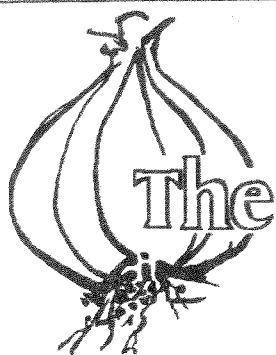


SPRING 1996



The Garlic Press

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



#27

WINTER GATHERING — GENEVA, NY — EXPERIMENT STATION

Getting Our Phil

Seven years ago, as part of an exchange program that took place between the U.S. and the Soviet Union, Phil Simon of the USDA was a member of a small team of researchers that travelled to the area north of Afghanistan into the regions of Turkistan and Uzbekistan to study wild alliums. Another of our members, John Swenson, accompanied him on that sojourn looking for the roots of ancient garlic. As all plant cultivars have areas of origin on the planet, it was determined that the "Golden Triangle" of garlic and other wild alliums was in this geographical area. After many years of waiting, since the slide show given by John Swenson, we were finally able to host Phil to come to Geneva, New York, where one of the four genetic seed storage sites for USDA is located. He brought along a beautiful set of slides from his trip that included pictures of alliums 4-6 feet high lifting their topsetting flower heads saddle high in the meadows of the gorgeous wild landscapes not far from the ancient city of Samarkand. One photo showed a slope of skree that appeared to be an old riverbed, and in the midst of these rocky interfaces was a boldly standing wild garlic. One of the hopes of this expedition was establishing that *Allium longicuspis*, long held to be the ancestor of modern garlic, could be identified and returned to the U.S. for study on a genetic level. Indeed, quite a number of cultivars were found that seemed to indicate that this variety of wild topsetting garlic not only existed

but had a tremendous capacity for survival in the harsh terrains and brutal climatic conditions of this region.

Upon their return from this expedition, studies were initiated at the University of Wisconsin at Madison. Two basic types of indicators were used: isozyme observations, which look at certain enzymes that show banding patterns consistently and which are used to study variation within a given specie; and morphological data, which is an ordered examination of physical characteristics such as cloves per bulb, bulb weight, skin color and number of topsets per umbel as well as number of flowers per umbel. The number of flowers per umbel is determined after removal of bulbils (the vegetative topsets). Finally, the flower color was determined to be an indicator of pollen-shedding abilities. Remember that what was being evaluated was the possibility that wild garlic (*A. longicuspis*) could originally have been capable of fertile seed production. Although 4 out of the 5 accessions of *A. longicuspis* clearly showed traits much different than *A. sativum*, or softneck garlic, there were still certain characteristics that showed discrepancies enough to allude to a more recent transition to asexual reproduction for the wild garlic. Most theories suggest that many factors are at work here and no clear-cut distinction exists. Since cultivated species show more variation than non-cultivated types, and since studies have shown that sexually reproducing plants

possess more isozyme variation than asexual ones, the most variable species were capable of both. So, a study like theirs, which had 110 diverse garlics falling into 17 isozyme groups, clearly did not show the variations they could have, since the total number of isozyme groupings is theoretically 72. The conclusions of this study to date were that clones of *A. longicuspis* did not display unique morphological or isozyme characters and, although it may be an ancestral type of cultivated garlic, the evidence at hand did not warrant *A. longicuspis*' classification as a separate species.

So the wild garlic is old and hardy, but it is not clearly different from thousands of years of domestic cultivated production. Some of the theories of how the physical characteristics can be so varied include the suggestion that soil type and moisture content exert a large influence on bulb-related traits. Generally, flower-related traits are more stable than bulb-related traits, and even there one sees quite a bit of variety. Sexual reproduction ancestrally replaced by clonal reproduction culturally results in much variation alone. Add to this the centuries of hand-selected, human-facilitated maintenance and widespread geographical relocation and one begins to explain the varietal differences seen in today's extensive collections. One other interesting proposal is that microbial infection is passed from generation to generation in asexual propagation; therefore,

[continued next page]

Winter Gathering (continued)

certain environmental factors, coupled with this amazing plant's selective immune-enhancing capabilities, have mutated it enough to adapt to the world by itself.

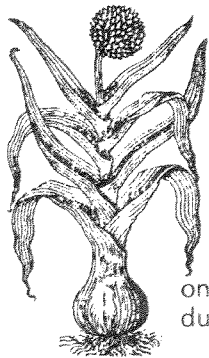
Phil finished off his presentation with a discussion of his work in obtaining viable fertile seed from garlic. Over the last couple of years he has been successful in getting perhaps 200 true seeds to develop in his garlic. Although it may appear to be a painstaking process of removing bulbils with tweezers in order to allow full development of the flower in the umbels, the resulting progress is quite exciting. As reported in past issues of the *Garlic Press*, the future is full of potential. Although one cannot hope immediately to be able to depend on seed rather than clove production for marketable production,

the possibilities of taking positive genetic traits and creating new, more viable cultivars begins to loom on the horizon. Interestingly, Phil found that houseflies were much more efficient at pollinating the garlic flowers in an enclosed system than the tedious work of human hand pollination. The future possibility of virus-free seed and new cultivars that could be introduced into our current systems of vegetative production opens up a new world of possibilities that should brighten all of our outlooks for the future of garlic in the next millennium.

Phil Simon is a gentle man, soft-spoken and dedicated. He was the first to admit, as he lunched at our garlic pot luck, that no one really knows all the answers. What we all

see, feel and think is uniquely important in the evolution of our understanding. As we applauded his efforts, he in turn expressed his admiration for the GSF and the work we have done over the years as well as the work that dedicated growers worldwide contribute to his field of expertise. Dave Stern presented Phil with the Director's Award in recognition of his valuable work and a garlic T-shirt. This type of interaction and wonderful sharing and caring by all of us is what this organization's future is all about. Once again, we would like to express our sincerest thanks to Phil for taking the time to explain to a group of growers and lovers of garlic how we all are always working together to strengthen our bonds of communication and understanding.

