

GARLIC SEED FOUNDATION
ROSE VALLEY FARM
ROSE, NY 14542-0149

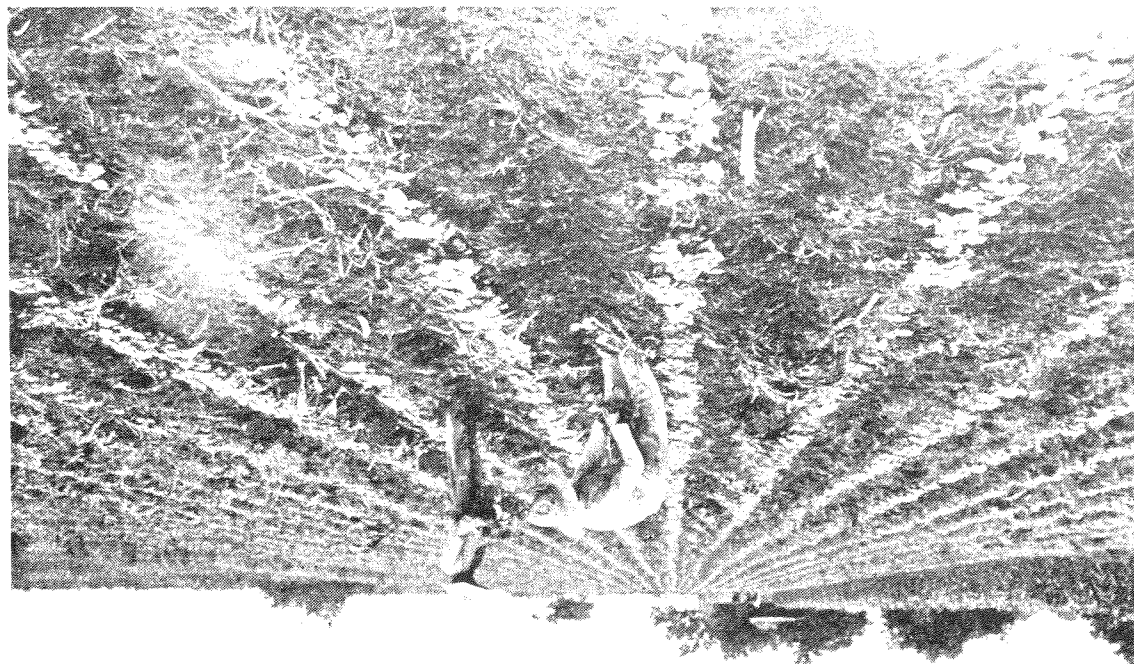
CHANGE SERVICE REQUESTED

Vinegar: An Effective Organic Herbicide
Fresh Garlic in the Spring (Cold Storage)
Garlic: Maintaining Postharvest Quality

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David Stern
Rose Valley Farm
PO Box 149
Rose NY 14542-0149

Intercropping garlic with cotton on the same land. The middles were planted to cotton several weeks before the photograph was made (time of harvest).



THE REGULAR, AND NOT SO
REGULAR, NEWSLETTER OF THE
GARLIC SEED FOUNDATION



Garlic Press



EARLY SPRING 2004
www.garlicseedfoundation.info

#43

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Initial membership in the GSF is \$15/4 issues. Renewals are 8 issues for \$20. All submissions for *The Garlic Press* should be sent to GSF, Rose, NY 14542-0149 or gardunk@yahoo.com. All medical references should be taken for educational purposes and any recommendations should not preclude consulting with a health practitioner. Please, no reprinting any material herein without written permission.

Vinegar: An Effective Organic Herbicide

2003 Garlic Field Trials at Honey Hill Farm
by Fred Forsburg (15 Jan. 04)

I received a USDA-SARE grant in 2003 to field test the use of vinegar as an organic herbicide in garlic production. This research was directed at the in-row control of weeds only. Between-row weeding was accomplished with mechanical control. Based on USDA laboratory research, I selected 10% acetic acid vinegar as it was shown to possess greater ability to kill weeds than the ubiquitous 5% vinegar. In my research, I additionally confirmed that vinegar is OMRI compliant for organic production.

In my field trial, I found that basally applied vinegar is an effective organic herbicide. According to USDA-Beltsville researchers, vinegar kills plants by producing a breakdown of the cell membrane integrity resulting in desiccation of foliar tissue. Vinegar controlled all broadleaf weeds in my garlic but provided mixed control on grasses. This may have been due to the cool and wet conditions we experienced throughout our 2003 growing season in upstate-NY. Weed control appeared to be more successful when temperatures exceeded 70 degrees and direct sunlight was available.

For optimal effect, most weeds should be sprayed when in their cotyledon or seedling stage. Many weeds can be controlled even in full leaf but may regenerate from root reserves e.g. thistles, dandelion. Vinegar should be treated as a non-selective herbicide, and, as most herbicides, is much more effective prior to seed set.

My first application, on May 10, was applied when the garlic was at 18" height, using a drift guard to protect the garlic as much as possible. While there was damage to the lower 1 or 2 leaves in the form of tip burn, it later proved to be cosmetic. The four subsequent applications (5/20, 6/1, 6/15, 6/22) seemed to have little visible effect on the more mature garlic and I later removed the drift guard when spraying. All test plots demonstrated effective control, but those that were sprayed on both sides of the row were almost totally devoid of broadleaf weeds. With regard to the garlic crop, I saw no difference in plant size, maturity date, quality, yield, bulb size, appearance, or keeping ability between the test and control plots.

This field trial reveals a substantial saving of labor for in-row cultivation of garlic. It required 18-20 hours to manually in-

row weed half an acre. One can basally spray the same plot in 1-2 hours. **This represents a 90% reduction in labor!**

The goal in herbicide spraying is the uniform application of product on the weeds. This is achieved through the use of calibrated spraying technology and selected travel speed. Sprayer calibration is accomplished by selecting the proper combination of pressure, volume and spray pattern for the target species. Large droplets can bounce off leaves and small droplets will drift. Thus controlling droplet size minimizes drift, improves effectiveness of the product, and reduces waste. Droplet size is a function of pressure and nozzle flow rate. With no pressure-controlling mechanism, the droplet size varies constantly with pressure changes in the sprayer and a poor result is certain, along with inefficient and ineffective use of the herbicide.

To control pressure, I used a device called a CFValve (Constant Flow Valve). It provides a constant flow regardless of varying input pressure. The second variable, the nozzle provides the flow rate and pattern. The third variable, travel speed is necessary in maintaining accurate applications. Gallons per acre are a function of nozzle flow, pressure and travel speed. I used a Solo backpack sprayer with the CFValve @ 21.5 psi and a TeeJet XR11002VS nozzle. This produced a medium droplet @ 20 gallons per acre.

Five applications on a half-acre required 50 gallons of product. The purchase of a 55-gallon drum costs \$67. Thus the cost of each treatment is \$13 versus 18 hours of manual labor. Shipping cost varies based on shipping distance and is not included in the equation. At conclusion of this project, no soil pH changes were found.

Vinegar is additionally useful as a general burn-down herbicide when weeds are young and rapidly growing. At the end of the season, vinegar has an advantage over other herbicides in that it can be mixed with water and tossed with your salad. Vinegar: the incredible edible herbicide!

[We thank Fred for sharing his research. A complete version of Fred's SARE report can be found electronically at 222.sare.org, Grant Number FNE03-461 and hard copy from GSF/ROSE (\$4.00). Fred is available for serious comments and questions at honeyhillfarm@exite.com (D.S. com)]

Director's Notes



It's good to be back! After months of negotiation, Bob Dunkel has returned to the helm of this publication and we are both very pleased to bring you this issue. We are reserving **Press #42** as a "**Best of the Press**" and that is almost halfway done. At the same time, we've got **Press #44** underway with the results of some very current research work on cultivars/varieties, crop insurance, USDA-GSF collaborative grant application, basic information on drying, and an important piece on the care of one of our most important tools—our hands.

They call snow "poor man's fertilizer" based on the theory that snowflakes, as they fall to earth, capture nitrogen from our air (which is 78% nitrogen). I am a wealthy man this winter! We've had continual snow cover, the deep and heavy snows have taken down five barns in the land block east of this farm, but it's been great for skiing and getting caught up in the barn and at my desk.

A couple of days after you received **Press #41** last spring, we experienced 30 hours of light rain with the temperature between 28°-33°F. Every surface had 1-3" of ice when the trees started coming down, all through the night, every couple of seconds hearing the explosion and the tops of trees falling/crashing to earth. This happened at the same time Bush was bombing Baghdad. I was out on the farm at daylight looking at such destruction I didn't recognize my own farm. One field had 74 trees topped over into the field, trees on roads and power lines, which weren't replaced for 9 or 10 days. The ice melted in less than 24 hours.

When I lived in Miami, I experienced hurricanes, and when I lived in Kansas, I survived a twister, but this ice storm was different. The big wind storms are a rush:

they roar in and roar out and then it is quiet. The ice took hours and hours, bending each limb and trunk, thicker and thicker. The breaking points started in the late afternoon and increased into the darkness. For over 15 hours, every two or three seconds, sitting inside with candles...listening...just listening...bam/crash...north then west, now south and east, near, then far, over and over, for hours and hours...crack/thump.

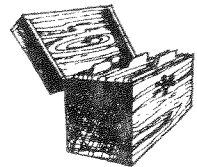
I knew 2003 would be a special year—my 30th at Rose Valley Farm—just not that "kind" of special. Thirty years of working in my 20-acre forest, cleaning hedgerows, planting windbreak and wildlife areas, planting orchards and timber stands...now some are O.K., some are gone, but all of it unmanageable. I felt like a mosquito in a nudist camp. I knew I had a lot to do, but I wasn't sure where to start!

* * * *

As I end these notes, I wanted to share two things that came across my desk recently. The first was a paper from the United Nations reporting that for the first time (2000) in recorded history, worldwide food production decreased. I then heard a medical person report the childhood trends of diet and lifestyle of American children today don't change, they'll be the first generation in recorded history to live a shorter life span than their parents. I was thinking that these two issues might be connected.

The snow is still deep and perfect for skiing, but the days lengthen and the sun is warmer on my face. Winter is still going to kick a little ass, but the tilt back has begun. I am ready for Spring and I'm ready for a change. I hope you enjoy your **Press**.

