



The Garlic Press

File



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

SPRING 1993

#16

GARLIC SEED FOUNDATION VARIETY TRIALS: RESULTS FROM 1992 HARVEST

The results from the 1991-1992 GSF variety trials are tabulated. Of the 13 test sites that received planting stock, data were collected and returned from seven. Although it may be painful to recall, last garlic growing season was a tough one, from planting to harvest. This may account for the lack of success in some sites. Hopefully, this year will be kinder, and cooperators who replanted their stock for this year's trials will be able to supply more information. Additionally, since this was our first attempt at such a large-scale trial, there are some logistical bugs to work out.

Nevertheless, we did obtain some very interesting results. All trials were harvested between 3 July and 29 July, 1993. Cooperators took their own data, which was then combined and is summarized below. Results are averages across the seven sites. Average values are given in the table below.

7 TRIAL SITES

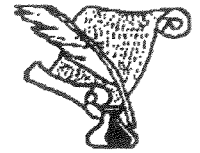
<u>Cooperator(s)</u>	<u>Location</u>
1. Ron Bennett	Victor
2. Mike Conway	Lindenhurst
3. Bob Dunkel	Geneva
3. Jim McFerson	Geneva
4. Dave Loparco	Ithaca
5. Steve Gilman	Stillwater
5. Sherri Mickel	Stillwater
6. Bob Nogash	Memphis
7. Bob Yerina	Little Falls

ID	TYPE	NO. BULBS/SIZE CLASS			AVE. BULB DIAMETER (cm)	AVE. NO. CLOVES BULB	AVE. TOT. HARVEST (g)
		LGE	MED	SM			
GSF 65	TS	15	11	4	5.5	9	870
GSF 60	TS	8	10	4	5.3	7	690
PALERMO	SN	11	9	4	6.1	8	930
VASTA	SN	8	7	6	5.3	7	690
GSF 61	EL	19	8	4	6.6	5	1530

While some sites appeared to have higher levels of performance than others, it is worthwhile noting that two strains, GSF 65 (TS) and Palermo (SN) performed much better across all sites, on the average, than the other two garlics entered. These results represent only one year's data, however, so it is important to continue the trials in our attempt to obtain consistent and reliable information about varieties available to GSF members.

More information about next year's trials will be available in the next newsletter, or by contacting Jim McFerson, USDA-ARS Plant Genetic Resources Unit, Cornell University, Geneva, NY, 315-787-2393.

DIRECTOR'S NOTES



Once again the days have lengthened and my pale skin starts its chameleon-like metamorphosis. Spring stopped by for a few days, but we've already had 85 degree days, most of the fruit's in bloom, asparagus is poppin up—but surely the frost will come again. The garlic's having a good time out there—flying out of the ground—4th leaf on the way! The bulbs planted for greens are ready for their first harvest. I pulled the mulch off the elephants and I'll soon put it back on when I'm done weeding it. I've cultivated once to get some air into the soil and knock out some early grasses. The differences in varieties are most evident to me now, by color and growth speed. We've had a good start to another season (but that's what I said last year, too!)

I enjoyed my 900 mile garlic journey last winter. Luckily, I had beautiful driving weather, clear roads, gracious hospitality, connected people to mailing labels, made some new friends and visited with some old ones. Sometimes, sitting there, pounding out the miles at 1:00 a.m., I'd wonder if it's worth it. But then I'd arrive at the meeting place, and for a few short hours touch people's lives in laughter, sharing information or ideas, helping them understand this entity: Garlic, and its Seed Foundation. People

are appreciative: they join, buy T-shirts/Books/Earrings, personally share with me their successes and failures, and thank me with hugs, handshakes, and smiles.

But this isn't why it's important to me—or the hundreds of letters I answer each year. We need to keep farmers on the land and gardeners producing food for their families. The big Land Grant Colleges and State Ag Departments are sitting on their butts watching the farmer getting flushed down the toilet. They do nothing for the small or part-time farmer. That's why I'm on the road and at my desk now, after 10:00 p.m. and I won't finish my ramblings until well after midnight. Up early to catch Bob (*Press* Editor) before work, then back to this farm for another long day. What a strange way to live.

This is going to be an exciting issue of the *Press*: Photo page, new art work, back issues available!, Western Page and fishbait! Bob does a great job and I appreciate his efforts and patience with me. You all be gentle to each other and with this earth we share. Good growing and good health, or as member Bill Bishop writes: "EAT GARLIC TO LIVE AND LIVE TO EAT GARLIC!"

(D.S.)

A COLORADO ALLIUM COLLECTION

This is a small germplasm collection that is the base for genetic improvement in several *Allium* species. After retiring from vegetable breeding, mainly onions, I began a collection of other *Allium* species. It began in the 1988 growing season with a few garlic varieties, some shallots, elephant garlic and a few ornamental *Alliums*. All my material, even in this year's plots, is from catalogs, many chosen from listings in the Seed Savers Exchange's Garden Seed Inventory.

Even now the collection is not large, as germplasm collections go, with 22 garlic varieties planted for the 1993 growing season, as well as several varieties of shallots and multiplier onions and many ornamental species. I plan to do some (1) breeding in species that are vegetatively reproduced commercially but also produce seed, and (2) selection in species that do not produce seed.

The breeding and selection are just beginning. Each species has its own problems and opportunities and each one reacts to the environment in different ways. And it has become a beginner's efforts with each species.

Needless to say, a one-man operation has to be kept simple. One way is to stay away from crops that are normally grown from seed. Anyone who has had to weed onion seedlings or transplant leek can appreciate avoiding this

extra labor. Sales of bulbs to pay for the long-term program are kept as simple as possible and only wholesale.