Is Your Elephant Springing a Leek?



GREAT HEADED LEEK

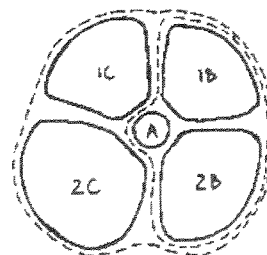
Over the years one of the questions we have most often been asked to explain is how does elephant garlic fit into the allium family?

Known in Great Britain as the "Great Headed Leek," *Allium ampeloprasum*, which identifies elephant garlic, also encompasses pearl onions because their bulb is the food storage of a single leaf and it does not consist of rings like common onions (*A. cepa*). Elephant garlic produces two different sizes of cloves — the outer ones, which are smaller, come from the upper leaves, which are the same as the ones that produce the wrapper on regular garlic. These small cloves are termed bulblets. The large interior cloves develop the same as a garlic clove.

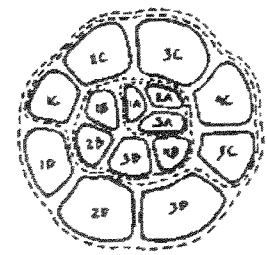
Quite often in any stress conditions an elephant garlic clove grows into a plant that produces only one symmetric clove, commonly referred to as a "round." This "round" will grow into cloves, bolt and produce flowers, which is what a leek also does.

The flowers of elephant garlic and leek resemble one another, and when they do flower do not produce bulbils. Thus it is for the production of small cloves (called bulblets or corms) from the underground outer leaves, and the tendency to produce "rounds" and flowers that elephant garlic is classified as a leek and not garlic. Leeks and garlic, though, are more closely related than garlic and onions or garlic and shallots.

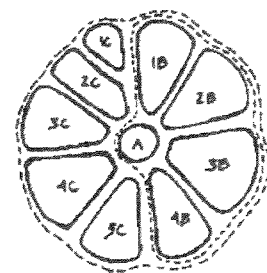
MATCH GAME



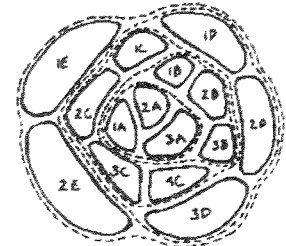
1



2



3



4

1. _____
2. _____
3. _____
4. _____

- A. _____ Rocambole _____
- B. _____ Continental _____
- C. _____ Silverskin _____
- D. _____ Artichoke _____

ANSWERS: 1-B, 2-D, 3-A, 4-C

Director's Notes

David Stern



John called from Indiana: 40° below and no mulch or snow cover. Rob and Rose Ann's garlic washed down to the road by the rapid melting (flooding) of record snow accumulation in Syracuse, NY. 80% winter kill from late planting in the Southern Tier. Last month Jane called from Texas, first year commercial grower with a great looking crop for sale. She called back today to report the severe drought had taken its toll. Shane's Garlic in Maryland was the best ever until the rains started.

So it is with garlic. We plant in the fall, with all the patience and hope of the thousands of years that man has cultivated this crop. We are eternal optimists, we farmers and gardeners, people of faith.

Spring was slow to get to Rose this year. Wet cool soils held back the green shoots, especially so for the elephants. There doesn't appear to be much winter kill, but the plants appear small for June 1. With only three more weeks of increasing sun, I'm predicting a smaller crop ... maybe. I cultivated last month only to warm the soil and put some air into it. There aren't any weeds, either. It's yet below their germination temperatures. I cultivated again this week for the same reasons. I'm fortunate that I decided last to plant in the sandy ground. Some of the upper fields are just now ready to be worked.

Spring usually means "helter-skelter" daily triage of looking at 30 jobs and time enough for 10. The weather slowed all that. I won't take equipment onto ground that isn't ready. You can do a lot of damage to the earth from compaction. It's years like this when a 4-wheel drive (mechanical front end) tractor can make you itchy. "Should I go out today and try it?" One of the tricks to efficient farming is keeping work ahead of you so no time is ever wasted. So this spring, with many hours

each day and lots of water to play with, I improved the farm drainage by cleaning its path downstream so the excess water could exit my land faster. It's something I should have done 20 years ago. What a difference! But usually you don't have the time in Spring, and in the Fall, when it's dry, you can't really tell what path the water takes. For this reason alone it's been a good spring. Now my task shall be to maintain it for the next 20 years....

GSF Business: We did a large mailing to over 400 members whose subscriptions were long overdue. Thanks to the 200 of you who decided to stick with us. We'll do the mailings more often now yet still stay relaxed about it. We're still at 1200 members. Some good folks have come forward as GSF contact folks and a few more festivals are starting up. But there have been some very discouraging things as well. I grow tired of asking people to help (in one way or another) and asking again and again. Why don't folks follow through? Why do they commit in the first place? I've also been threatened with a legal suit and had people call up angry as hell for things way beyond our control! There are times I don't want to do this anymore, it isn't fun. It appears that the GSF won't have its annual Fall Gathering this year. We'll try to develop more regional gatherings and rely on festivals and Ag-Conferences for sales and our educational mission.

I hope your garlic grows and your summer goes well. Let's learn from what has happened and keep that faith. I look forward to meeting folks in Maryland later this month and in Virginia next October.

May we make Peace on this green earth,
David

It's a pleasure to recognize someone who has played an instrumental role in our industry, along with women and men who have shared their time and knowledge to organize, publish, research, create and share the vision of the GSF. The 1995 Award was given to Dr. Phil Simon when he visited with us at Geneva, NY last February.

