) container. You are better off to develop your soil by adding a lot of compost and composted manure and plant directly into the soil. Check my growing instructions on the Boundary Garlic website for more information.*

**John McDougall, Chair, Verona Lions 2011 Garlic**

**Festival** wrote: I just digested your recent Newsletter. It was terrific. Thanks for your leadership and guidance in the planning and operations of the 2011 Verona Lions Garlic Festival. You have been the 'spiritual guide' from the very beginning.