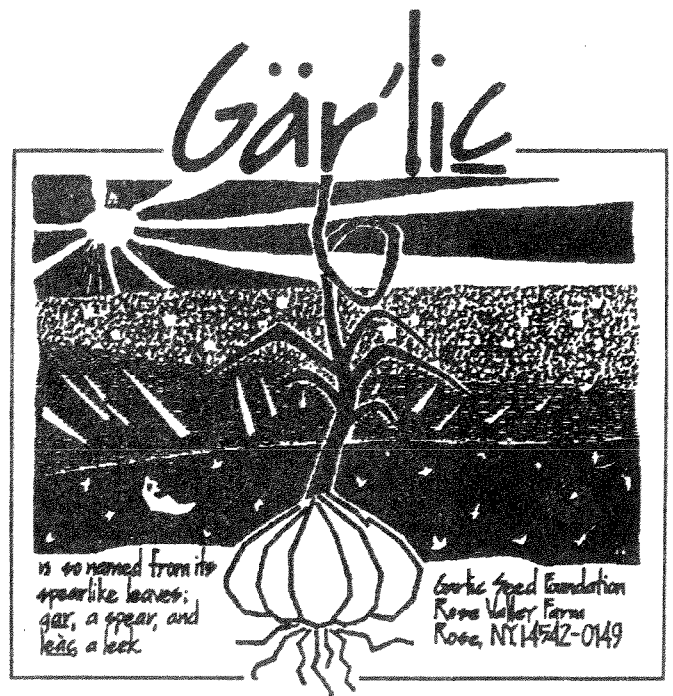
Of special interest to garlic growers might be my move in the fall of 1991. The plots were moved from mineral soil on the plains near Fort Collins to river bottom land in the foothills a few hundred feet higher. Bulbs were generally larger after the move. The one variety that did not overwinter at the new location was Korean Rocambole, although it did well at the old one. Emergence was less than 50 percent from cloves in the spring of 1992, and surprisingly there was a 100% emergence from bulbils of the same variety. The only other noticeable difference was in German Red garlic. Before the move there was no bolting, except for an occasional plant with a scape that was barely visible. At the higher elevation, normal scapes appeared on nearly all plants but did not mature enough to produce bulbils.

I would be happy to show the plots to anyone who is near Fort Collins during the growing season.

Dick Foskett
604 Birky Place
Fort Collins, CO 80526
(303) 482-5976

ALLIO-FILE

- ❁ FREE information on sustainable agriculture: Call A.T.T.R.A. (Appropriate Technology Transfer for Rural Areas) 1-800-346-9140 and ask your question! They research and send you what's out there — use it!
- ❁ I checked out some garlic pills (KWAI) the other day: 100 pills for \$8.50 or \$.085 each, 6 pills equals 1 clove, so each clove is worth \$.51. If 8 bulbs to the pound and 8 cloves to the bulb, then there's 64 cloves to the pound; and 64 cloves at \$.51 means Kwai's selling garlic at \$32.64 per pound!
- ❁ Do you have a *garlic business card*? Please send it to the GSF for a future *Press* page. Thanks.
How do you like the photo page? Please send us one of you and your favorite herb for the next photo layout. This costs a bit more, but we thought we'd try it.
- ❁ Many, many thanks to members Karen Kenney for the *Press* graphics, Carol Fugman for the graphic used on the *Press* reprint cover page, and Bob Yerina for the T-shirt ideas. Please keep them coming! We'll use them.
- ❁ "A nation that destroys its soil destroys itself." (F.D. Roosevelt, Pres.)
- ❁ When you renew by check, please note "renewal" on your check for us. Please check mailing labels for your anniversary date.
- ❁ Member ED MASLAK from Verona, PA wrote requesting more articles for the home hobbyist interested in collecting varieties from around the world. We'd like to have a member/collector write something for the next *Press* about this for Ed and others.
- ❁ Along this same line, the Seed Savers Exchange is listing over 200 varieties in their 1993 catalog! Contact them at: 3076 N. Winn Road, Decorah, IA 52101.
- ❁ We've also gotten word from Canada that they too are starting a collection. I'll put more on this in the next *Press*.
- ❁ Louis VanDeven has been working to germinate the elephant corms that many of us don't have very good luck with. He whacked off the outer skin, planted them in plastic pots with a Festi-Lome growing medium, with a pad for bottom heat. Van's got about a 50% germination rate, and they have now been transplanted outside. He'll keep us informed as/if they size up.
- ❁ Ron Bennett reports from the medical front line on new uses for the stinky stuff: Bee stings! Slice a clove and put the cut side against the stung skin. "Instant relief," says Ron.
- ❁ Peconic River Herb Farm, 310-C River Road, Calverton, NY 19933, has a complete calendar of workshops and lectures, including ... A Week-Long Garlic Festival starting September 18!
- ❁ ENVIREpel (bioinsecticide/insect repellent) is made from 100% garlic water. When applied to the plant as a spray it bonds with the plant tissue to change the UV light reflection, which fools the pests. There are a couple of drawbacks, but if you're interested, call McKensie and Associates, 1-800-847-4769 for more information and dealers.
- ❁ Those interested in growing some of garlic's cousins—the daylilies—contact GSF members Lee and Diana Bristol for their beautiful 1993 catalog: Bloomingfields Farm, Gaylordsville, CT 06755-0005.
- ❁ Gilroy, California was once known for its prune production. Prunes lost popularity in the American diet about the same time EXLAX hit the market. Now they grow some garlic in Gilroy. Last January 15 they had an earthquake in Gilroy (5.1 on the scale). Will this affect the garlic?
- ❁ Why not give a gift GSF subscription to someone you love or hate this year?
- ❁ Is your organization or club raising funds for a well-deserving project? The GSF would donate a 1-year membership. Please drop us a line if we can help you with this.
- ❁ We **DO NOT** give out our mailing list to anybody for any reason. If you want to sell something, place an ad in the *Press* (contact GSF for prices) and all members can read it. No more junk mail!
- ❁ Lastly, we say goodbye to the Fresh Garlic Association after 25 years of service to the Garlic Big Boys. The official word was that the growers didn't support the organization, but my guess is that there's more to it, as in "Chinese" (*Garlic Press* #15). You see, Argentina had heavy rains in December that turned their garlic dark, and that held the banks back from financing. Chilean garlic was good in quality but twice the price as Argentina—but they're also selling to Europe. So is Mexico! 7 million pounds this year (only 5 million in '92), because Argentina's low quality couldn't supply Europe. So, for the *first* time, California is shipping garlic to Mexico, but only 7 million pounds. China also shipped to Mexico at a cheap price. California admits that they expected a strong market so they raised the price, which allowed China easy access. The games people play ... (D.S.)