Dr. Simon works for the USDA/ARS Veg. Crops Unit and the University of Wisconsin, Department of Horticulture, with assignments in research and teaching. His undergraduate work was in Biology at Carrol College, and his M.S. and Ph.D. are in Genetics, from the University of Wisconsin—Madison. His research areas include the genetic improvement of vegetable nutritional and culinary quality; biochemical genetics; and breeding of carrot, onion, garlic and cucumbers; and the application of biotechnology for plant improvement in agriculture. He is widely published and, indeed, not long ago we read (in *Carrot*

Director's Award



World) of work he was doing with disease resistance in carrots.

To us, his work in garlic is of major importance in collecting and identifying genetic and chemical traits, and with his graduate assistant, M. R. Pooler, he produced the first true garlic (sexual) seed. We appreciate his work and his coming to NYS to share with and educate us in seed production. His

knowledge and informal teaching style were most helpful. He has also graciously shared some important slides of his work, which have been included in our GSF Grower and Consumer shows. He's the father of twins, and his favorite garlic dish — 40 clove chicken.

Congratulations, Phil Simon, recipient of the 1995 GSF Director's Award.

[Past Awards: (1991) Bob Dunkel, Doug Bowne, Dr. Eric Block, (1992) Pat Reppert, Dr. Jim McFerson, (1993) Tim King, (1994) Ron Engeland, Louis Van Deven, (1995) Dr. Phil Simon.]

ALLIO-FILE

- ❁ At last, **27 Decorative Alliums** for your garden, many uses, sizes and zoned appropriately: McClure and Zimmerman, 108 W. Winnebago, P.O.B. 368, Friesland, WI, 53935-0368, 414-326-4220
- ❁ Take **Slides** of your fields, equipment, kids and pets, any garlic related business. Send to GSF for presentation.
- ❁ Any **Photos** (BW or color) for our next photo page?
- ❁ I apologize to each of you that I hounded for your postal "**Zip + 4**." Now, after years of working to lower our mailing cost (our biggest expense) by qualifying for "Zip + 4" Pre-sort, the UPS has announced a change in the rules and now we're going to play "barcode." This is so they can further mechanize and layoff more workers.
- ❁ Will you have **Garlic For Sale** this fall? Get listed in the "GSF Seed List 1996." Fill out and return the form in this **Press**.
- ❁ Totally **Garlic Mail-Order Catalog**: House of Garlic in Doylestown, PA (63 East State Street), 1-800-RV-GARLIC: Collectibles, clothes, keepers, pickles, art and fun.
- ❁ **Garlic Oil Dispensers** to reduce wildlife browsing with fruit/veggies/nuts/ornaments. Place 4-6' apart in soil, or on fence or trees. Approx. 50¢ each: Gemplers 1-800-382-8473. I bet they'll be great "air fresheners" for your car!
- ❁ **Vibra-Digger Video**: A tool for harvesting garlic and other root crops for the small farmer/large gardener. Send \$1 (postage) to view. Must be returned in **1** week.
- ❁ **Thanks** to all who contributed to putting this together and getting it out: Mischa, Taran, Ann, Jayne, Dorothy, Dunk, Davis, Nancy, Margaret and Nick, Joy and Steve, Davis, Allyson, Tim and Carl, Clara Sue, Keith, Rod, Tom, Charlie, Grace, Liz, Rolf, Tom, and Rick.
- ❁ Anyone used a "**Cajun Smart-Bar**"? Some kind of metal alloy to remove scents from your hands ... like garlic. This could be a dangerous tool to the Chic-to-Reek movement! Could you use it for other body odors? Please respond if you've used one.
- ❁ Why does some **Garlic Turn green** when it's pickled? Charlie Bishop writes: "I've talked with a food biologist at Cornell about pickled "Green" garlic and have come up with another possible cause. If the water mixed with the vinegar solution is too alkaline, the finished pickling solution may not be acid enough (S/B < 4.5 pH) to prevent minerals (iron) from being absorbed by the garlic. I've tested a few water sources and most have tested near 6.p pH. Baxter Health Care makes a pH kit available through good pharmacies."
- ❁ **Moles** a problem? Charlie also sent: "Mole problems? Open top of mole mound. Down in the tunnels place sticks of "Juicy Fruit" gum. Make sure your bare hands don't touch the gum. They love it. It disrupts their bellies and zap-zap."
- ❁ **Compendium of Onion and Garlic Diseases**, APS Press, 70 pages, 125 photos, with excellent description for diagnosis in the field and/or kitchen. \$35, 1-800-328-7560.
- ❁ **Garlic Braiders** needed at Saugerties Festival! Demonstrate your art and skill and teach others! Contact Bob Yerina, RD 1, Box 13, Little Falls, NY, 13365-9801.
- ❁ From time to time we are asked if there are **Genetic Markers** that can be used to tell one garlic from another. With the help of Phil Simon and Jim McFerson (USDA Geneva, NY), that information will be published as soon as we get a final determination on procedures and costs.
- ❁ **How Was Your Winter** and how'd the garlic make it through? Last winter set records in snow and cold temperatures. One day I got a call from Indiana: "It's 45 below and no snow cover ... " What did the winter of 95-96 teach you now that the garlic is growing. Please take a few minutes and jot down your observations and I'll put them in the next **Press**. Put "**Winter**" on your envelope. Thanks.
- ❁ **Renewals**: The number on your mailing label is the issue you expire. This is **Press** #27. This winter we sent out over 400 letters to folks who didn't renew their membership. 250 have been dropped from our ranks. Please take it upon yourself to renew and check to be sure we do our job and make the needed change. \$10 for 4 issues, \$20 gets you 8 — Thanks.
- ❁ Would you like a copy of **Phil Simon's Talk** (Feb. '96/Geneva, NY): **Varietal Development in Garlic: Breeding versus Clonal Production**, Jan., 1996? Send SASE to GSF. Put "Simon" on your envelope.
- ❁ To All Members: Is your not-for-profit or service organization raising funds or in need of a **donation**? The GSF will gladly donate a 1 year subscription to this organization for use in raffles or other drawings. Contact GSF.
- ❁ Become a **GSF Contact Person** for your area! Put as much or as little time into the job as you can, but we need local folks to help out. Contact GSF.
- ❁ **Purple Mesh Tubing** — perfect for braids or loose bulbs: \$7.50 for 200' (S&H included). Order now — limited supply.
- ❁ Does anyone have a **Garlic and Pumpkin Pie** recipe?
- ❁ **Moving?** Please contact GSF with new address and zip.
- ❁ If you **do not** want your **name** given out by the GSF (for local information), please contact GSF.
- ❁ **Free Advice** to gardeners and farmers: USDA funded "Appropriate Technology Transfer for Rural Areas" - ATTRA, no charge, just call them up, ask your question. They'll either know the answer, research the answer, send you a prepaid packet of materials, or new information their research uncovers. All to help us become better farmers/gardeners: Toll Free 1-800-346-9140.
- ❁ **Name Change**: The following have been submitted since the last **Press**: The Loyal Royal Order of Stinkers; The Garlic Express; Allium Alliance; The Garlic Foundation; Garlic Gazette; Garlic Times; Natures Miraculous Medicine—We Dig Garlic; Garlic Growers Group; Garlic Society and Garlic Adepts Society; Garlic Growers Guild; Garlic Producers Guild; Garlic Group; Garlic Society; G.R.E.A.T: Garlic Researchers, Eaters, Agriculturists and Traders; Garlic Lovers Society; Garlic Growers; Garlic Growers Union; American Garlic Foundation; Garlic Alliance; Garlic Council; Garlic Growers Network; Garlink; and ...
- ❁ Lastly, **EPA**, in its infinite wisdom, has declared garlic to be a low-risk pesticide and exempt from costly registration. Garlic poses little or no risk to public health.