(D.S. com)



Recipes

GARLIC FETA FETISH From Mary Anne Nichols

1 cup feta cheese
2 cloves garlic, chopped
1/3 cup olive oil

Mash together with fork. Spread on crackers, pop corn cakes, etc.

SOUTHERN GARLIC SPOON BREAD

Stolen from *Mad for Garlic*, a cookbook by Pat Reppart available from GSF

3 cups milk
3 cloves garlic, put through a press
1 cup stone ground white cornmeal
1 1/2 tsp salt
1 tsp sugar
2 Tbsp butter
3 eggs, beaten
3 tsp baking powder

is gently simmering, add the garlic and whisk. Then add the cornmeal gradually, constantly stirring. Then stir in the salt, sugar, and butter. Continue stirring until the mixture becomes thickened, then remove from heat.

2. In a bowl, beat the eggs along with the baking powder. Beat until the eggs are lemony in color. Then gradually add the beaten eggs to the cornmeal and mix well. Immediately pour into a greased casserole and bake in a pre-heated 450-degree oven for 20 minutes or until the spoonbread is puffed and browned.

1. In a saucepan, heat the milk to a simmer. When the milk



Press #43: March 2004

GSF ORDER FORM



MEMBERSHIP IN GARLIC SEED FOUNDATION

(includes **GARLIC PRESS** subscription and #387)

GSF/CORNELL REPORT #387 (10 pgs.) (Comes with membership) _____ X \$15.00 = _____

GROWING GREAT GARLIC (Engeland, 213 pgs.) Grower's Guide for Collectors _____ X \$3.00 = _____

MAD FOR GARLIC (Pat Reppart, 157 pgs.) Cookbook _____ X \$12.00 = _____

CLOVE N' VINE "How to Make a Garlic Braid" _____ X \$10.00 = _____

GARLIC, GARLIC, GARLIC (Griffith, 432 pgs.) Cookbook _____ X \$3.50 = _____

THE COMPLETE GUIDE TO MAKING GARLIC POWDER (Kimball, 40 pgs.) _____ X \$16.00 = _____

STRINGBRAID YOUR TOPSET - VIDEO (Yerina) _____ X \$7.00 = _____

GARLIC PRESS SETS

Set #1 (Issues #1-#8) _____ X \$25.00 = _____

Set #2 (Issues #9-#14) _____ X \$8.00 = _____

Set #3 (Issues #15-#20) _____ X \$8.00 = _____

Set #4 (Issues #21-#26) _____ X \$8.00 = _____

Set #5 (Issues #27-#32) _____ X \$8.00 = _____

Set #6 (Issues #33-#36) _____ X \$8.00 = _____

Set #7 (Issues #37-#41) _____ X \$9.00 = _____

Any 2 Sets or more \$7.50 each _____ X \$7.50 = _____

All 7 Sets _____ X \$50.00 = _____

T-SHIRTS M L XL XXL _____ X \$10.00 = _____

GARLIC PHOTO CARDS

Beautiful Color from Eastern Exposures _____ 4 cards X \$ 8.75 = _____

Beautiful B & W from Earth Images _____ 8 cards X \$17.00 = _____

IDEAL CAPE COD WEEDEE (perfect hand tool for garlic) _____ X \$12.75 = _____

TOTAL _____



Make Checks Payable to: **Garlic Seed Foundation, Rose Valley Farm, Rose, NY 14542-0149**

* Members - all prices include postage and New York State Sales Tax

* Non-members - please add 15% for shipping and handling

*** PLEASE - U.S. FUNDS ONLY**



CULPEPER'S COMPLETE HERBAL, 1653

(Thanks to Louis Van Deven of Carrollton, IL)

Garlick. The offensiveness of the breath of him that hath eaten garlick, will lead you by the nose to the knowledge hereof and (instead of a description) direct you to the place where it grows in gardens, which kinds are the best, and most physical!

Government and virtues. Mars owns this herb. This was anciently accounted the poor man's treacle, it being a remedy for all diseases and hurts (except those which itself breed). It provokes urine, and women's courses, helps the biting of mad dogs and other venomous creatures, kills worms in children, cuts and voids tough phlegm, purges the head, helps the lethargy, is a good preservative against, and a remedy for any plague, sore, or foul ulcers; takes away spots and blemishes in the skin, eases pains in the ears, ripens and breaks imposthumes [whatever that may be], or other swellings. And for all those diseases the onions are as effectual. But the Garlick hath some more peculiar virtues besides the former, viz. it hath a special quality to discuss inconveniences coming by corrupt agues or mineral vapors; or by drinking corrupt or stinking waters; as also by taking wolfbane, henbane, hemlock, or other poisonous and dangerous herbs.

It is also held good in hydropick diseases, the jaundice, falling sickness, cramps, convulsions, the piles or hemorrhoids, or other cold diseases. Many authors quote many diseases this is good for; but conceal its vices. Its heat is very vehement, and all vehement hot things send up but ill-favoured vapours to the brain. In coleric men it will add fuel to the fire; in men oppressed by melancholy, it will attenuate the humour, and send up strong fancies and as many strange visions to the head; therefore let it be taken inwardly with great moderation; outwardly you may make more bold with it.

Flush away a pound a day & still eat your favorite foods with the incredible new ...

GARLIC CRASH DIET

■ LOSE a pound a day and still enjoy mouth-watering foods on the EXAMINER's new Garlic Crash Diet.

And while you're getting rid of ugly flab, you'll give your body a super-healthy garlic cleansing!

The miracle herb's ability to speed weight loss was proven during a ground-breaking study.

Nutritionist Walter Blung, of Cologne, Germany, put 20 of his patients on diets that included large amounts of garlic. Another 20 patients went on the same diet without garlic.

He was stunned to discover that while all dieters lost weight, the weight melted off much faster from the garlic eaters.

"Garlic helps to give people that full feeling," Blung explains. "It dampens their appetites and gives food an added flavor that leaves an aftertaste in your mouth, making you aware of your last meal."

The EXAMINER's panel of diet experts has designed a plan that takes advantage of the pungent herb's power to boost the slimming effects of a healthy three-day crash diet — and even includes tasty low-cal versions of your favorite foods like spaghetti, pizza and chili!

The regimen includes fruits and vegetables, as well as garlic. Instead of three large meals a day, you'll eat six small ones two hours apart, drink lots of water and get your metabolism going full blast by taking a brisk 30-minute walk every day.

Eat nothing but the foods listed, and avoid alcoholic beverages. Sugar and salt are taboo. If you have any health problems that could be aggravated by a crash diet, don't try it. Also, be

sure to check with your doctor before going on this or any other diet.

Begin each day by drinking an 8-ounce glass of water with 2 tablespoons of apple cider vinegar. Also, drink an 8-ounce glass of water after each small meal.

DAY ONE

Meal 1. One cup plain, low-fat yogurt with 1 medium sliced banana.

Meal 2. 1 shredded carrot; 1 stalk of celery, chopped; 4 radishes; 1 diced clove of garlic. Season with 1 tablespoon of apple cider vinegar and juice of half a lemon and serve on a crisp bed of lettuce.

Meal 3. Add 2 cloves of minced garlic to ½ cup of your favorite tomato sauce. Pour mixture over 1 cup cooked spaghetti.

Meal 4. Apple or pear. 1 slice dry whole-wheat bread.

Meal 5. Raw vegetable, salad seasoned with 1 tablespoon apple cider vinegar, juice of ½ lemon. Sweeten with artificial sweetener, if desired.

Meal 6. Large fruit salad served on bed of lettuce. Season with 1 tablespoon low-fat plain yogurt, with artificial sweetener.

DAY TWO

Meal 1. Cup of orange and grapefruit sections sprinkled with shredded coconut.

Meal 2. Raw vegetable salad made with 1 cup chopped broccoli, 1 cup chopped green beans, 1 diced garlic clove and ¼ cup shredded almonds.

Meal 3. Vegetable soup made with 1 vegetable bouillon cube, 2 cloves chopped garlic, 4 cups water, 1 medium chopped onion, shredded

carrots, chopped celery, fresh mushrooms, broccoli, greens, parsley, green or red peppers. Season with hot cayenne pepper, bring to a boil and simmer for 30 minutes.

Meal 4. 1 large apple.

Meal 5. Small green salad with chopped onion and garlic.

Meal 6. Substitute lean ground turkey for hamburger in your favorite chili recipe and add 2 cloves of minced garlic. Top a 1-cup serving with chopped onions and low-fat shredded cheese.

DAY THREE

Meal 1. Cook 1 egg, 4 medium chopped mushrooms and 1 clove chopped garlic in skillet greased with ¼ teaspoon olive oil. Break yolk when egg white is cooked and mix ingredients together vigorously.

Meal 2. 1 chopped medium onion, 2 diced garlic cloves, 1 cup sliced beets, 1 small sliced tomato, served on a bed of lettuce.

Meal 3. Vegetable pizza. Sprinkle grated part-skim milk mozzarella cheese on ½ slice pocket bread, cover with your favorite tomato sauce, add ¼ cup chopped fresh mushrooms, red and green peppers and 3 chopped garlic cloves and bake until the cheese is melted.

Meal 4. 2 cups fresh watermelon cut in slices.

Meal 5. Sprinkle ½ cup shredded Monterey Jack cheese over 1 cup chili beans and bake until cheese melts. Saute 3 diced garlic cloves in 1 tablespoon olive oil and add to mixture. Serve on ½ slice toasted pocket bread.

[Reprinted from July 6, 1993 EXAMINER, p. 19]



ALLIO-PHILE

❖ **Farewell to Doug Urig:** creator and publisher of *Mostly Garlic*, who passed away last year. Doug was energetic, creative, and loved garlic. He was unable to complete his publishing commitments due to his health. If you are "owed" issues of *Mostly Garlic*, please notify GSF/Rose and we'll credit you with some extra *Press* issues. We remember Doug warmly.

❖ **What happened to Press #42?** At this point, it's a "work in progress" as the *Best of the Press*. We only had one *Press* in 2003, and again we encourage your help by submitting contributions for the *Press*. We're all familiar with deception from our government, corporate bosses, our intelligence services, and now the GSF!

❖ **Goodbye to Harry Henderson:** A very special individual who lived his life as a writer and reporter, observing and analyzing, working for a better community and just society. A very gentle giant.