OUT OF MY HEAD

In the ways we speak, our descriptions of things, and our interaction, we often liken our experiences to other forms of nature. Constantly we intermingle. We abide within the bounds of nature or are punished by its extremes. In the tumble of time we lose track of our footholds and fall into negative patterns, back to where only a renewed commitment to our goals can provide the mechanics of our ascent to the future.

It has been a long winter. The daylight has finally lengthened and I am slowly awakening from out of this long hibernation and sense of inner confusion. It seems I'd better learn to humble myself to the wisdom of the clove. Beneath the covers of white, anchoring and preparing for spring emergence, the noble clove, in patient rapport with its micro-organic environment, is certainly more attuned to its world than I to mine. Displaced by winter, I'm a hostage held over from the long season of mud, and the growing cold has numbed my senses. Light has been rationed, and the landscape is bare boned and austere.

Perhaps I'm missing the point, and many of you are quite happily at rest and preparing like the clove for the season at hand. For me though, what hits home is this sense of a dying energy that longs to be renewed. Only lately have I begun to renegotiate my yearly contract, my commitment to another season of fulfilling duties and a laborer's delight in exhaustion. Somehow longevity must be linked to this sense of purpose. Some perennials, the elders of the beds, do not return and in cycles we must learn to replant or divide and give nurture to the survivors. In each example, in each form of nature that survives, we see attributes useful in renewing this contract of ours. We are all interdependent and we are integrally a part, a link in this food chain. Especially as garlic growers we exemplify this in two very special ways. First, by fall planting we begin our cycle where many other growers end, and as we learn to value these long, quiet months of subtle growth, we extend this ongoing sense of survival. Second, in our product, in the miraculous properties of this healing and wondrous food, we are providing ourselves and others a great immune-enhancing array. Slowly we are unlocking the secrets of this magical essence wrapped in the parchment of time.

In this critical period of great political and economic change, it is all important to conjure forth the logic and power of the clove. The pithiness of its matter and the sharp pungency of its bite make it an essential and transformative herb. The terms "food-aceutical" or "nutriceutical" have become a new part of our language and describe the fundamental natures of foods that take on an added dimension of immune enhancement or elements of systemic cleansing. There is truly a great wealth and abundance in the varieties

of life forms on this planet, and that is why it is so tragic that there is such an increased extinction rate for so many of the flora and fauna that we have perceived as varmints and weeds. We have failed to look into the hearts of these life forms and see their usefulness and uniqueness. The distortion that exists in our misunderstandings and our failure to be attuned to the pulse of our planet is inherently linked with the foods we eat and the thought forms we digest. Eating nectarines from Chile in February instead of potatoes and cabbage, or bundling up to go buy our bags of oranges instead of digging up sunchokes, parsnips and carrots, has done what lawn spraying companies have done to suburbia. Our roots do not grow deep; they turn up and reach for the quick fix from the rubber hoses, from the supermarket misters, and what is called thatch I call confusion.

We must set our priorities and stand steadfast and long. We must overwinter like our garlic, knowing the cycle of growth and its limits while retaining the precious memory of renewing life, and we must relearn the wisdom of seasonal foods that is programmed deep within each of us like the bird map of migration. Individually, we are like these asexual bulbs that are only vegetatively assured of survival. Seen as a culture or society, though, we can hope to learn to rely on one another to perform the ants' dance of cooperative living. Again, however, it is only through renewed commitment, through anchoring and strengthening our roots and accessing the nutritious bounty of life itself that we each can be part of the healing of the earth and one another. Feel the emergence beginning within your own heart and mind, feel that cotyledon unwinding and walking the twisting staircase of its own DNA, and know purpose. Share in the wisdom of life by being patiently attuned to inner growth and stand strong but flexible in the winds of change that come. Life is precious like the clove. More than 5000 years of renewed obedience to nature's law is stability. An enduring civilization is growing right out our back doors and though we are ever sowing new seeds of change, let us remember our elders, these cloves, who have outlived pharaohs and kings.

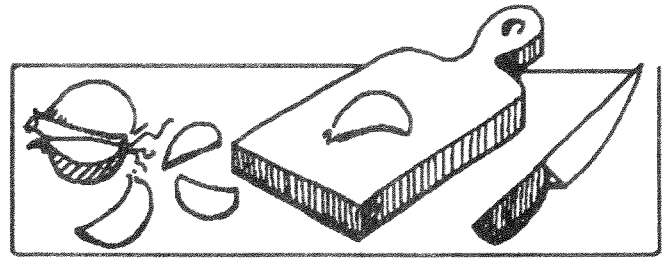
(B.D.)