Thanks Toronto!

Following dinner, we sat enjoying several Canadian Lagers and talking about the conference the following day. Jody shared that he had to fight to put a garlic session in the Ontario Horticulture Gathering. "If we get a hundred I'll be very satisfied," Jody said, but a question he had was whether or not it would bring any new farmers to their conference. Jokingly, I asked if the GSF would get a bonus if we had a big crowd. Jokingly, he answered yes.

There were close to 100 when we started at 10: a.m., and when Jody asked, about 75% had never come before and attended because of Garlic. I had two hours to cover the 120 slides, answer questions and try to get a few laughs. Twice we stopped to bring in more chairs, and by the time I finished at 12:30 p.m., every chair was occupied, 3-deep along the sidewalls, and 4- and 5-deep in the back, all floor space up front was covered with bodies, and there were even folks behind the screen watching the slides in reverse! People who couldn't get in the door became angry and demanded their money back at the registration tables

Over 300 stinkos attended that session, and after lunch they rearranged the rooms, moving the pumpkin/winter squash farmers to more humble facilities and giving us the "grand" ballroom! The afternoon sessions were equally well attended to hear Phil Simon discuss his work and presenters

on pests, marketing, and economics. A very well organized and facilitated event. These sessions were the most well attended in the 23-year history of the conference!

Special thanks to Jody Bodnar, Horticultural Crops Advisor at the Simcoe Station, for his work. Farmers in Ontario are fortunate to have such a personable, skilled and industrious advisor. Unlike some parts of this country (USA), I have the real sense that Canada values its farmers and wants to give them a prominent place in their regional food system.

But, of course, it was the farmers whom I was able to meet and talk with that are the real joy of this work. Sometimes, when I'm licking stamps and packing-off T-shirts, I'm not overjoyed with the GSF. But for a few minutes with AL Music (Music Strain is a prominent cultivar in Ontario), to learn of Ted Maczka's (Fish Lake Garlic Man) latest research, and hear how the Garlic Growers Association of Ontario are cooperatively marketing — well, it makes it all worthwhile. Interesting folks doing good work.

Thanks Toronto, for the warmth, hospitality, and support. Hey Jody, what's the bonus?

[D.S.]

ON-FARM GARLIC RESEARCH IN MINNESOTA: SOIL QUALITY FACTORS AFFECTING GARLIC PRODUCTION

by Tim King and Carl Rosen

Two on-farm garlic trials have been initiated in Minnesota in September/October 1995 and will be continued for two growing seasons. The project is being funded by a Sustainable Agriculture Demonstration Grant obtained through the Minnesota Department of Agriculture. The study will be conducted jointly by two commercial garlic growers and the Department of Soil, Water, and Climate at the University of Minnesota. The overall objective of the study will be to (1) determine if current soil test recommendations are adequate for garlic production, and (2) characterize the effects of a composted manure amendment on garlic growth and biological properties of the soil.

Based on garlic feasibility studies conducted in Minnesota, specific soil requirements seem to be necessary to produce a marketable garlic crop. A demonstration at the Staples irrigation center on a sandy soil failed to produce a marketable crop, suggesting that organic matter may play a role.

Organic matter is important in soils because it provides a slow release source of essential nutrients, improves soil physical properties, and enhances microbial activity.

On both sites, a buckwheat green manure was plowed in before planting. One site has a loam texture with about 5% organic matter and tested high in fertility. The other site has a loamy sand texture with 1.2% organic matter and tested low in fertility. Treatments at each site include (1) a control where no amendments were to be applied, (2) addition of composted manure based on its available nitrogen content, and (3) addition of inorganic fertilizer based on a soil test. Chemical and biological quality factors will be determined before and after soil amendment. Chemical properties measured will include pH, inorganic N, and macro- and micro-nutrients. Biological properties measured will include microbial activity and microbial biomass carbon and nitrogen. Garlic yield and quality will be determined at harvest and, if further funding can be secured, nutrient uptake by the garlic bulbs and shoots will also be determined.

The overall goal of this two-year project is to develop environmentally sound nutrient and soil management practices for garlic production under mid-West conditions.