❖ **USDA estimate:** Garlic production in the U.S. was approximately 41,000 acres or 64 square miles.

❖ **Small Farmer's Journal:** If you have access to this wonderful journal of practical horse farming (and everything else in sustainable living), check out #107, Summer, 2003, for a nice layout of "no-till" garlic at Beach Grove Farm in PA.

❖ **Garlic Pills:** Or should I call them "supplements"? If you've got to take them, how many? How often? Here are some general guidelines: dehydrated standardized powder: 200-300 mg 3 times a day, Aged Garlic Extract (AGE kyolic)

300-800 mg 3 times a day. Check it out with your medical/health care provider.

❖ **GSF Business:** Please send to GSF/Rose: photos/slides of your garlic; change of address forms; ideas or questions for future *Press* articles; business cards; articles, recipes, songs or poems for the *Press*.

❖ **Send SASE:** For a free copy of the economic worksheet or string braid diagram to GSF/Rose.

❖ **Top 27 Richest Americans:** make more money than the poorest 1/3 of Americans, or 95,000,000 citizens. Bill Gates has (more money than Africa) control of \$46 billion dollars, the 400 richest control \$955 billion dollars.

❖ **Festivals:** Please send information on 2004 plans to GSF/Rose.

❖ **Powder Producers:** Please note that the GSF is selling Herrick Kimbal's book (see ad). An additional companion *Garlic Powder Profits* report is available from the author.

❖ **Photo Cards:** In addition to the beautiful color cards from Eastern Exposure, the Foundation is now selling striking Black & White images by April Hubbard/Earth Images, who we first saw at the Hudson Valley Garlic Festival (see ad).

❖ **Belle Vernon, PA:** It was a quiet day last August 15 when Victor Nikitchuck's (of Antelope, CA) tractor-trailer crashed on the bridge. The cargo, 7 tons of garlic powder, was set ablaze when the fuel tanks ruptured. "That was the tastiest fire we ever put out," Fire Chief R. F. Benson told the AP.

❖ **World Record:** Father Rick McCann, (60-year-old Catholic priest and gardener) has entered the record books with a garlic bulb weighing in at 1.54 kg (3 pounds 5 ounces). This breaks the 15-year-old record of Robert Kirpatrick of Eureka, CA of 1.32 kg (2 pounds 14 ounces). Rick credits the holy water he irrigates with. Congratulations!

Amazing herb is also a super-healer

■ DOCTORS HAVE discovered what healers have known since the days of ancient Egypt — garlic is one of nature's most powerful healers!

"Finally, about 4,000 years late," says Dr Earl Mindell, author of the best-selling book *Vitamin Bible* (Warner).

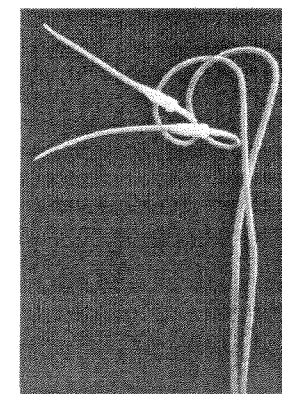
Here are just some of the medical wonders the amazing herb can perform:
 ■ Eating a clove or two of garlic can snuff out a cold before it gets going. "If you catch it early enough, you might not even get sick," says Dr. James North, chief of microbiology at Brigham Young University in Provo.

■ Garlic kills other viruses. North's research shows that garlic kills a flu and respiratory virus known as parainfluenza 3, as well as herpes simplex 1, the cause of cold sores, and Herpes simplex 2, the bug responsible for genital herpes. Garlic even killed the polio virus in 90 percent of lab tests.

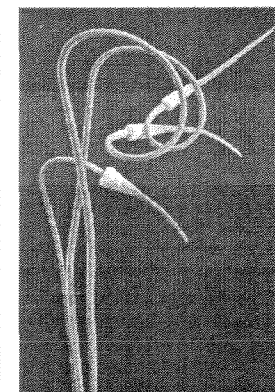
■ It protects against stomach cancer, according to Chinese researchers.
 ■ Animal studies at the University of Texas show garlic guards against cancers of the breast, esophagus, colon and rectum.

announcing
garlic scape
photo cards

(size 5"x7")



"Garlic Dance"



"Garlic Twist"

created by
April S. Hubbard
www.earthimages.com

available on order form, GSF/Rose

NATIONAL GARLIC SURVEY Cooperators Needed

Gayle Volk, Plant Physiologist with the USDA in Ft. Collins, CO is looking for volunteers to participate in a survey during this 2004 harvest season.

We know that garlic varieties can be very responsive to various environmental growth conditions. We are conducting a survey to determine growth habits of garlic varieties throughout the country. **If you are interested in receiving more information or participating in this project, please contact:**

Dr. Gayle Volk
USDA-ARS
1111 S. Mason St.
Ft. Collins, CO 80521-4500
gvolk@lamar.colostate.edu



OUT OF MY HEAD

Bob Dunkel

I no longer seek the understanding of words for they are too fragile. They do not hold over through the long winter of feelings and the winds of change. It is respect I am learning, for each and all. It is our tao, our way we so rarely imbue with the sacredness that's due. Every moment is eternity, every form immortal and none remain unless all be given their due! So remain thankful and persevere, but not in a trudging tired way but come with the flicker of a firefly, in the recognition of birdsong so early it defies even our yawns. Dance awhile and rest, rest awhile and dance...forever. It is the lapping of the sea's tongue on the shores of eternity. In and out like breath and in so many other ways we are calmed into its endless balance of unbalanceable truth. Work awhile and rest, sit and stare and breathe out wonder and inhale beauty, rise and work awhile....

A waning westbound moon
In tangle of clouds and mist
Fogs the morning's horizon.
So much too like garlic
It passes in phase, overlaps like waves
And stitches night and day
Autumn and Spring, together in time...
A hawk, silent atop the phone pole
Only its back and outlined beak
Is visible in passing, yet
It breathes its patience into us.
The heron at the edge of darkness
Alone seeks out its waiting shoreline
Together an instant, we pass
In the busyness of twilight
And it sounds the sense of perseverance
Inaudibly almost, like haiku
Or far Eastern landscapes
It is condensing the now
With a dragonlike beauty.

Last summer I was invited to a garlic poetry day along with poet, speaker Robert White Eagle. It was a wonderful event with a great pot luck and will grow into the 1st Annual Southern Tier Garlic Festival in Olean, New York. It must have been a black vulture that slowly circled overhead as Robert White Eagle chanted and spoke his peace. The irony and wonder of that motion came amidst words of medicine bundles and the sacred sites of the Native Americans. They are rare minerals, gems in this societal mine or on these pocketed reservations, but they are not sought out for their wisdom and stories but have been sequestered to isolate their differences. In the USDA guidelines for garlic grading, the only distinction made is that the red garlic and the white garlic must not be mixed! That and 1 and 1/2 inch garlic or smaller are not to be sold commercially. Always sun and shadow, pavements wet and dry, and the sky.... Why are we so unaccepting of that which by necessity is different? Why is there a distinction of color? The totems of nature all have a value. Each is endowed with qualities and abilities that teach us of the heartpath into sacred space. We own nothing and control even less! Only when we find the wind at our backs, take that downturning path or float with the current do we understand our connection with all things. People are people, antelope on the plain pretending the jaws of predators are not meant for them, grazing on grace and relying on the sound sense of the elders that guide them or alert them to run.

Whenever I speak about garlic, afterwards come the great stories, the personal exchanges of folks who have touched somehow the same wonder of this bulb. It is encouraging—encouraging you and I to be part of its cycle, to try with one clove or thousands to play a brief part in its cycle back to itself. There is a camaraderie, a consonance with this healing force in the guise of a stinky clove. Like the tired beggar, no longer standing but hostage to a staircase or the wall of an alley, that rests a tired tin cup before them and waits, we learn to fall plant and be patient. It is truly no better or worse than any form of life, but we have tamed it and now it holds us in its grip. Like membranes beneath the round wrapper leaves, we come into the realization of its multidimensionality.

It is indeed a cross stitched wonder, a tapestry of root, leaf and flower or the knitting of muscle, skin and bone, and that charge of electricity that motions forth the pulsing we call life.... Our engagement then becomes the dance we do, the busyness that speaks of being born, not dying, and the delicate balance we so shallowly call survival. It is as fragile as that fertile ground, the topsoils we measure anymore in inches and not feet that speak of the marginality of living apart from all from which we seek distinction. So we embrace this garlic, break it apart into its pieces and surrender. We cannot reassemble this...its warranty is broken through our stubbornness and intent to control. Only by letting go of each clove and giving it back to the earth do we allow it to display and mimic the true mystery that is in all things.

Ain't Broken/Got Fixed

Mother, this is broken
I'm sorry, can it be fixed?
The Mother opens her heart
Holds the clove near, and says
Leave it with me awhile....

A season of doubt ensues
As if the earth herself were lost
Dead and lifeless, suffocating 'neath snow...
Then, one morning we awaken
There is birdsong in the half light of morn
Reminding us in white rupturing tips
That the mending has begun!

Then, the symphony of life is awhir
Everywhere merges the form of seed
In its embodiment of now...

We watch the wonder of each new leaf
Building its stairway skyward
Atop which the scape will be a spire.

We tend to that to which we are endeared
We feed and strengthen ourselves
From this edifice of chlorophyll
In which we seek not immortality
But patience to await its gentle passing.

In hospice we continue our attentiveness,
Then one day The Mother speaks:
Out of the cacophony of green everything
She says, Here my child, here is the bulb
Do not fret nor worry, for now it is whole
It has always been whole, but
In your lookingness you were lost!

In every part of life I am there
Even in death you must trust me
None is lost, and there is only change...
But you and this bulb and indeed all things
Have an eternity that is ever present
But not always to eyes and fingers
But indeed to your hearts!

(B.D.)

Spring Planting of Garlic

by Kate Rotindo and Gayle Volk (USDA-ARS) and Walter Lyons (TheGarlicStore.com)

In the northern U.S., garlic is normally planted in the fall and harvested in the late summer months. Although this is the traditional agricultural practice for garlic, there are certain drawbacks to fall planting in some areas. In Colorado, for instance, fall planting of garlic can be trying for a grower. The weather sometimes turns cold and snowy by early October. Autumns and winters can be VERY windy, which can make it VERY hard to retain any mulch during the long, dry winters. Irrigation is often needed during the winter and can be quite impractical. In more temperate climes, such as the deep south and the west coast, people often report good success with late winter or early spring planted cloves. Thus, we wondered, IF we could keep our bulbs (especially the hardnecks) viable through March, what kind of yields might we expect?