The Garlic Press is produced seasonally for and by members of the Garlic Seed Foundation. Membership in the GSF is \$10 per year and includes this newsletter and reduced rates at official functions. All submissions for *The Garlic Press* should be sent to the editor, and are published at the discretion of the editor and dependent on available space and the relevancy of each issue's theme. Please address all correspondence of newsletter value to Bob Dunkel, 2079 Washburn Rd., Stanley, NY 14561.

MIDWINTER'S SPRING

Have you seen the garden, fair?
Closed your eyes and known it's there?
Taken flight some starry night
Drawn by some uncertain light
To the heart beneath the snow
Pounding steady to the glow
Of winter's music, far below your feet?
The garlic's song is hidden there
Tucked away, you hands were there
To pat to sleep and cover warm
Thru seasons of approaching storm.
And now it's brought you back it seems
Still not awakened from these dreams
Where fairies light and magic dew
Convince the skeptics, even you,
That year around the growing goes
Like nodding heads to their repose
On cycling thru this endless time.
Hear the meter, hear the rhyme,
For this the garlic master dreams
And out that breath the sulfur screams
Wake up! Wake up! The time is near
To tend the field and prune the pear,
To tap the maple's rising sap.
It's time to rise from out your nap,
See the bulbs and bulbils grown,
Know the truth you've always known.
Life goes on! It's always been
A dance we dance and dance again.
As one clove only ever grows
Every night the sower sows this dream ...
So, have you seen the garden, fair?
The pollen floating in the air?
Have you felt the heated noon
Tho' cold has covered yonder moon
That shines like shadows rising green
To lift the mulch and hasten spring?
On to where the day begins
To beckon forth the scape, my friends.
And longest day its signal sends
To sharpen blades, your back it bends,
For on and on the harvest grows
Within the heart inside the cloves.
And all this life the cycles sure
Have messaged all to time endure
Tho' variation is the rule
Forget the logic and the school
And close your eyes to see the spring.
So ever do the fairies sing
To those who patiently await
The swinging of the garden gate.
So waken now, get in the mood
We're all the guardians of our food!

(B.D.)



FETTUNTA (TUSCAN GARLIC BREAD)

["Breads", *Tampa Tribune*, 1993]

4 (1-inch thick) slices rustic bread
4 cloves unpeeled garlic (see note)
About $\frac{1}{4}$ cup freshly pressed extra-virgin olive oil
Salt, freshly ground pepper

Toast, grill or broil bread slices until lightly browned on both sides. Rub 1 clove unpeeled garlic over surface of each slice. (Garlic haters should eliminate this step; garlic fans should press hard). Liberally pour oil over garlicked bread with the generosity of Tuscan millers, who totally immerse bread in oil. Sprinkle with salt and pepper to taste. Serve immediately. Makes 4 servings.

NOTE: Garlic grates itself on hardened toast, the peels miraculously disintegrate and fingers don't smell garlicky.

ROASTED SUNCHOKES, GARLIC, AND MUSHROOMS

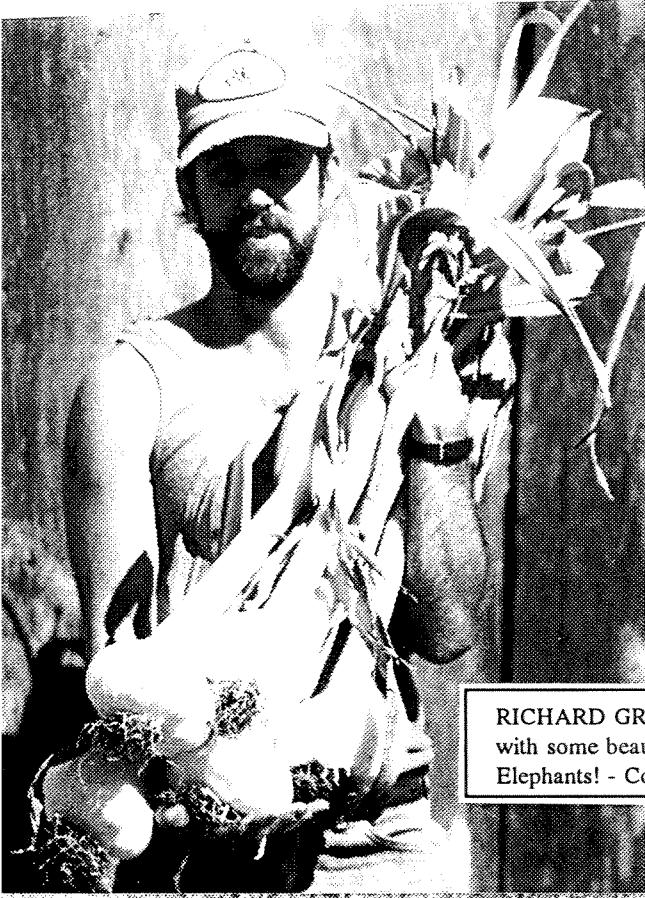
[*Cooking Light Magazine*]

1½ pounds unpeeled Jerusalem artichokes (sunchokes)
scrubbed, trimmed, and cut into ½-inch cubes
½ pound small fresh mushrooms, quartered
12 small cloves garlic, peeled
1 tablespoon olive oil
¼ teaspoon dried whole thyme
1 tablespoon finely chopped fresh parsley
1 tablespoon lemon juice
dash of pepper