Garlic in Wine

With the increased interest in small-scale processing and value-added marketing of garlic products (pickles), I want to throw out a new idea — garlic packed in wine. While the marketing will most certainly depend on your local interest, my concern was in the safety of the product in regard to Botulism. I talked to Dr. Splittstoesser at Cornell's Food Processing Center in Geneva, NY, and appreciate his helpful comments.

Botulism, which has been deadly to humans who consumed affected garlic, lives on the surface of the garlic, isn't destroyed by heat, and can live in the absence of air. Acidification is the only way to destroy it. The low pH in vinegar works well. The FDA says 4.65 and below is needed. Good wine has a pH of 3.5 or less, so it, too, will successfully destroy the microorganism.

I see some good potential for growers working with a winery to develop a new product: local garlic/local wine. Please check with your appropriate local or state regulators in putting such a venture together to be sure all health and safety issues are adequately addressed. As for Reds vs. Whites, I'll let you experiment! If you experiment with this idea, please share it with others via the *Press*. Thanks. [D.S.]



OUT OF MY HEAD

Bob Dunkel

Mother Bulb

HAPPY SPRING! It's green and oh so wet here, after the longest wintry season I can remember. Add to that, rain 25 out of the 30 days in April and more this May. The wells have filled back up, along with the ponds and lakes, and the garlic is up and growing. Though the field is too wet to get out on yet, growth is terrific and I'm glad this year that I didn't trial any mulches.

Through this whole year's cycle, which seems to have overlooked much of the fall and spring, there still is the strong sense of continuity in our work. Those extreme and random variables disguised as weather seem to have had their way this year as the swings of nature's pendulum sometimes show a murmur at the heart of things. There was very little winter kill, and the spurts of standing water in the low spots seem not to have radically affected any of my varieties. Now is the time of that remarkable transition of energy from the mother bulbs into the newly forming cloves. Each tiny time capsule buried last fall has those thousands of years of wisdom and survival skills to impart to a new generation. Though certainly not bulbs themselves, these cloves that were the vegetative material on which our dreams were built last October, now have undergone a transition in which the fertile buds have formed above the old basal plate, and at this site of the true stem, at the base of the inner leaves, the buds that will develop as cloves have emerged. All of the formative energy is drained out of the old material and recycled into the new crop, and the stories of those mothers lives on in our genetic memory.

I've spent much of the winter reading about Complexity and Chaos theory, a new paradigm of scientific thought that has shrugged off the reductionist theories that everything can be explained by simplification. Whether we watch star systems, cells or sub-atomic particles, there are certain phenomena that lie outside our mathematical and lingual abilities. Within our hopeful views of balanced systems we have found chaos. Energy levels in flux unending and on the edge of chaos, pretty wild words you know, and yet what has been found? A new sense of underlying order that is self-directed, called complexity. The whole is greater than the sum of the parts. Forget looking for the building blocks of matter, energy in disguise ever on is all there is, and it is transformative! Inside each cell of our body, in each tiny clove, is stored the necessary information, in coding, to develop into the complex mechanisms we perceive. The edges melt before us as all merges into change and adaptation. We are part of this cycle in the way we time our planting and harvesting, in the ways we tend these growing children and in our understanding of the connectedness of all things. We are all creating an environment suitable to allow these innate growth tendencies to thrive while verifying that the mystery of all is inside each

and every one of us. The genetic inheritance that is countered by environment is an interface. We are logged on to change. The nature vs. nurture debate is dead and not separable in reality. There is only one constantly changing, growing, resting force called Life that appears and disappears throughout time and in many forms. We are the Mother and we are the clove and, more than that, we are becoming both. May this season be kind to all of you as you do service to it.

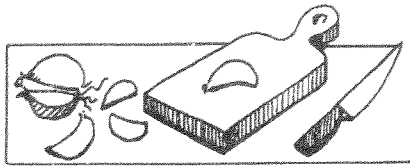
Mother

Where is the Mother
Oh where does she lie?
With body of earth
And spirit of sky . . .
Gently she rests there
All tucked in her bed
Visions of children
Still dance in her head
Till tiny buds form
About her true stem
A magical transition
From her unto them.
Leaves then unfolding
Round each fertile bud
Rise to the heavens
Right out of the mud
Each of her children
Are nourished so fast
As springtime explodes
Out the roots of her past.
This sweet kindly mother
Has given her all
Her cycle's completed
Begun in the fall . . .
Yet life is unending
The clove never dies
In Spring's grand ascension
I still see her eyes.
So Mother, Dear Mother
We thank you so much
For giving us your life
And your gentle touch.

*[In memory of my Mother (Bulb)
Dorothy Dunkel whose quiet passing
Marked 75 years of loving surrender
To her family. May her refolding
Open us all to the wonder of life . . .]*

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. (716) 526-5779 evenings, please.

DEADLINE FOR NEXT ISSUE — JULY 15TH, 1996



Recipes

GARLIC SAUTE OF SUMMER VEGETABLES

From Pat Reppert, Shale Hill Farm & Herb Gardens, Saugerties, NY 12477

This is sort of like a ratatouille except that it is made with practically no oil. Although we had a lot of garlic in the one served at the Festival, it was mild tasting. This is usually true when you use fresh garlic.