For spring planting to be successful, garlic bulbs must remain viable until spring. Under a grant from the Colorado State University Specialty Crop Grower Program, Dr. Gayle Volk and technician Kate Rotindo of the Plant Germplasm Preservation Research Unit at the National Center for Genetic Resources Preservation (NCGRP), USDA-ARS, Fort Collins, CO worked in conjunction with Dr. Walt Lyons of Yucca Ridge Farm, Inc. (TheGarlicStore.com) to test new methods of over-winter storage of varietal garlic. The project's second objective was to compare spring planted garlic to the same varieties planted in the same field the prior fall.

Bulbs from the 2001 harvest, including two softnecks (Inchelium Red and Silverwhite) and eight hardneck varieties (Chesnok Red, German Porcelain, GSF#65, Polish Hardneck, Romanian Red, Siberian, Spanish Roja, and Zemo) were provided by Yucca Ridge Farm. These cured garlic bulbs were kept at room temperature after the 2001 harvest until being placed into NCGRP's cold storage units at 0°C or -3°C on 20 September 2001. The bulbs were stored in closed cardboard boxes packed lightly with crumbled newspaper until the following spring.

Bulbs were removed on 6 April 2002 for the first spring planting (S1). Garlic that was to be planted on the second planting date, 26 April (S2), was also removed from storage on 6 April and kept at 5°C until planting. (It is reported that

during storage at 4-5°C, dormancy is broken and shoot elongation occurs. When planted, the bulbs stored at 4-5°C quickly sprout and mature earlier than bulbs that have not been exposed to temperatures that accelerate shoot elongation). Three plots (sixteen cloves each) of each variety and storage temperature for the S1 and S2 plantings were randomly distributed in the same field as were bulbs planted the prior fall (10 October 2001). To the extent possible, irrigation (overhead sprinklers), fertilization (two spring foliar feedings), mulching and weed removal were the same for all plantings.

The fall and both spring plantings were harvested at the end of July 2002, cured (dried), and taken to the National Center for Genetic Resources Preservation to be weighed and circumferences measured. The yields were compared to determine whether 0°C or -3°C storage temperatures were preferable. The bulbs stored at -3°C had larger circumferences and weights. The variety Zemo, for example, stored at -3°C had an average bulb weight of 16.1 grams, while the Zemo bulbs stored at 0°C had an average bulb weight of 15.4 grams. Polish hardneck stored at -3°C had an average circumference of 13.0 centimeters, whereas the bulbs stored at 0°C had an average circumference of 11.1 centimeters.

When compared to fall planted bulbs, spring planted bulbs were smaller in size. The garlic varieties were pooled and average bulb weights were calculated. The fall planted bulbs had an average bulb weight of 29 grams, while the first spring planted bulbs had an average bulb weight of 19 grams and the S2 bulbs average weight was 17 grams. On the whole the S1 and S2 plantings exhibited excellent bulb firmness, wrapper quality and overall appearance. These results confirm that varietal garlic stored at cold temperatures of -3°C and 0°C and spring-planted under Colorado Front Range growing conditions can be successfully harvested. Although the weights and circumferences may be slightly lower than traditionally fall-planted garlic, this study demonstrated spring planting of garlic might prove to be a workable alternative to the sometimes difficult conventional fall planting. This research has been accepted for publication in *HortScience*.

Push your thumb and index finger into the root zone of a patch of grass, and bring up a pinch of earth. You will likely be holding close to one billion individual living organisms, perhaps ten thousand distinct species of microbes, most of them not yet named, cataloged, or understood.... In a handful of typical healthy soil there are more creatures than there are humans on the entire planet, and hundreds of miles of fungal threads.

— David Wolfe, *Tales from the Underground*

Fresh Garlic in the Spring? Cold Storage May Be the Answer!

by Kate Rotindo and Gayle Volk (USDA-ARS) and Walter Lyons (TheGarlicStore.com)

Have you ever tried to buy *good*, fresh organically grown garlic in the spring and early summer? Sure, there may be some southern hemisphere imports in the store, but their journey has often left them worse for wear. Also, the organic certification may not always be up to domestic standards. The spring garlic drought can be a real trial for true garlic lovers. But there may be hope!

Most organic varietal garlic consumed in the U.S. is harvested in the later summer months. After the curing (drying) process, fresh garlic purchased by consumers is normally kept on a kitchen shelf at room temperature for several months. The quality of the bulbs, especially the hardnecks, often begins to deteriorate within 3 or 4 months of harvest. Cloves begin to sprout and lose firmness and desirable flavor. Thereafter, consumers have no available fresh market garlic until the next season.

Under a grant from the Colorado Specialty Crop Grower Program, administered by the Department of Horticulture at Colorado State University in Fort Collins, we studied the feasibility of low temperature storage of varietal garlics for up to nine months. The joint program was performed by Dr. Walt Lyons of Yucca Ridge Farms, Inc. (TheGarlicStore.com) and Dr. Gayle Volk, assisted by Kate Rotindo, of the National Center for Genetic Resource Preservation (NCGRP), Fort Collins, CO, to observe the impacts on the culinary quality of garlic bulbs stored at several cold temperatures. NCGRP, formerly called the National Seed Storage Laboratory, has pioneered long term cold storage and cryopreservation of our nation's precious plant germplasm treasures.

Several varieties of hardneck and softneck garlic from the 2001 harvest were stored on 20 September 2001 in NCGRP's large commercial coolers at 0°C and -3°C. A pre-determined number of bulbs was removed from cold storage after 7, 8 and 9 months. They were subsequently kept in brown paper bags at ambient temperatures (20°C to 30°C) in three home kitchen environments. Qualitative taste test evaluations were performed by three separate panelists at two week intervals

through early fall, 2002, or as long as samples lasted. Each variety of garlic was observed for color, smell, firmness, extent of sprouting, and was tasted raw and cooked (gently sautéed in a light canola oil). Each set of panelists had data sheets that were filled out at each tasting session. Panelists rated the sweetness, "heat," after-taste, and overall taste/flavor of the cloves when raw and cooked.

Panelists detected no noticeable degradation in the initial tests of flavor and quality of garlic restored to room temperature after 6 or 8 months of storage at -3°C. A summary of the data taken from the three panelists showed that the two softnecks (Inchelium Red and Silverwhite) and a hardneck (Siberian) stored at -3°C retained high quality characteristics for more than three months at room temperature. In fact, the softnecks were still quite edible as the year 2002 reached its end, more than 16 months after harvest. The German Porcelain and Romanian Red varieties stored at -3°C remained edible for only two months at room temperature (but they were of lesser quality when originally placed in storage the prior fall). In the comparison between -3°C and 0°C storage using Chesnok Red, Zemo, and Inchelium varieties, bulbs stored at -3°C were of higher quality (cloves were more firm with a better flavor) and had a longer shelf life than those bulbs stored at 0°C.

Overall, garlic bulbs stored at -3°C for up to 8 months could be kept at room temperature for at least 2 months for culinary use without signs of deterioration. This could be an effective method of providing garlic-loving consumers with fresh garlic throughout the spring and summer months when garlic is normally still growing in the fields.

We note that -3°C (27°F) is a difficult temperature to maintain in any home refrigerator dedicated to this task. Commercial food coolers are available, but may not be conveniently located to a grower, nor perhaps affordable. We are now conducting tests to see whether a standard home refrigerator can maintain constant enough temperature to replicate the results of the industrial grade coolers at NCGRP.



The International Herb Association has designated the Garlic as the Herb of the Year for 2004. Each year they select an herb to promote and educate about its culinary potency, medicinal properties, and gastronomic history. Their National Herb Week, May 2-8, 2004, will feature the garlic and they are preparing an informational packet for release in March 2004.

The International Herb Association (IHA) is a professional trade association providing educational, service, and development opportunities for those involved in herbal endeavors since 1985. The IHA office is at P.O. Box 5667, Jacksonville, FL 32247-5667. The Foundation would like to thank them for their recognition and Mr. Chuck Voight, Chair of the IHA Horticulture Committee (and garlic grower), for his promotion.

A New Book!

The Complete Guide To Making Great Garlic Powder

Herrick Kimball is not a good cook and he admits it. But the man does have one redeeming culinary talent: "I know how to make the best tasting garlic powder in the world," he says. After reading his new book, *The Complete Guide To Making Great Garlic Powder*, you may be inclined to believe the Upstate New York garlic grower is right.

The premise of Kimball's book is that the flavor of powder made from stiffneck varieties of garlic is remarkably superior to that made from the more common softnecks. But since virtually all supermarket garlic powders are made from the softnecks (grown primarily in China and California), few people on the

planet have ever tasted garlic powder at its best. When they do, it's a revelation.

Making Great Garlic Powder begins by heralding the virtues of homemade stiffneck powder. Then the author presents what he believes to be the seven essential elements of great garlic powder. The book goes on to tell readers how they can successfully grow their own garlic. It concludes with a detailed explanation of the author's simplified bulb-to-powder home-processing technique.

The book's emphasis is not only on making garlic powder that tastes great. Kimball is clearly passionate about making powder that is as wholesome and healthful as it can possibly be.

The Complete Guide To Making Great Garlic Powder is a 9" by 5", 40-page book with 17 illustrations. Copies are available from the **Garlic Seed Foundation**, TheGarlicStore.com, and from the author at Whizbang Books.

For those who may be interested in making and selling homemade garlic powder, Kimball has put together a 24-page report, *Garlic Powder Profits: The Herrick's Homegrown Story*. Contact Whizbang Books for more information.

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A garlic affair

by Keith Stewart

Of the approximately one hundred varieties of vegetables and herbs we grow on our farm, garlic reigns as the sovereign queen. I would give up the 99 others, albeit reluctantly, before I would give up my garlic.

Garlic is the crop we grow the most of, the crop for which we have some reputation at our farmers' market in New York City and, perhaps more endearingly, it is the crop that brings in the most cash.

Most growers of garlic, be they weekend dabblers or for-profit players like myself, soon learn that they have entered into a relationship with a plant that will not be easily cast off. Garlic's attributes are such that, once smitten by the garlic bug, many growers develop a lifelong attachment.