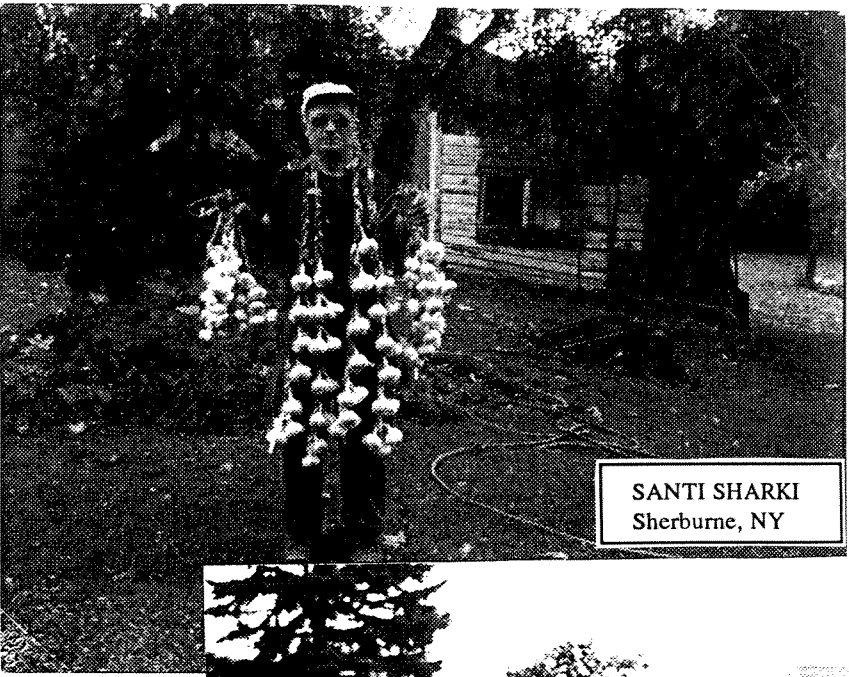
Mix first 5 ingredients in an 11" x 7" x 2" baking dish, tossing gently. Bake, uncovered, at 350° for 50 minutes, stirring every 15 minutes.

Add parsley, lemon juice, and pepper, stirring the mixture well. Yield: 10 servings (about 68 calories per ½-cup serving).

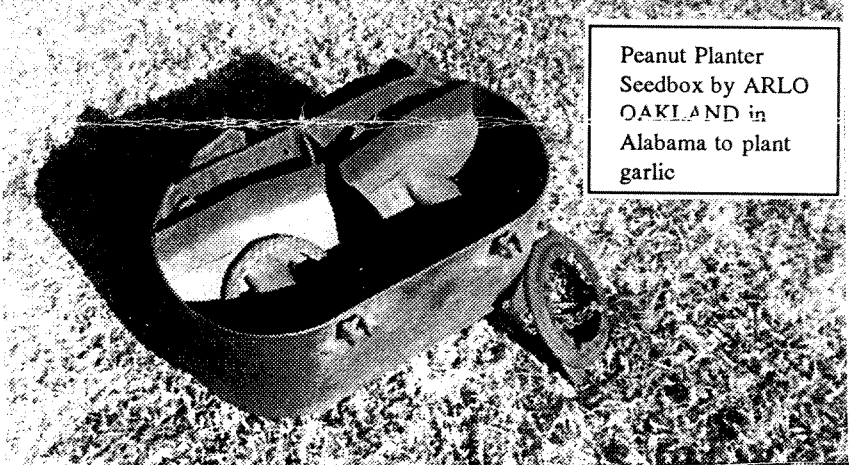
Calories from fat 20%; Cholesterol 0 mg; Sodium 2 mg.



RICHARD GRAY (Alesia, OR) with some beautiful West Coast Elephants! - Costal Mt. Garlic



SANTI SHARKI Sherburne, NY



Peanut Planter Seedbox by ARLO OAKLAND in Alabama to plant garlic



"AGLIO DON" of Punxsutawney, PA with DAVID STERN. Black plastic for weed control.



A member's license plate. (Does he check his oil and vinegar when he gets gas?)



BRIARPATCH FARM, Carrboro, NC Mulched and irrigated, double 90".



ATTENTION WESTERN (USA) GARLIC PRESS MEMBERS YOU'RE INVITED!

In Issue #15, under "How can the Foundation Help You," there's a comment: "3000 miles west, in Oregon, Bill Thomas will be contacting GSF members for ideas and suggestions."

THIS IS IT!

Are you, like me, one of those "geographically disadvantaged" members who can't get to the (NY) Garlic Day? Who can't socialize, listen to qualified speakers, personally share ideas/products and taste all of those culinary delights?

If so, this is what I propose:

The GSF-WEST Regional Group - A "Cell-Division" with identical genes. We have mutual interests, we differ only in geographical dispersal.

This idea is still in the concept stage and therefore open to all of your thoughts, ideas and comments. Basically, we do have some Western university experts (garlic), some unique growing conditions, and we should have a Western Garlic Day (Weekend). Let's promote garlic!

Some of my thoughts are:

- A GSF-WEST newsletter would be an integral part of the *Garlic Press*. Personal happenings, growing techniques, marketing, recipes, etc. of GSF-WEST members.*
- A "Bulletin Board," members only. Items for sale or swap, news of (your) local garlic related events, etc.*
- A Garlic Day-West
- Develop ongoing dialog/participation with garlic specialists, including academia, in our geographical area.
- And lots of others. However I want to get your ideas and participation. Please write or phone - see below. Your participation is essential to the success of GSF-WEST.

*Write to: Country Aire Farms
195 Country Aire Drive
Grants Pass, OR 97526-8276

Or Call: (M-F prior to 7 PM (PST) 503-476-5168

COUNTRY AIRE FARMS — Bill Thomas 2/22/93

Country Aire Farms is located at 195 Country Aire Drive on the West side of Grants Pass, Oregon, 1.5 miles from the city limit. Grants Pass is in Josephine County in southern Oregon, 250 miles south of Portland and 90 miles northeast of Crescent City, CA.