- | | |
|---|--|
| 2 onions peeled & chopped coarsely | 1 each green, red, and yellow pepper (sweet), cut in bite-sized chunks |
| 15 whole cloves of peeled garlic - minced | 1 jalapeno - remove seeds and veins - minced |
| 2 cups of mushrooms sliced | Freshly ground black pepper |
| 1 medium eggplant - peeled and cut in bite-sized chunks | 1 Tablespoon olive oil |
| juice of 1 lemon | 1/2 cup chicken broth - mixed with 1 Tablespoon |
| 2 small zucchini - cut in bite-sized chunks | Balsamic vinegar |
| 1 yellow squash | |

Have vegetables chopped & ready to go. Pour lemon juice over eggplant and mushrooms and toss to coat. Pour oil into large wok (or similar pan) and heat. Add onions and saute til lightly browned & fragrant. Turn heat down just a bit - add garlic - stirring all the while. After 1 minute, add eggplant and mushrooms. Stir well - put top on and steam for 2 minutes. Then add rest of vegetables - tossing and stirring. Grind black pepper over the vegetables. If there's not enough liquid to keep the vegetables from sticking, add chicken broth - **by the tablespoonful**. Toss & stir. Put top on pot and steam again for 2 minutes shaking the pan. Take top off and toss and stir til liquid is evaporated. (Although we did not use fresh herbs in this, by all means add whatever you like - rosemary, basil, thyme, marjoram - all of these would add definite character to the Saute. It is delicious served with freshly grated Parmesan Cheese.

WILD CARROT SALAD

From Paula Simmons Green

3 cups shredded carrots

Dressing:

- 1/4 cup oil
- 1/4 cup lemon juice
- 6 cloves crushed or minced garlic
- 1/2 teaspoon cumin
- 1/4 teaspoon hot pepper flakes
- 3 Tablespoons fresh mint leaves, chopped
- salt and pepper to taste

Pour dressing over carrots. Chill 1 hour or more.

GARLICKY MUSHROOMS

From Paula Simmons Green

- 1/2 cube melted butter or margarine
- 1/4 cup olive oil
- 8 cloves garlic, peeled and cut in half
- 1/4 cup sliced onion
- 2 teaspoons Balsamic vinegar
- pinch of salt or dash of soy sauce
- 1 1/2 pound mushrooms

Place mushrooms in large shallow ovenproof dish. Puree rest of ingredients in blender, pour over mushrooms. Bake 15 minute at 350°F. Serve over rice, or with garlic bread to dip in the juice.

CAULIFLOWER WITHOUT CHEESE

From Paula Simmons Green

- 2 Tablespoons oil
- 6 large cloves garlic, chopped
- 1 large or 2 small cauliflower, separated into florets
- 1/2 cup chopped fresh parsley
- 1 large beefsteak tomato, peeled, seeded and coarsely chopped
- 2 Tablespoons hot water

Stir garlic into hot oil in non-stick skillet, stir one minute. Add water and cauliflower, cook on low heat for about 3 minutes, stirring gently. Stir in parsley and chopped tomato. Simmer gently till cauliflower is tender-crisp. Salt and pepper as desired.

QUICK HOT HOT SEASONING SAUCE

From Paula Simmons Green

- 4 large heads of garlic, cloves peeled and sliced
- 1/2 dozen dry hot peppers, stems removed
- 1/2 cup white vinegar
- 1/4 cup minced fresh ginger
- 1/2 teaspoon salt
- 2 cups warm water

Puree all ingredients in blender, high speed, using only about half of the water. Pour puree into saucepan. Rinse out blender with rest of the water, adding it to saucepan. Simmer for a few minutes, not too long, then pour into glass bottle. Refrigerate, allowing solids to settle. Use top liquid to add "spice" to any recipe. This can be very, very hot, depending on variety of hot pepper used.

FISH LAKE FIRE WATER

- 7 to 8 large cloves (F-3 Fish Lake) garlic - shredded with garlic slicer
- 1 bottle Vodka

Put shredded garlic into bottle of vodka. Let it age for 6 months. Use sparingly for medicinal purposes or just for pleasure.



(F-3 garlic available from Fish Lake Garlic Man)
 Ted Maczka
 R.R. 2
 Demorestville, Ontario KOK, IWO
 Canada

**96****GARLIC
MED LINE**

THINNING THINGS OUT

Recent studies have shown that consumption of a clove of garlic per day could be beneficial in preventing thrombosis. Male volunteers between the ages of 40 and 50 years consumed 3g/1 clove for a period of 26 weeks and served as their own control. The result was a 20% reduction in serum cholesterol and 80% reduction in serum thromboxane! The conclusion: "Thus, it appears that small amounts of fresh garlic consumed over a long period of time may be beneficial in the prevention of thrombosis [blood clotting]."

HOT STUFF

Another study for 1996 looks at Capsaicin (the pungent irritating ingredient of hot chili peppers) and diallyl sulfide (a thioether found in garlic) for their chemoprotective effects. Both lowered induced tumors about 60% after 22 weeks, so things should really start heating up in the future as garlic and hot peppers vie to replace salt and pepper on table tops.

END THE MILLENNIUM WITH SELENIUM

As part of their follow-up studies on inducing mammary tumors in rats fed with high selenium garlic, Don Lisk of Cornell and Clement Ip of Roswell Cancer Institute (both of whom have worked with GSF in the past) have determined at this interim stage of their work that it is primarily the selenium that is responsible for the cancer preventative qualities that had such good results in shrinking or knocking out the induced tumors as they developed. Since two different batches of garlic feed were used with radically different selenium amounts, they were able to determine that the increase of selenium was a major factor in both diets and not just the garlic per se. Since selenium is naturally existent to some extent in garlic from most soils, future research efforts now will study the chemical form of selenium in garlic.

FINALLY: BABY'S BREATH

Garlic ingestion by pregnant women was found to alter the odor of amniotic fluid. 45 minutes before testing the mothers were given either placebos or garlic oil capsules. A sensory panel concluded 4 out of the 5 women you could tell by the smell! Garlic tea for baby and me ought to be the new slogan for pregnancy centers everywhere!



WASHINGTON DC GARLIC FESTIVAL

Though political season is in full swing, on June 29th and 30th, 1996 it will be time to take a deep breath and sniff ... garlic will be in the air with the commencement of the first annual WASHINGTON DC GARLIC FESTIVAL, to be held at the Montgomery County Agricultural Fairgrounds in Gaithersburg, Maryland.