Often, our passion for *Allium sativum* goes well beyond its wondrous culinary, medicinal and curative properties. For me, it is the plant itself that is most remarkable: its stately appearance in the field, its fascinating life cycle and growth habit, its hardiness, its ancient lineage, the way it comports itself in this world.

Garlic is believed to have originated in the foothills of mountainous south central Asia (northern Iran, Afghanistan, northeastern Turkey, China). It probably was one of the first wild plants to be cultivated by humans, going back perhaps 10,000 years. We can imagine precious bulbs of garlic being transported along silk trade routes by nomads and hunter-gatherers long before silk was being traded. Today, garlic has found its way to all corners of the globe and its many cultigens have adapted brilliantly to diverse climates and soils.

The center of garlic production in this country is Gilroy, California. The vast bulk of garlic grown for processing and supermarket sales comes from this area.

Gilroy's production is predominantly softneck garlic—it stores well and is relatively easy to grow on a large scale. The bulbs have numerous small cloves that overlap each other and are often irksome to peel. The flavor of softneck garlic is adequate but rarely exceptional.

The northeast, with its cold winters, is better suited to growing hardneck garlic, a different subspecies that is closer to the original wild garlic from south-central Asia and not as domesticated as the softneck varieties. Hardneck garlic (sometimes called topset garlic) has larger cloves that radiate out from a central hard stem. They peel easily and their flavor, while it ranges widely from one hardneck variety to another, is often outstanding. Hardneck garlic is more demanding to grow, tends to yield less per acre, and often has a shorter shelf life. But among real garlic lovers it is the only stuff to eat.

On our farm we grow Rocambole, a variety of hardneck garlic that arrived in my hands fourteen years ago through good fortune and the generosity of a neighbor. Andy Buriga,

an old Italian-American who lives down the road from us, befriended my wife Flavia (also of Italian ancestry) while she was out on one of her landscape-painting excursions. After Mr. Buriga learned that I was running an organic farm, he presented my wife with a brown paper bag containing about 30 bulbs of garlic and suggested to her that I try growing them. He said the original planting stock came from Calabria, Italy, that it had entered the states many years earlier in the pocket of a friend, unbeknownst to customs officials. Ever since then he had given it pride of place in his well-tended garden.

That fall I separated the bulbs Andy had given me into a couple of hundred cloves and planted them in fertile soil. They lay in the ground all winter with a blanket of straw mulch covering them. At the end of March they emerged as the first crop of the season—slender, blue-green shoots that quickly grew. Over the next few months I provided water and pulled the weeds that competed with them. At the end of July, after their leaves had started turning brown, I dug a couple of plants, brushed the soil off them and beheld a marvelous sight. The bulbs had a vibrant aura about them. Their buff-colored skins were streaked with a reddish-purple blush. They were firm and well formed. And they were big.

Though this was not the first garlic I had ever planted and harvested, that day marked the beginning of my perennial romance with the "stinking rose." I gave the bulbs to my wife. She used them in a meal that night and told me it was the best garlic she had ever eaten. Though not a man of discerning palette, I was inclined to agree.

A couple of days later I sold a few dozen bulbs at the farmers' market I go to in Manhattan. The following week almost every customer who had purchased one came back smiling, asking for more. It occurred to me that I was onto a good thing.

The following year we sold a few hundred at market (again to rave reviews) and saved the rest for planting. I continued like that for a while, parceling out my trove in a quite parsimonious fashion, but within a few years I had built up a planting stock of 20,000 cloves and an eager pool of customers. I was ready to do serious business.

Last year we planted 37,000 cloves taken from about 6,000 bulbs. It appears now that we have reached a natural ceiling in garlic production, both in terms of what we can sell at market and the resources we have available to grow it. These days, I sometimes feel overwhelmed by the vast sea of garlic growing in my fields and the great effort required to plant it, mulch it, weed it, water it, harvest it, cure it, grade it, and sell it. But I still dearly love my garlic and regard it more than ever as the plant that defines the essence of our farm.



Garlic Produce Facts (continued)

Rates of Ethylene Production

Garlic produces only very low amounts of ethylene (<0.1 u/kg•hr).

Responses to Ethylene

Not sensitive to ethylene exposure.

Responses to Controlled Atmospheres (CA)

Atmospheres with high CO₂ (5-15%) are beneficial in retarding sprout development and decay during storage at 0-5°C. Low O₂ along (0.5%) did not retard sprout development of "California Late" garlic stored up to 6 months at 0°C. Atmospheres with 15% CO₂ may result in some yellow translucent discoloration occurring on some cloves after about 6 months.

Physiological Disorders

Freeze injury. Due to its high solids content, garlic freezes at temperatures below -1°C (30°F).

Waxy breakdown is a physiological disorder that affects garlic during latter stages of growth and is often associated with periods of high temperature near harvest. Early symptoms are small, light yellow areas in the clove flesh that darken to yellow or amber with time. Finally the clove is translucent, sticky and waxy, but the outer dry skins are not usually affected. Waxy breakdown is commonly found in stored and shipped garlic but rarely in the field. Low oxygen levels and inadequate ventilation during handling and storage may also contribute to development of waxy breakdown.

Pathological Disorders

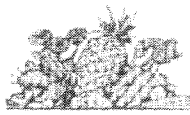
Penicillium rots (*Penicillium corymbiferum* and other spp.) are common problems in stored garlic. Affected garlic bulbs may show little external evidence until decay is advanced. Affected bulbs are light in weight and the individual cloves are soft and spongy and powdery dry. In an advanced stage of decay, the cloves break down in a green or gray powdery mass. Low humidity in storage retards rot development. Less common storage decay problems include **Fusarium basal rot** (*Fusarium oxysporum* cepae) which infects the stem plate and causes shattering of the cloves, **dry rot** due to *Botrytis allii*, and **bacterial rots** (*Erwinia* spp., *Pseudomonas* spp.).

Special Considerations

To control sprout development and lengthen the storage period, garlic may be treated with preharvest applications of sprout inhibitors (i.e., maleic hydrazide) or be irradiated after harvest. Outer cloves of bulbs are easily damaged during mechanical harvest and these damaged areas discolor and decay during storage. Therefore, high quality garlic for the fresh market is usually harvested manually to avoid mechanical damage.

Curing garlic is the process by which the outer leaf sheaths and neck tissues of the bulb are dried. Warm temperatures, low relative humidity, and good airflow are conditions needed for efficient curing. Under favorable climatic conditions in California, the garlic is usually cured in the field. Curing is essential to obtain maximized storage life and have minimal decay.

Garlic flavor is due to the formation of organosulfur compounds when the main odorless precursor alliin is converted by the enzyme alliinase to allicin and other flavor compounds. This occurs at low rates unless the garlic cloves are crushed or damaged. Alliin content decreases during storage of garlic bulbs, but the effect of time, storage temperatures and atmospheres has not yet been well documented.



Garlic

Produce Facts

Recommendations for Maintaining Postharvest Quality

Marita Cantwell

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Maturity Indices

Garlic can be harvested at different stages of development for specialty markets, but most garlic is harvested when the bulbs are well mature. Harvest occurs after the tops have fallen and are very dry.

Quality Indices

High quality garlic bulbs are clean, white (or other colors typical of the variety), and well cured (dried neck and outer skins). The cloves should be firm to the touch. Cloves from mature bulbs should have a high dry weight and soluble solids content (>35% in both cases).

Grades include U.S. No. 1 and unclassified, and are based primarily on external appearance and freedom from defects. Minimum diameter for fresh market is about 4 cm. (1.5 inches).

Optimum Temperature

-1°C to 0°C (30°-32°F) The variety of garlic affects potential storage life, and the recommended conditions for commercial storage depend on the expected storage period. Garlic can be kept in good condition for 1-2 months at ambient temperatures (20°-30°C [68-86°F]) under low relative humidity (<75%). However under these conditions, bulbs will eventually become soft, spongy and shriveled due to water loss. For long-term storage, garlic is best maintained at temperatures of -1°C to 0°C (30°-32°F) with low relative humidity (60-70%). Good airflow is also necessary to prevent any moisture accumulation. Under these conditions garlic can be stored for more than 9 months.

Garlic will eventually lose dormancy, signaled by internal development of the sprout. This occurs most rapidly at intermediate storage temperatures of 5°-18°C (41°-65°F). Garlic odor is easily transferred to other products and should be stored separately. High humidity in the storages will favor mold growth and rooting. Mold growth can also be problematic if the garlic has not been well cured before storing.

Optimum Relative Humidity

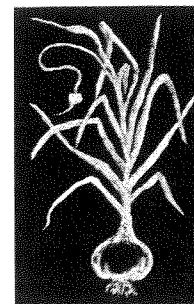
60 to 70%

Rates of Respiration

Temperature ml CO ₂ /kg•hr	0°C (32°F)	5°C (41°F)	10°C (50°F)	15°C (59°F)	20°C (68°F)
Intact bulbs	2-6	4-12	6-18	7-15	7-13
Fresh peeled cloves	12	15-20	35-50		

To calculate heat production, multiply ml CO₂/kg•hr by 440 to get Btu/ton/day or by 122 to get kcal/metric ton/day.

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Growing 37,000 garlic plants on a small, diversified organic farm is no minor task. It must be approached in a highly organized, almost military fashion. At each stage timing is critical. First we select six or seven thousand of our best bulbs from the summer harvest. We prefer large bulbs, but not the very biggest—these do not store as well and have a high proportion of split cloves that grow two or three small plants instead of one large one.

In early October we look for a comfortable spot and sit down to separate the chosen bulbs into their constituent cloves. This phase of garlic planting is known as “clove popping.” We grade the cloves into several categories depending on their size and quality. Any soft, damaged or otherwise suspicious cloves are rejected. It usually takes two weeks and is quite taxing on the hands. By the time all the cloves are popped and ready to plant, my helpers are wondering if our Worker’s Compensation insurance covers thumb-replacement surgery. (It does not.)

Next, I use a tractor to cut furrows 18 inches apart in well-rested ground. We then set about on our hands and knees, planting the cloves one at a time at a spacing of 4 to 6 inches. Each clove is pushed a few inches into the soil and must be oriented correctly, so that its first shoot in the spring will head toward the sun, not deeper into the earth. The smaller cloves are planted more closely together and will be dug and sold as “green garlic” in early summer (the entire plant is sold, leaves and all, to the bemusement of my newer customers). The larger cloves that receive the full 6-inch spacing will be allowed to grow to maturity.