The farm, at 960 feet in elevation, in USDA zone 8, experiences 30" of rain and 150 to 180 frost-free days per year. The owners are Donnette and Bill Thomas (formerly of San Jose, CA). The primary product is garlic. Tomatoes, herbs, pickling cucumbers and cut flowers are also grown at the 3-acre farm and sold at the Growers Market.

Donnette and Bill are currently in the process of developing the farm, previously winter pasture for the Cecil and Wilbur Johnson Dairy.

Two acres of pasture were Roto-vated in the spring of 1992. Some gladiolas, pickling cucumbers, squash and melons were grown that year. An unplanned traffic-stopper occurred when the huge flowers (seed heads) of grain amaranth appeared visible from a hundred yards or two. We had a lot of inquiries about the attractive, multicolored flowers.

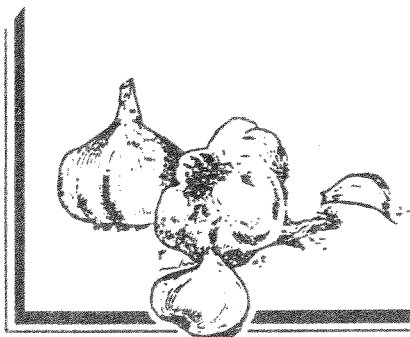
The former pasture is currently planted in crimson clover for soil improvement purposes (to be rotovated into the soil in early April). One quarter of the pasture is planted in garlic (October 1992), which will be harvested in mid to late June.

At present we are growing $\frac{1}{4}$ acre of garlic, 75% of which is elephant "garlic." The balance is Rocambole, California Late and Hungarian Red. The elephant has 7 inches of growth surrounded by a 2-3" layer of very rare snow which fell on February 19th and 20th. We finished planting October 15th for a June harvest. Should pull 1,500 to 2,000 lbs. green. No specific market developed to date. (Know anyone who wants to buy?) We will sell at the local growers market.

Atlantic giant pumpkins (the big ones) will be visible from Country Aire Drive adjacent to the pond. Drive by in August/September/October and watch 2 of them grow!!

Let's hear from you —

Luther Burbank, in his heyday, offered \$1,000.00 for an ounce of garlic seed and went to his rest without receiving a taker.



ASK ALICE



One side makes you foul,
One side makes you growl,
But the one the market gives you,
Won't even sprout at all.
Go Ask Alice, if she's in, et al.

Alice, Alice off the wall, look into your crystal ball. Is it big, or is it small — what's the fairest bulb of all? Selma Mirror, Fogshead, Nova Scotia

Although geographic distribution, soil types and climate zones all play critical roles in determining the attributes of distinct garlic flavor, it seems that your question delves even deeper into defining the essential elements of alliaceous perfection. Admittedly, I used to believe bigger is better, and I tried to convince myself that the wateryness and pith of my largest varieties were to be overlooked and not questioned. "Pound for pound, as long as they're around. Nope it just won't do. How is it for you?" So on and on I tried and tried. "They're not like onions," I cried and cried, "not like leeks with pungent peeks or an elephant that really reeks."

The bulb that's best, beyond compare, is the one that's never even here. For the fairest one that's found is the one still growing in the ground.

Alice, I've heard that ostriches hide their heads in the soil. My soil has a lot of clay. How can I get my bulbs as big as ostrich eggs? Sandy Ize, Hardbottom, Utah

Well, when we talk about relative densities of soil types we unearth quite a lot of variables mixed with some rock solid assumptions. Ideally, we must seek out some sort of balanced environment, which should include the basics of soil amendments like green manures, compost, or other ways of assuring a good population of soil microorganisms so that proper nutrients are available for plant uptake. Quite often, with Spring fertilization and even foliar feeding, we encourage a goodly amount of weed growth and hope our cultivating habits are adequate to leave our garlic in a state of little or no competition. By thinking ahead of ourselves and building the soil tilth in the dormant period between harvest and planting, and/or by a well-planned rotation and/or fallowing, we can take a lot of the guesswork out of trying to pump size into our crop. Those ostrich eggs you may be looking at had best be fertile. Don't be fooled by size alone, and don't assume the other guy's soil type is always richer! I think experimenting with mulches as well as a variety of amendments will lead to a better understanding of varietal selection as well as what works best for you.

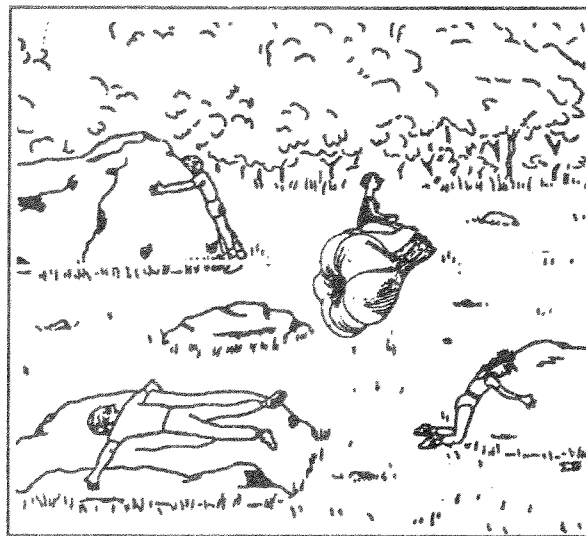
I'm a new member of the GSF and would like to ask if it's important to rotate the planting location of my garlic in the garden each year? The last two years my bulbs have been smaller and in the goofy weather have not done so well. I'm using stock from a local supermarket. What can I do? Frustrated, D.T. Altoona, PA

This question is like a two-edged sword, so let me try to deal with this delicately. One issue is your own soil and cultural habits, and the other is your source of seed garlic.