Of course, the Washington DC Garlic Festival will feature garlic-laden foods from many of the area's restaurants and caterers. Ample seating will be available for diners to enjoy their food and listen or dance to a variety of musical entertainment. The Mayor of Gilroy is flying in for a ribbon cutting ceremony that will take place on Saturday the 29th at noon, with the Mayor of Gaithersburg.

In addition to the food booths, there will be a section of craft booths that will create a unique shopping experience for many garlic fans. Vendors will offer many hard-to-find garlic cooking products, books, and the area's most unique selection of garlic gifts. In addition to garlicky foods and gifts, the festival will feature a "Garlic Information Center" that will be handled by David Stern. In addition, we will have various speakers discussing anything from the medicinal uses of garlic to growing great garlic. We want to invite any and all **Garlic Seed Foundation** members to this event, and if you have a

topic you'd like to present during our educational seminars please let us know as soon as possible.

"We're very excited to bring the Garlic Festival to Washington DC," said Garlic Festival producer Margaret Leitch. "The Garlic Festival is an event that the whole family can enjoy. We will offer activities appealing to those both young and young at heart and bad of breath." Attractions will include a children's area, a stage with live entertainment, face painting, roving garlic "heads," magic shows, and strolling musicians. Garlic cooking demonstrations will be sure to delight the senses.

A portion of the proceeds will benefit local organizations like the Boy Scouts of America as well as the American Cancer Society. "Congratulations and good luck to The Washington DC Garlic Festival on this, your first Garlic Festival—may there be many more. The American Cancer Society, and the community that it serves, are grateful for your generosity in choosing to donate a portion of your proceeds to help in the fight against cancer!" Gregory O. Dick, M.D., President, Montgomery County Unit of the American Cancer Society.

Call 1-800-78-garlic for more information

Ask for Nick or Margaret

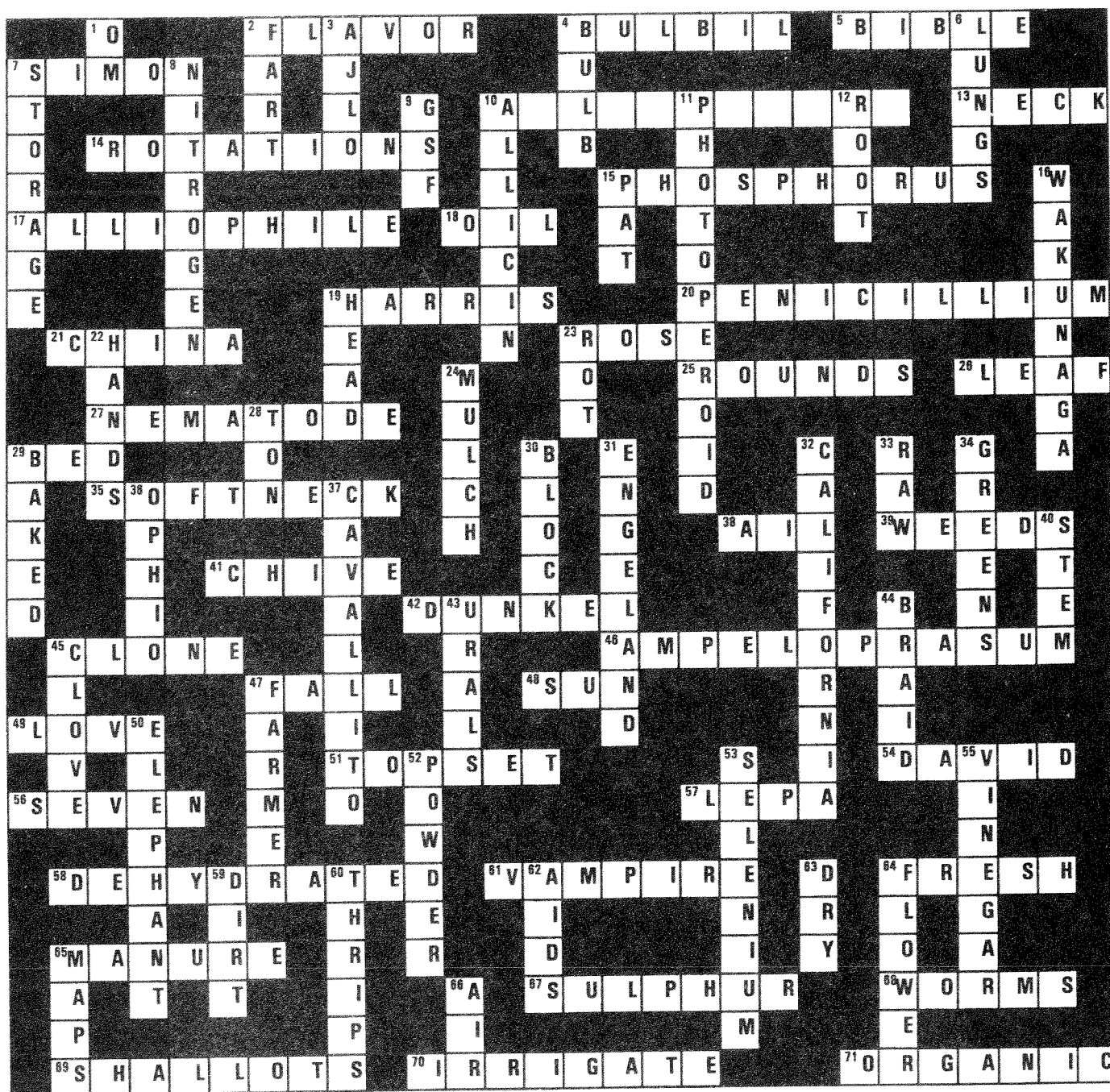
CROSS WORD

Well, either this was too difficult or you all aren't into garlic games! We only had 2 entries that qualified as Winners, and since the first hadn't paid their dues since '94, she/he was eliminated by the judges!