After planting is completed (it usually takes two to three weeks), the cloves are mulched a few inches thick with about a hundred tons of well-aged bedding material from a nearby horse farm. For a farmer it is a good thing to know that the garlic is in the ground, that the next generation of this most special plant is waiting under the snow to be born.

The first green shoots break ground in late March or early April, and that’s when I know I’m back in the garlic business. By mid-April all the plants should be up; May and June are months of intensive weeding, much of which is done by hand. If the rains fail, irrigation will have to be supplied.

Toward the end of June, our garlic sends up a flower stalk, though it’s more correctly referred to as a false flower stalk, since garlic rarely, if ever, reproduces sexually like most other plants do. Instead, its strategy for self-perpetuation relies on clonal division: each new bulb is a clone of an earlier bulb (going all the way back to an ancient mother bulb from some distant time, you might even say). The false flower stalk of our Rocambole garlic, if left on the plant, can grow two or three feet high. It goes through some wonderful loops and whorls and eventually straightens up and swells at the top to form a capsule that contains several miniature balls of garlic known as bulbils. Most growers believe that early removal of the false flower stalk—the scape or top, as it is

often referred to—will lead to a larger bulb. We subscribe to this belief but usually leave some tops on anyway, since they make such a sight in the field.

The growth of the false flower stalk, the development of the capsule and the formation of the bulbils are all part of what makes hardneck garlic such an extraordinary plant. Visually, the tops are striking. They also are excellent to eat.

The garlic carries on its above-ground growth rapidly until the summer solstice, when the longest day is reached.

By December we are taking our last bulbs to market (excluding, of course, a personal stash) and our customers are stocking up for winter.

As the days begin to shorten, the garlic slows down its photosynthetic processes and begins to focus on its underground parts—the energy captured in the leaves is directed downward to form a new bulb.

We harvest our garlic when about half of the leaves have gone brown—usually in the last week of July and the first week of August. This calls for major effort on the part of all hands present and generates a copious amount of human sweat. A tractor loosens the soil on each side of the bulbs, so most of them can be pulled by hand without additional digging. But the numbers are great, the sun is hot, and the total weight of garlic is several tons.

With their leafy tops still attached, the bulbs are hung in clusters of ten or twelve in every available space in the barn and tractor sheds. Strategically placed fans assist in the curing process. Access is severely limited and the air is redolent with the smell of fresh garlic. If the weather is not too humid, within a month the stems of the plants will be sufficiently dry and hard that the leafy tops can be cut off without risk of bacteria entering the bulbs.

Once the leaves are removed (this is typically carried on over several weeks), the bulbs are graded according to size and quality. The largest bulbs are usually sold first. They are prized by our customers but do not store quite as well as the smaller and medium-size bulbs. If all goes according to plan, by December we are taking our last bulbs to market (excluding, of course, a personal stash) and our customers are stocking up for winter.

Meanwhile, dormant in the frozen ground, the next generation of garlic is waiting to fulfill its ancient destiny and, at the same time, keep its promise to help a small farm stay afloat. It’s not a bad deal on both sides.

[“Locally Grown,” *The Valley Table*, September-November 2001, pp. 30-32. *Ed. Note:* “New Zealand native Keith Stewart has been chronicling life on his certified organic farm in Greenville and examining agricultural issues in our *Locally Grown* column since day one. He’s known as Mr. Garlic to the folks who frequent the Union Square Greenmarket on Wednesdays and Saturdays.”]



From Bob Anderson, Bangs, TX (July 2002)

It's been another one of those interesting years in the garlic business. An unusually warm winter followed by an unusually cool spring and summer caused some crop failures and delayed maturity and harvest of other varieties across the country for the second straight year.

Since we live out in the middle of nowhere, finding help is difficult to say the least. My wife's sister lost her job when the company she was working for went out of business so we were able to hire her to help and she has been a Godsend. Without her I would be hopelessly bogged down. Finding planting help is even harder since almost no one wants to do farm work anymore and those few who do want wages, insurance and a benefits package that exceeds our gross income and so it looks like I'll be planting by myself again this year if the soil dries out enough to plant—it's been too wet for the last month—just like two years ago when it stayed too wet to plant for months until it was too late to plant.

Growing garlic is an interesting business. Our first seven years we had good weather and excellent large healthy crops while we built up our volume of planting stock—we had to start by buying small amounts of planting stock and replanting the entire crop each year since large volume purchases of these rare varieties were not possible. When we got enough volume to make a profit, the weather turned bad (about the same time as our web site started getting lots of hits) and we've had three weather-related crop disasters in a row.

This year's crop looked pretty fair until the invasion of the grasshoppers this spring—more different kinds than I have ever seen in my life. Contrary to anything you may have heard about garlic killing or repelling insects, grasshoppers love garlic and will eat it to the ground and then go into the ground and eat out the bulbs. We tried to protect the garlic by putting in heavy duty floating row covers, but they held in the heat and forced the garlic to mature early while the bulbs were still small, and anyway some of the grasshoppers ate their way through the floating row covers and had a feast. Next time we will build long hoophouses using metal window screen material. It'll be expensive, but worth it if it protects the garlic from the grasshoppers while allowing the heat to escape and actually providing a little protection from the fierce Texas sun. It's almost enough to test one's faith, but not quite.

If things run in seven-year cycles, then we've got four more years to wait until our next bumper crop, and that's OK, I'm patient and I'll wait it out. We live in magnificent solitude on a remote cattle ranch and it's a good place to wait. Right now many of the bushes and trees are bare from the grasshoppers, but they'll come back as they always do. Most of the grasshoppers are dead now, but they leave behind a layer of their manure and their dead bodies to fertilize and

make lush next year's greenery. For that reason, grasshoppers are actually a benefit to the land, it's only because they eat our cash crops and shade trees that we consider them to be a nuisance since the year after the invasion is always green and beautiful and the garden soil is always extra fertile.

Please don't think I'm complaining because I'm not. I complained to Landlady Nature about lack of precipitation a couple of years ago during our severe drought and she rewarded me with water in the form of a tornado with huge hailstones that destroyed the crop I was hoping she would irrigate. I can't say she didn't answer my prayer, but she did teach me to be careful how I ask for something and to be more specific about the form of what I wanted and to be more respectful in my manner of asking. I don't complain anymore, though on occasion I might make some humorous comment on the current state of her blessings.

Maybe Lady Nature will allow me to plant in November and December when the soil is refreshingly cold and your legs from the knees to the toes become numb and your fingers feel like icicles. Garlic is planted on your hands and knees one clove at a time by using your hand to move the normally soft soil aside to form a cone-shaped hole and manually seating each clove then covering the hole with the clove in the bottom, root end down. Our soil seldom freezes, but sometimes it gets so cold that it's like sticking your fingers in ice water all day, especially since the cloves are wet from being soaked in an organically compatible inoculant solution at the time of planting. Sometimes our fingers get so cold we lay down in the fetal position in the field and put our hands up under our armpits for a few minutes to take the pain away. when numbness replaces the pain we begin planting again. Fingers become ragged and sometimes bleed as the hardened soil particles scratch them every time we put another clove in the ground and seat it firmly three inches down. I'm not sure if planting under such conditions is an act of love, foolishness or desperation, but we do it anyway until we get so cold we have to retreat to the house for a bowl of hot soup and thaw out. Then we go back out and plant all afternoon until the light grows too uncomfortable and involuntary tears roll down your face.

That evening we'll celebrate Mother Nature's generosity by building a fire in the fireplace using the mesquite wood she so thoughtfully provides for our use. A fire is never more welcome than when one is truly cold. This festival celebrating life goes on for a month or two until we either run out of garlic to plant or time. When we lived in town I would buy garlic from the store and flip the thermostat switch if the room got cool, but somehow when one endures the harsh conditions imposed by circumstances, one appreciates simple things all the more. I can't really say why we do it, but I can say we wouldn't go back to living in town for anything. This

The Many Lives of Garlic Growers

By Phyllis Pollak, phypollak@yahoo.com

Just who are we, what were we before we became garlic growers/lovers, and why are we passionate about growing garlic? All good questions. Since I began to write a column in *The Garlic Press*, people have sent letters and e-mails to me in which they have described their "Sicilian heritage," and government and corporate careers. At the Saugerties Garlic Festival, I talk to garlic farmers, who are always so friendly and open about their lives. Some of the vendors come from a long line of garlic growers and have family operations in which siblings and their children are involved in their family businesses. Others are couples who have retired from careers in the business world and have become involved in garlic growing almost by happenstance. They started growing garlic on a small scale, went to a few garlic festivals, and over time their crops grew larger and larger in size, and they began to follow the garlic festivals across America. In my own family, we are about to begin our second generation of garlic growers. My oldest son, Gus, and his wife, Denise, now have their own home and will plant garlic this coming fall, during the full moon in October, when most good Sicilians are out planting their garlic crop for the forthcoming year!

When one begins to seriously grow garlic, one starts to mark the passage of the year by garlic-growing activities:

- Late Fall: The planting season (October/November)
- Winter: The garlic farmer's resting season
- Spring: The removal of the straw covering of the garlic beds after the winter is over and the pushing through the earth of the first sprouts of the garlic stalks
- Late Spring: The swaying of the tall garlic stalks in the warm spring breeze
- Early Summer: The cutting off of the scape
- Summer: The tenderly digging up of the garlic bulbs and the ever so gentle wiping off the dirt which covers the most beautifully pure white garlic bulbs, and then the hanging and curing of the garlic
- Late Summer: Savoring the aroma of the garlic as it cures
- Early Fall: Preparation of the garlic harvest for the fall festivals (especially the Saugerties Garlic Festival) in late September

Although this is just a broad outline of our garlic activities, for the Pollak family this pretty much encompasses our year. O.K., we do celebrate Thanksgiving, Christmas, New Year's Day, etc., but the main events that mark our lives are those reflecting the life cycle of our garlic bulbs. Eventually, our garlic becomes part of our food and hence part of ourselves. Even on our holidays, garlic is never far

from our sight or heart as it hangs in our festive kitchen and is given as gifts to family and friends.

