

Number 79

Summer 1987

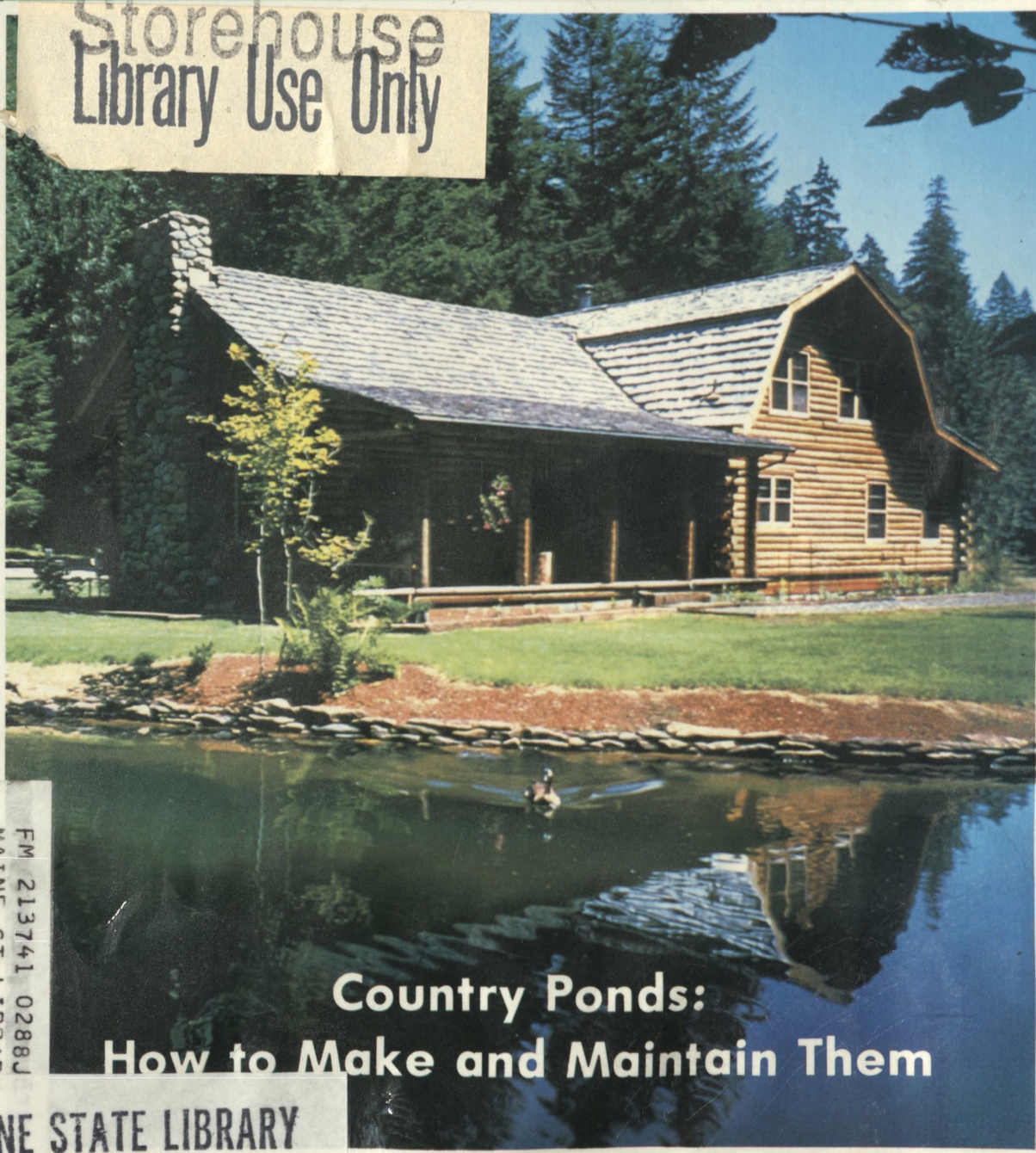
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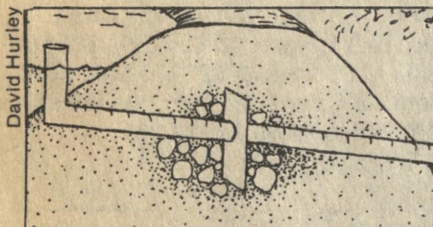
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Photo courtesy of Real Log Homes. Cover design by Lynda Mills.



# LETTERS



## For the Birds

I enjoyed your article, "For the Birds," in the Garden 1987 issue. Many helpful tips for feeding birds were included. In the article, you list several books and magazines for bird-feeding enthusiasts. I suggest that you left one out: *The Living Bird Quarterly*, an award winning, full-color magazine of the Cornell Laboratory of Ornithology. The magazine covers not only bird feeding, but bird biology, behavior, conservation, art and travel. It is sent to all lab members; memberships start at \$25.00 per year.

**Rick Bonney**  
Cornell University  
Ithaca, NY 14850

## Advice, Not Seeds

We just received your Garden 1987 issue of FARMSTEAD. Thank you for the mentions of the "Year of the Tomato and Marigold" in your "What's New for 1987" article.