The Champion: Lew Ward of Newfield, NY, Horticulturist, Dad, and gardener of garlic! Lew was awarded a swell prize for his many hours of work. He also pointed out an error in #18 across: the key should read "10% o CA crop," which is the percentage processed for "oil," Garlic Crude!

Some of you became irate and angry with me over #10 across, "Order out of Order," which I felt was the most creative question I asked! The Order of garlic is *Asparagales* (page 3 of Press #26). Putting that "out of order"—any way you want—would align an "A" for #10 down, "P" for #11 down and an "R" for #12 down. The other letters are of no concern.

Congratulations to Lew. Here are the answers. [D.S.]





Canadians Discourage Planting Chinese Garlic

Under Canadian law, all garlic coming into their country is for human consumption unless it has a Phytosanitary Certificate from China and the Department of Agriculture indicating that it is free of disease. The Garlic Growers Association of Ontario reports that some growers are using it for planting stock. Joe Yyenada, Horticulture Coop Advisor, warns that uncertified planting stock may carry such pests as stem and bulb nematodes and white rot. These can be devastating to garlic production and can remain active in the soil for many years, and eradication becomes an expensive process.

This is just one battle the Canadians are having in the Garlic War with China, which has been dumping millions of pounds onto the Canadian Marketplace. Prior to 1993, about 10% of the fresh market consumption was from China. Then in 1994 it jumped to 50% and in '95 to 70%! The reason is price, when last year U.S. garlic sold for \$1.37/#, Mexican at 1.06/#, Argentinean at 77¢/#, and Chinese at 26¢/#! This is called "dumping" — selling below the cost of production to eliminate competition. Small-scale region GSF members are trying to market at approximately the same prices as those of us in the States (\$3.50/#). The Garlic Growers Association of Ontario is acting as the lead group, in cooperation with other Canadian producers, to file an anti-dumping complaint with Revenue Canada similar to the one filed in the U.S. two years ago that resulted in a 376% tariff tax to bring the product up to fair market value (Press #22). Good luck, eh!

New Video Available "Vegetable Farmers and Their Weed Control"

Vern Grubinger, Vegetable and Berry Specialist
University of Vermont Extension System

Vegetable farmers have considerable knowledge about cultivation equipment. This video was produced in an attempt to get some of that knowledge on film so it could be easily shared. Funded by the USDA, SARE (Sustainable Agriculture Research and Education), the video proposal was developed and carried out by me and Mary Jane Else, University of Massachusetts Weed IPM Specialist. The videographers were hired from the University of Vermont's *Across the Fence* daily farm and home television program.

The intent of this project was to help Extension educators and growers improve their knowledge of weed control equipment. Beyond that, it should also lead to better understanding of the diversity of cultivation tools and strategies being used by vegetable growers in New England.

We visited nine farmers in three states to get their opinions on various pieces of equipment and how to use them. In the video, growers describe some of the pros and cons of specific equipment and point out important features. Direct market, wholesale, conventional and organic growers were included.

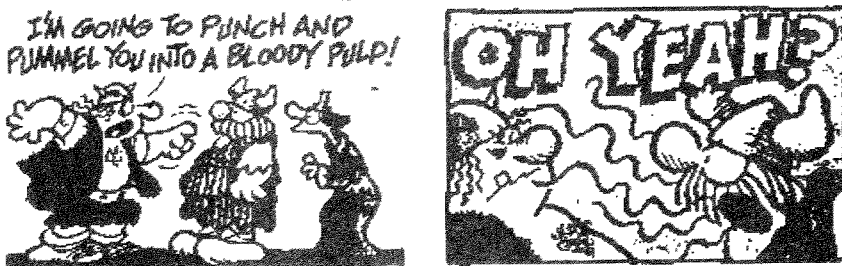
The growers talk about how they use equipment on a number of vegetable crops. Machinery covered includes Budding basket and finger weeders; Lely tine-weeder; rotary hoe; rolling cultivator; Bezzeries implements; various sweeps and shovels; as well as backpack and tractor-mounted flame weeders. Also, homemade tools for cultivating the edges of plastic mulch.

The two-hour first draft of the video was shown at the recent New England Vegetable and Berry Conference for evaluation prior to final editing. The vast majority of viewers said the video improved their knowledge of cultivation equipment.

The final version of the video will be about 90 minutes long. It should be available in mid-April. The cost will be \$10 including postage. Make checks payable to UVM Extension. Please include a note with your name and mailing address requesting the weed equipment video. Send to Center for Sustainable Agriculture, 590 Main Street, Burlington, VT 05405-0059. It is our hope that this video will help you weed'em and reap!

[Note: Those of you who attended CSF Garlic Day '95 will remember Vern's slide presentation on weed control. This is an excellent video at a super price. Nominated for 4 Grammys. If weeds are a problem in your garlic, I recommend this tool. (D.S.)]




HAGAR THE HORRIBLE CHRIS BROWNE





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Canadian Field Day Garlic Growers Association of Ontario Slaght's Farm, La Sallet	June 22	Joe Ondusko 519-443-7229
Washington, D.C. Garlic Festival	June 29 & 30	Nick and Margaret 1-800-RV-GARLIC
Fox Run Winery Garlic Festival, Penn Yan, NY	August 3 & 4	Wendy 315-536-4616
Western NY Garlic Harvest Festival	August 10	Gary Skoog, Batavia, NY 716-637-6587
Bloomsburg Herb and Garlic Festival, PA	August 24	Constance Miller 717-389-1040
Adams Garlic Fest Pawcatuck, CT	August 24-25	Adams Family Farm 860-599-4241
Deerfield Valley Garlic & Herb Festival Whitingham, VT	August 3	Joy and Steve 802-368-7147
Hudson Valley Garlic Festival Saugerties, NY	September 28-29	Rod Wilson 518-677-3544
Virginia Garlic Festival Amherst, VA	October 12-13	Richard Hanson 804-946-5168