Thus, inside our former business selves, the focus on office deadlines and all those high-tech, metropolitan, corporate stressors recedes in importance in our lives as we become more involved with garlic farming. Although there were work situations and deadlines that I dreaded in the business world, there isn't any aspect of the work involved in tending our garlic garden that I don't enjoy.

I eagerly anticipate the feel of the soil on my fingers when I plant the garlic in the fall, and I look forward to the first sight of the garlic stalks in the spring. I don't remember eagerly anticipating a work project or business meeting with the same enthusiasm that I look forward to my new garlic crop every year. It isn't that I didn't like corporate America; it is just that when I discovered the emotional well-being that I derived from growing garlic, I felt that I discovered work that made me feel good. I am not in a high-rise, temperature-controlled, artificial, closed-building environment. Compare walking into one's garlic field, breathing in the aroma of garlic, and feeling the summer air to walking into an office building and heading for an elevator. The sway of the air caused by fans in an air conditioning system does not compare to a natural breeze. There simply is no comparison between the plants inside buildings and the sight of one's garlic stalks swaying in the breeze, or sitting at a well-polished, long mahogany conference table in a business meeting versus being outside tending a garlic garden. I am not making a value judgment for everyone. Is one way of life more exciting or more valuable to oneself or society? It is probably a matter of choice, desire, and/or values. If we could magically open a side door to one of those high-powered business meetings and offer a way out of that meeting and into the vast expanse of a garlic farm with the sun in the horizon and the sight of garlic stalks swaying in the wind, would many men and women run out that door?

It is a choice we can all make, but along with the choice comes the economics of the different lifestyles, and we all well know that although garlic farmers might rank high in well-grounded and happy lifestyles, their bank accounts do not reflect high figures.

I'm fortunate because I have had the opportunity to sample both worlds. After working for 12 years in a medical school, I retired two years ago and now work part-time teaching "social skills" to emotionally disturbed children. I have time to tend to my garlic garden and I'm able to spend precious time with my husband, grown children, and now beloved grandchildren. I'm glad to have had the opportunity to experience the corporate world, but I feel blessed that I've discovered growing garlic, for now I can be as Gerard Manley Hopkins says, in "God's Grandeur."

Well, this column is way too long even for my meanderings on the value of the life of a garlic farmer. Happy days to all of you no matter your lifestyle.

SOME THOUGHTS ON GROWING GARLIC

by Paula Simmons-Green, Washington

Planting

Garlic likes a rich, well-drained soil, pH about 6.2 to 7.5. Crop rotation is important to avoid disease — a two-year rotation for sure, and three years would be better. Consider onions, leeks and garlic as similar species and rotate accordingly.

Planting time in northern regions is mainly in the Fall, 4 to 5 weeks before the ground freezes. Separate the bulbs into cloves (carefully) a day or two before planting. Root/scar end goes downward, and sharp pointed end upward. Don't push a clove down into unprepared soil. Have the soil well tilled and make holes with trowel, or plant in trench and cover with soil. Space between cloves 3 to 4 inches, depending on variety, with 12 to 18 inches between rows. The narrower spacing would be suitable for raised beds, which are easier to weed.

Add a few inches of mulch, chopped straw or hay, or grass clippings. This protects garlic from severe winter weather and drastic changes in temperature. It also serves to keep down small weeds. For most varieties, you will need to pull the mulch back from the emerging garlic in the Spring, so that garlic leaves can grow up straight without fighting to get through the mulch, which usually packs down during the Winter. With garlic bulbils, removal of the mulch that is directly above them is crucial.

Fertilizer

Home gardeners use 5-10-10 at planting time, followed by side dressings with nitrogen in the Spring. Foliar sprays of fish fertilizer in early Spring are often recommended. You don't want to fertilize after late April or early May, because the garlic will have started bulbing by then.

Spring Planting

Garlic is sensitive to both chilling and day length. For Spring planting to bulb well, this means that planting stock should be exposed to temperature of between 32° and 45°F for two weeks to a month. Day length is the other factor in bulb development, which may explain why a new variety of garlic can take several years to adapt to your growing area and why California garlic does not do well in northern longer-day climates. This day-length factor also holds true for onions, and seed companies should specify day-length requirements for their onion seed offerings.

Spring planting can be used to produce a "green" garlic for use before your main crop matures. Some growers specialize in this item and sell it as "green garlic" when the plant closely resembles a leek.

I appreciate having some Spring-grown garlic, because it often does not separate into individual cloves but just forms a fairly large round bulb, which is absolutely perfect for thin slicing and drying.

Weed Control

Mulch applied for Winter protection can, after pulling it back from right above the emerging garlic, serve to keep down much of the weed growth between rows. Otherwise, control weeds by shallow cultivation or hand pulling. Especially annoying are late summer large-leaf weeds that grow fast.

Watering/Moisture

Mulch will help conserve soil moisture. Water as necessary to keep soil evenly moist—but only until three or four weeks before harvest. Moisture too close to harvest makes bulbs more difficult to dry after harvest, thus causing mold and disease in harvested bulbs.

Scape Removal

Most varieties of "hardneck" garlic will send up a flower stalk early in June. It has a capsule at the top that is called a "scape" and contains tiny bulbs called "bulbils." On most varieties it is best to remove the scape and the stem down to about the level of the top leaf. Some growers cut them even lower, while on a few varieties it is advised to allow the tall stem to cure before removal. A few experts even suggest this may give the bulb a longer storage life. The reason for scape removal is to allow all the plant energy to go into bulb production. Some, such as "Asian Tempest," do not seem to be adversely affected by omission of scape removal.

Do NOT remove scapes if you want the bulbils for future planting. Just let plants grow to maturity, be harvested, and cut off scapes after they have dried on the plants.

The removed scape, when still immature and green, is very tender and tasty, quite a delicacy in stir-fry recipes.

Harvest

Harvest time will be a little different for each garlic variety. Too early harvesting will not have allowed optimum clove development and makes bulbs more difficult to dry since they will have too many bulb-covering wrappers. Too late in harvesting will result in "shattered" bulbs, where the bulb-protecting wrappers will have dried away and individual cloves are breaking apart.

Test digging can help harvesting decisions while noting the degree of drying of the leaves. The usual timing is judged by the look of the plant leaves, which start drying outer leaves first and down from the tips. You will need, on Hardneck garlics, about 4 or 5 green leaves left, because these indicate the number of bulb wrappers you will have. One of these wrappers will need to be rubbed off the dry bulb to clean off dry dirt.

Garlic Storage

"Cool and dry" is the ordinary advice in cookbooks. Actual storage temperature of 34° to 36°F is a commercial ideal, but garlic then deteriorates in flavor and quality within two weeks of removal from refrigeration. Storage at 40°-45°F can cause sprouting earlier than normal. Home storage in an unheated room at about 50°F, with humidity of 55-65% would do well if there is good ventilation. The experts say that the Hardneck varieties can use a little higher humidity than the many-cloved Artichoke types.

DEHYDRATED garlic slices, dried till crisp, keep well in cool dry storage and can be pulverized as needed, in blender, food processor or "mini" electric chopper. Owners of bread machines find the pulverized (powdered) garlic convenient.

GARLIC IN OIL: To store in oil, soak peeled cloves for 24 hours in vinegar, then drain and store treated cloves in oil. The mildly garlic-flavored vinegar is great in salad dressings. The vinegar-soaked garlic will not taste of vinegar after storage in oil, and vinegar soak protects against botulism! Keep refrigerated.

PICKLED GARLIC is an expensive delicacy that can be made quite easily. Most recipes call for adding salt and sugar to vinegar, bringing to a boil, and pouring this over peeled garlic. Add a few little hot peppers for extra zing. Store cool and dark for a couple of weeks.

PUREED AND FROZEN: Garlic cloves can be pureed in oil and frozen in small containers for making your Basil Pesto early in the summer before you dig your garlic crop. It stores well refrigerated.

Letters to the Press (continued)

is our life and we love it, although I must confess I'm really looking forward to getting some equipment to semi-automate the process of planting. In contrast, harvesting is usually done in 90 to 100 degree heat—statistically, if you average things out, that means we work in comfort.

From Mike & Barb Burnet, Australia (August 2002)

We now have 87,000 plants nearly ready for harvest of which about 90% will have to be replanted next year. The demand is increasing particularly in the veterinary and medical fields and we estimate that we will need about 20,000 tons per annum to meet the oncoming need. We believe Bayer Germany are planting some 80 acres in preparation for this demand brought about by the overuse of antibiotics in both the animal food chain and medical use. Last year Australia was second only to France in the obscene use of antibiotics. We consumed over 200-tons of antibiotics and lazy doctors wrote 2.5 million scripts, 80% of which were entirely unnecessary, so our resistance to any new emerging strains of flu, etc., is virtually zilch!

The World Health Organization estimate and have warned that by 2005 there will not be any antibiotic capable of countering the numerous pandemic situations that have started and will continue to grow. The only solution is to commence protective therapy now by the daily ingestion of at least one clove of garlic, which will release the necessary compounds to build up bodily resistance in the event of attack. However, our leading medical research university, Monash, has not recommended that garlic be taken as a preventative therapy for a multitude of conditions. To prepare ourselves and to be able to supply, we will need at least another 30 acres on top of our thirty odd existing grower crops with a continual annual expansion of at least twenty new growers. Money is now our problem so we are chasing funds; however, we do not want to lose control. The big drug companies stand to lose \$4.2 billion per year if the government supports the introduction to garlic, so we have to be pretty careful as to where the money comes from, and we have had a couple of curious sniffs.