As far as your intuition towards a rotation is concerned, this is surely a safe and wise approach to both avoid soil-borne diseases that may carry over year to year in your plot and assure maximum nutrient uptake. There are many variations of rotation that you can use. An easy one is to plant into an area previously used for legumes and to follow your harvest of last year with a sown cover of rye/vetch or buckwheat or clover. Find a rotation that works with what you grow and/or interplant with other compatibles.

As for the seed stock from the market, beware of any garlic that is not a locally grown one or acquired from a reputable seed source. Markets can easily carry garlic from "elsewhere" that may have spray retardants or anti-sprouting agents that will undo your well-intentioned desire to multiply your seed.

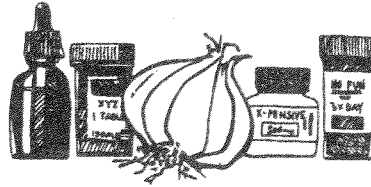
Don't Give up though my friend, and may you swell and smell. Today Altoona; tomorrow the World!



THE LATEST TECHNIQUES FOR ABSORBING ESSENTIAL MINERALS.

SUMMARY OF THE CARDIOVASCULAR EFFECTS OF GARLIC

Larry D. Lawson, Ph.D., Murdock Healthcare, Springville, UT (2/5/93)



Consumption of moderate amounts of garlic cloves, garlic powder, and certain garlic preparations have been shown to have consistently favorable effects on blood lipids (cholesterol, triglycerides, LDL-cholesterol, HDL-cholesterol), blood pressure, and blood circulation in both animals and man. In the past 30 years there have been scientific 220 studies on the cardiovascular effects of garlic and garlic compounds. Although most of these have been in vitro (test tube) studies, 40 of the studies demonstrated that feeding garlic to animals did decrease elevated blood lipid levels.

Since 1975 there have been 31 human clinical trials conducted on the lipid-lowering and blood pressure (determined in only 8 of the studies) lowering effects of garlic and garlic products with persons having moderately high serum cholesterol levels (> 240). All of the studies in which patients consumed either garlic cloves (5 studies, 3-10 grams/day) or stomach acid-resistant, high allicin-yielding garlic powder pills (14 studies, 0.6-0.9 grams powder/day, which is equal to one small clove weighing 1.8-2.7 g) showed significantly decreased blood cholesterol (6-29%) and triglyceride (8-34%) levels. In the 8 studies where blood pressure was measured, there was an average decrease of 10%. LDL-cholesterol decreased 11-26% and HDL-cholesterol ("good" cholesterol) increased 0-14%.

There have been 4 clinical studies with garlic powder pills which failed to change the blood lipid levels. In all 4 cases, the allicin yield of the powder pills was zero or very low, a very good indication that allicin is the active component of garlic toward reducing lipid levels. Animal studies, however, indicate that allicin is not responsible for the blood pressure lowering effects of garlic. Allicin is not present in cooked garlic, but the blood pressure lowering compound is.

Another type of garlic product is the garlic oils, of which there are two types: steam-distilled oils and oil-macerates. There is no oil in garlic. Garlic oils are a result

of commercial processing of garlic in which the allicin released from chopped garlic is converted to other sulfur compounds. In steam-distillation or cooking, allicin is converted to allyl sulfides (mainly diallyl trisulfide and diallyl disulfide). Steam-distilled oils are the main type of garlic oil sold in the U.S. Both animal and human studies have failed to demonstrate any effects of steam-distilled oils on reducing blood lipids.

The second type of garlic oil, oil-macerate, is produced by blending chopped garlic with a common vegetable oil, such as soybean oil. In a few hours, this process converts allicin to new sulfur compounds called vinyl-dithiols and ajoene (ajoene was discovered by Prof. Eric Block of the S.U.N.Y. Albany and has been shown to possess cardiovascular activity). Oil-macerate pills are rare in the U.S., but are very common in Europe. An important feature of the oil macerates is that 4 clinical studies have demonstrated that they do lower blood cholesterol and blood triglyceride. Furthermore, in India a three-year study has recently been conducted by a Dr. Arun Bordia with oil-macerates involving 432 people who had prior heart attacks. The group was split in half so that half were taking garlic oil-macerate (15 mg undiluted/day) and half were taking a placebo. After three years the people taking the garlic oil-macerate had 35% fewer second heart attacks and 45% fewer deaths than the placebo group. These are truly remarkable results. This type of mortality study also needs to be conducted with garlic powder pills.

An important aspect of the cardiovascular effects of garlic are the low doses needed compared to standard pharmaceutical drugs used for cholesterol reduction. A 15% reduction in elevated serum cholesterol levels requires 2 grams of clofibrate, 16 grams of cholestyramine, 1 gram of probucol or 15 grams of soluble fiber. The same reduction is achieved by 1 gram of dried garlic (3 g fresh garlic (containing 5 mg of allicin) or 15 mg of undiluted garlic oil-macerate.

Byron W. Dalrymple, "Weird Baits That Work," *Field and Stream*, (March 1992), p. 44.

Some of the most ingenious but dreadful baits are those concocted for catfish. A neighbor of mine built one that was awful. He soaked milo grain in water in a bucket, set it in the sun until it fermented, and then stirred in a couple of boxes of snuff. Cats, he claimed, like tobacco. Next came a handful of sliced garlic. After the hot sun had worked on this mess, in went the main ingredient: chicken entrails. When this hideous mixture, stirred occasionally, was thick mush, he cut squares from his wife's discarded pantyhose and, wearing rubber gloves, made little bags of it, tied with monofilament, which were then tied to the hook.