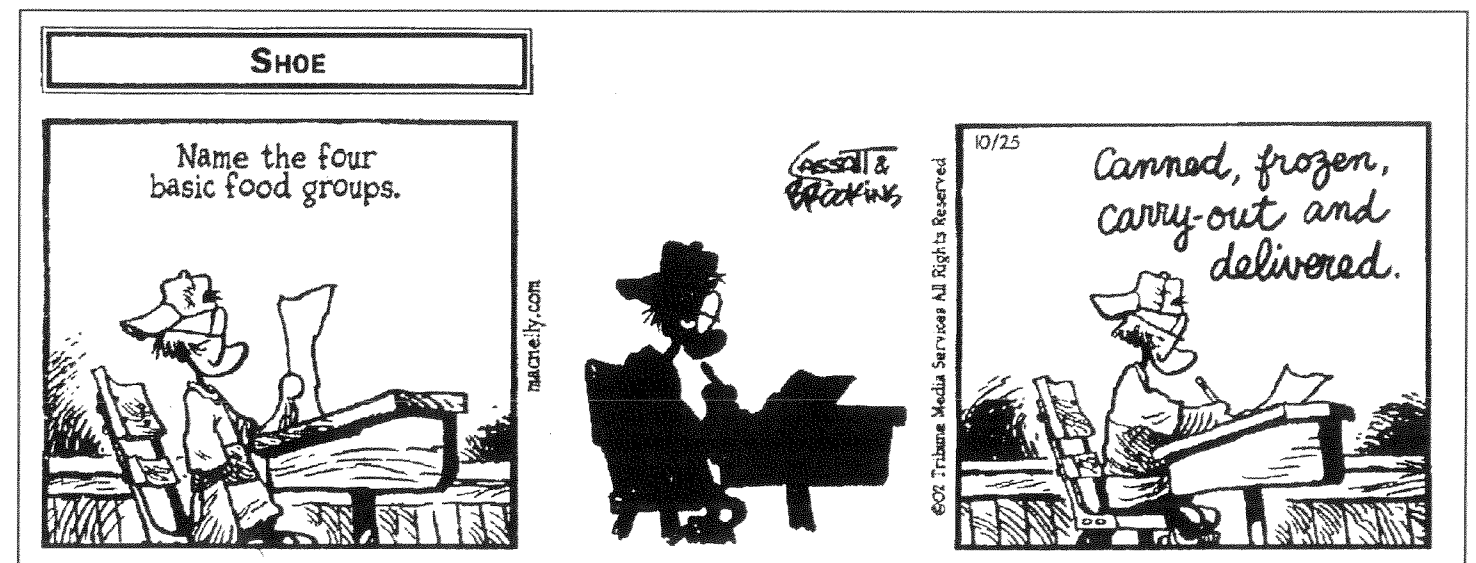
CULTURAL PRACTICES AND POST-HARVEST DISEASES OF GARLIC

An extensive series of experiments in Egypt has identified several correlations between cultural practices and severity of several storage diseases of garlic (due to *Aspergillus niger*, *Botrytis allii*, *Fusarium oxysporum*, *Penicillium citrinum*, and *Penicillium funiculosum*).

- Disease incidence increased as the number of irrigations went up. The percentage of infection was about tenfold higher with six irrigations than with one irrigation.
- Disease incidence increased when higher application rates of ammonium nitrate were used.
- Disease incidence decreased when higher application rates of superphosphate were used.
- Disease incidence decreased when higher application rates of potassium sulfate were used.
- Disease incidence was reduced by about two-thirds by curing bulbs without neck topping.
- Disease incidence was reduced by about two-thirds by harvesting 190 days after planting, rather than 150 days after planting.

Reference: Abstract 2422, *Horticultural Abstracts* 60(4), April 1990, 280.

NOTE: Please note that this research reflects softneck garlic grown in the tropical zone. (DS)



The Love of Dirt

With dignity and feeling, this 120-year-old essay describes a basic human yearning. By Charles Dudley Warner

The love of dirt is among the earliest of passions, as it is the latest. Mud-pies gratify one of our first and best instincts. So long as we are dirty, we are pure. Fondness for the ground comes back to a man after he has run the round of pleasure and business, eaten dirt, and sown wild-oats, drifted about the world, and taken the wind of all its moods. The love of digging in the ground is as sure to come back to him as he is sure, at last, to go under the ground, and stay there. To own a bit of ground, to scratch it with a hoe, to plant seeds, and watch their renewal of life—this is the commonest delight of the race, the most satisfactory thing a man can do....

Let us celebrate the soil. Most men toil that they may own a piece of it; they measure their success in life by their ability to buy it. It is alike the passion of *parvenu* and the pride of the aristocrat. Broad acres are a patent of nobility; and no man but feels more of a man in the world if he have a bit of ground that he can call his own. However small it is on the surface, it is four thousand miles deep; and that is a very handsome property. And there is a great pleasure in working in the soil, apart from the ownership of it. The man who has planted a garden feels that he has done something for the good of the world. He belongs to the producers. It is a pleasure to eat of the fruit of one's toil, if it be nothing more than a head of lettuce or an ear of corn....

To dig in the mellow soil—to dig moderately, for all pleasure should be taken sparingly—is a great thing. One gets strength out of the ground as often as one really touches it with a hoe. Antaeus (this is a classical article) was no doubt an agriculturist; and such a prize-fighter as Hercules couldn't do anything with him till he got him to lay down his spade and quit the soil. It is not simply beets and potatoes and corn and string-beans that one raises in his well-hoed garden; it is the average of human life. There is

life in the ground: It goes into the seeds; and it also, when it is stirred up, goes into the man who stirs it. The hot sun on his back as he bends to his shovel and hoe, or contemplatively rakes the warm and fragrant loam, is better than much medicine. The buds are coming out on the bushes round about; the blossoms of the fruit-trees begin to show; the blood is running up the grape-vines in streams; you can smell the wild-flowers on the near bank; and the birds are flying and glancing and singing everywhere. To the open kitchen-door comes the busy housewife to shake a white something, and stands a moment to look, quite transfixed by the delightful sights and sounds. Hoeing in the garden on a bright, soft May day, when you are not obliged to, is nearly equal to the delight of going trouting....

I do not hold myself bound to answer the question, Does gardening pay? It is so difficult to define what is meant by paying. There is a popular notion that unless a thing pays you had better let it alone; and I may say that there is a public opinion that will not let a man or woman continue in the indulgence of a fancy that does not pay. And public opinion is stronger than the legislature, and nearly as strong as the ten commandments. I therefore yield to popular clamor when I discuss the profit of my garden....

Of course there is no such thing as absolute value in this world. You can only estimate what a thing is worth to *you*. Does gardening in a city pay? You might as well ask if it pays to keep hens, or a trotting horse, or to wear a gold ring or to keep your lawn cut, or your hair cut. It is as you like it. In a certain sense, it is a sort of profanation to consider if my garden pays, or to set a money-value upon my delight in it. I fear that you could not put it in money. Job had the right idea in his mind when he asked, "Is there any taste in the white of an egg?"

There is life in the ground: When it is stirred up, it goes into the man who stirs it.



When I go into the garden with a spade, and dig a bed, I feel such an exhilaration and health that I discover that I have been defrauding myself all this time in letting others do for me what I should have done with my own hands.

— Ralph Waldo Emerson



18th Century Cures

Feeding a child garlic would cure bedwetting or worms. Eating garlic was thought to cure bronchitis and was used as a remedy for colds, rheumatism and "lung trouble" when boiled in milk.

Market Shrinkin' or Stinkin'?

According to the latest statistics of the American Farmland Trust (AFT), we are now losing 1.2 million acres of farmland a year. Far from what we could call a sustainable trend, part of what makes this worse is that we are losing prime farmland to development. If we link this into the concept of free trade, we have a prescription for radical change for farmers. Getting this back around to the small farmer means that local markets and sustainable practices are the only hope for viable economic survival.

An incredible amount of supermarket produce comes from greenhouse production. Computerized systems that regulate inputs, water and heat are supplanting traditional systems. This is both a threat and a challenge to the small grower. As far as garlic goes, of course, the challenge is from imports of tons of bottom-priced wholesale bulbs that squeeze the California market but leave local rural markets relatively free for niche production and various marketing tactics. The seed garlic market has gone sky high as any examination of this year's catalogs will surely show. That is

one reason I would like to see us pursue a program that gives incentives to our members to swap and sell varietal selections that can benefit us in many ways. With some funding and volunteers, we could establish and print a listing of members' available stock and create some reasonable pricing guidelines for member-to-member transactions. I see the amazing success of Seed Savers Exchange and realize that our sustainable future depends ultimately upon each of us. We can't wait for corporate conscience to support common folk. We need to be resolved to be part of solutions at our local level and to support organizations that do not put profit before people.

The GSF cannot take responsibility for quality or pricing, but we would certainly like to support a means to make high-quality garlic and seed available to each and every one of our members, as well as to help you in finding supportable ways to keep your community healthy and happy with garlic breath abounding. Please send us your comments and suggestions as to how we can better meet your needs. (B.D.)

THE INDIAN SUPPRESSION THEORY

by L. John Harris

The introduction of garlic into the Americas is not nearly as well documented as are its travels along the trade routes from its home in southwestern Asia to Europe. We know that the Spanish explorers brought garlic to the Americas, but there is also a Native American tradition of garlic consumption, especially for medicinal purposes. There are many stories about wild garlic being used by the Native Americans to cure sick Europeans. It is also fairly clear that progressive waves of European and Asian immigrants brought a taste for garlic to Anglo-Saxon America. Many immigrants realized, however, that to assimilate and compete in the American Melting pot, they would have to tone down their garlic consumption. And thus, the American mouthwash and breath-mint industry was born. But Native Americans were not allowed to assimilate. Why? I shall hazard a guess that may seem more absurd than it actually is.

Native Americans knew where the wild garlic was. The Anglo-Saxons wanted to control garlic awareness in America, knowing that garlic-loving Europeans and Asians would eventually flock to America. Perhaps the new Americans feared that the native Americans, with access to wild garlic (*Allium canadense*), would later pose a threat to their plans to cultivate, *Allium sativum*. So they got nasty with the natives. For hundreds of years, therefore, the Anglo-Saxons, and their assimilated European brothers, have built the garlic industry in America to serve their own needs and those of the Asians, who love garlic too much to assimilate. Now, with two world wars under our belts, the United States has emerged as a garlic-loving country, but control of garlic is now held by an increasingly diverse lot. As the poet, William Stafford, writes in his *Ode to Garlic*, "It makes us all alike, all offspring of powerful forces, part of one great embrace of democracy"

A Blast From The Past

from Louis Van Deven

William Shakespeare must have liked alliums, for his people talk a lot about herbs and onions and garlic. And Homer, in his *Iliad*, tell us that Nestor served garlic to his guest Machaon.

Galen, the famous physician of first-century Rome, said garlic was the countryman's best antidote and he prescribed it liberally. He said a meal of garlic completely purges a dog of worms. If allowed the run of the garden where it is grown, he will help himself, but I doubt if he will be allowed in the house for some time. (Also, my own experience is that this is not true.)