I suspect I'm the first to divulge his secret potion, which was pure murder on catfish. By the way, he gave his catches away. Said he couldn't abide eating fish that could stomach such awful stuff. Anyway, by the time he'd tested his weird bait there was no one to cook his catch. His wife had left!

BOOK REVIEW

by Sherrie Mickel, Rucky Tucks Farm

Garlic: Nature's Original Remedy,

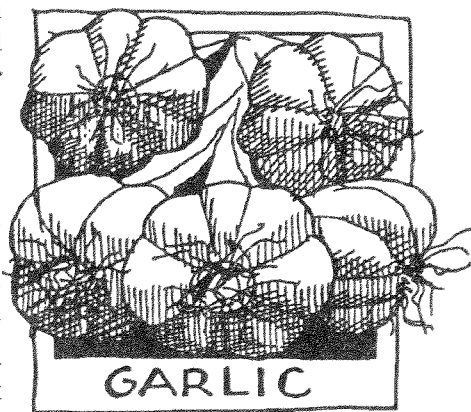
Stephen Fulder and John Blackwood (Rochester, VT: Healing Arts Press, 1991).

A medical research scientist, who is currently in Israel trying to establish a medicinal plant industry, and a writer, poet and garlic lover joined forces to write *Garlic: Nature's Original Remedy*. This 136 page paperback is pithily packed with lore, history, chemistry, traditional herbal and current medical information. It is an astonishingly comprehensive book. It is intended for garlic users more so than growers, though its chapter on the botanical aspects of garlic ("Garlic Planted") is full of useful information. There are currently 450 species of Alliums, down from a one-time total of 1000 or so. Alliums are unlike other underground veggies in that their bulbs are part of their stems, not their root systems. And, of course, their aroma sets them apart. Their fragrance is cut loose when the plant is bitten or cut or crushed or otherwise wounded. It is a defense against predators. The chapter on garlic chemistry ("Garlic Probed") goes on to completely explain (with diagrams) how this strongly scented allucin is released, and how it defends our own bodies against our own predators, like bacteria.

Garlic's strong scent caused it to fall into disfavor in England in the 17th century, after having been used and esteemed for thousands of years. The chapter entitled "Garlic Past" tells that "clay models of garlic bulbs were found in a tomb in Egypt ... they can be dated back to 3750 BC." Dried garlic bulbs have also been found in Egyptian tombs and the Romans believed the Egyptians used garlic to swear oaths over. ("Place your left hand on this bulb of garlic and repeat after me.") The Jewish holy book, the Talmud, instructs the faithful to eat garlic the night before the Sabbath so as to "encourage the matrimonial love-making appropriate to that day." The Romans had an expression "*allia ne comedas*" (may you not eat garlic) that meant "may you not be drafted," since Roman soldiers were fed garlic to increase their warlike prowess. Culpepper, the medieval herbalist, said that garlic was ruled by the planet Mars, and Hindus, Jains, Buddhists, and celibate yogis are still forbidden to eat garlic so that it might not heat them up and arouse them unduly. Even so, the oldest Sanskrit manuscript in existence is a medical treatise dated between 350 and 375 AD that tells a beautiful, lyrical tale of how garlic was discovered and came to be known as a medicinal plant. (A greedy king stole the elixir of immortality and drank it. The god Vishnu set up pursuit, caught him, and slit his throat—wherefrom fell drops of the elixir that hit the ground and sprang up as garlic!)

But, getting back to the English, as fashions and tastes changed, garlic's pungency and lusty vitality caused it to be considered a little too randy for the noble classes to consume. John Evelyn wrote, in 1699, that garlic "is a known medicine, and it is all right for country people ... or for seamen" but not, as the poet Shelley lamented, "[for] young women of rank." A Victorian cookbook written by Mrs. Beeton proclaimed, "The flavour is disagreeable to the English palate."

Most of the book is devoted to the vast medicinal uses of garlic. Dr. Albert Schweitzer used it in Africa against typhoid and cholera. During the Black Plague, the famous 4 Thieves Vinegar, containing garlic—recipe included—was both a preventative and cure. Interestingly, the book notes, without comment, that French priests who ministered to those sickened by plague stayed healthy, while English ministers "were generally infected with the contagion, to which several of them fell victim."



The book explains how garlic is a warming herb whose active biological constituents are in greater concentrations in organically grown bulbs. There are chapters on garlic research, on how it fares against infections, on its effects on the blood, and as an overall bodily purifier. While this review has focused on garlic's history, the book does not, necessarily, but rather is a balanced blend

of documented information (starting with the Sanskrit and going on to an inscription on the side of the Cheops Pyramid that details the amount of garlic eaten by the laborers building the pyramid) that leads up to current scientific study and research. The authors found approximately 700 papers published over the last two decades, and have included a comprehensive list of recommended reading at the end of the book. Also included is sensible information on herbal medicines and modern "chemically pure" drugs, garlic preparations, and food products. There is a list of wild alliums (including the six foot tall *a. ampeloprasum*, or sand leek), chemical diagrams on how allucin comes to be, molecular models of the active ingredients, a garlic pregnancy test, a diagram of how garlic products are made—raw to product—in the U.S. (including garlic oil capsules and odorless extracts), a chart of its medicinal uses, and even recipes for garlic brandy, bread, and broth, Siberian energy food, garlic aphrodisiacs, garlic suppositories, and garden insect repellents. And, there's certainly a section on vampires and traditional uses for garlic in the Balkans. It's a great book.

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