Your coverage of new varieties of vegetables was very extensive and well done. Please note, however, that All-America Selections should not be listed as a source for seeds; we do not sell them. We promote the AAS Winners which gardeners can purchase from mail-order seed companies.

Even though I am presently an apartment dweller, I enjoy your magazine. It gives me a feeling of the country, trees, rolling hills, peace and quiet.

**Carol Hamacher**  
All-America Selections  
Downers Grove, IL

## A Great Read

You put out a superior magazine. We read it from cover to cover. Thank you for a great read.

**Jim Rice**  
Naylor, MO

## Steep Sledding

Commendations to FARMSTEAD for daring to publish an article as comprehensive and detailed as Dr. Sideman's on the physics, chemistry and biology of soil.

With reference to Martin Christianson's article in the Winter issue, page 24, in this part of the Delaware Valley, a 90-degree incline is usually a vertical drop or ascent, such as on a wall or cliff face. Maybe in his section of the valley an incline of that severity is sleddable.

**Jonathan Gell**  
Trenton, NJ

*Good for you to catch our mistake. We were coasting right through and missed the obvious error. Our hills are about 45-degree angles here.*

## Picking Poultry

I have been raising and showing poultry for seven years and found Luttmann's story on "Choosing the Perfect Chicken" complete and informative. As always, there is the perfect chicken breed for everyone. My chickens bring such pleasure that I can't imagine life without them. Anyone needing more information on choosing a breed for their needs and personality can write to me.

**Kitty Kennedy-Hodgetts**  
Box 197  
Richmond, VT 05477

## Dream Farm

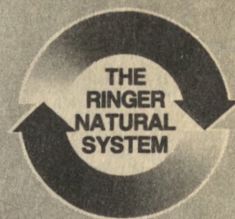
My daughter and I have enjoyed your magazine very much. My daughter has already moved to a city in Washington where we will live for the next few months while we locate our farm. This has been my dream for a very long time. (I am 65 years old.) We will be depending on you and your magazine to help us.

**Rachel Marie Collier**  
Renton, WA

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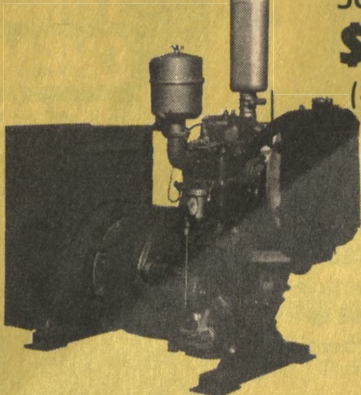


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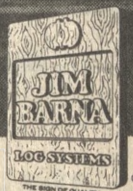
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Publication No. USPS 541-970  
ISSN 0746-8245

Second class postage paid at Freedom, Maine 04941 and at additional mailing offices.

FARMSTEAD is published six times yearly: January(Garden), March(Spring), May(Summer), July(Harvest), September(Fall) and November(Winter).

Postmaster: Please send change of address Form 3579 to FARMSTEAD, Box 111, Freedom, ME 04941.



## The Lost Ice Worm

The Garden 1987 issue suggested the Cordova Ice Worm Festival as a remedy for cabin fever. Residents of Arkansas must have been puzzled by tourists asking directions. After all, they may never have heard of Robert Service, who wrote about Alaska, the state where Cordova and its Ice Worm Festival really is.

Susan Dixon  
Fort Greely, AK

## Grasshoppers in Retreat

With regards to a reader's question about organic control for grasshoppers in Kansas, we have found that grasshoppers do not like the spirea bush. In a blender, I puree one gallon of spirea leaves with one quart of water. Strain the mixture and combine one-half cup of the mixture with two tablespoons of dishwashing soap and two gallons of water. This repellent can be sprayed on fruit trees, shrubs, flowers and gardens. The grasshoppers won't come within 30 feet of where it is sprayed.

Foster W. McClellan  
Hutchinson, KS

## The Proper Perspective

You have a fine publication. I am amazed that it "slipped through the cracks" and I just discovered all of its goodness, wrapped up in some 60 pages. Please continue to keep things in proper perspective and be in touch with reality, which you are doing now.

John Frye  
St. Paul, MN

## A Growing Family

It is a privilege to subscribe to your magazine. I thoroughly enjoy it. I thank you and all your staff for producing such a fine family magazine. I live alone except for two dogs and two cats. One of my cats has just had four solid white kittens, so my family is growing.

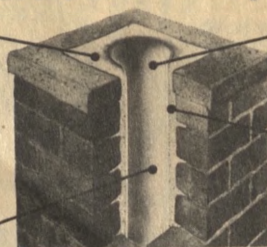
Harold Barry  
Jasper, FL



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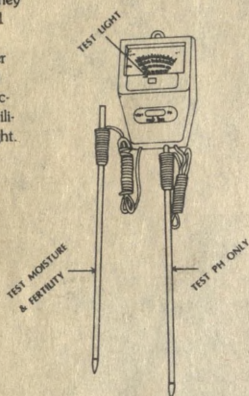
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# ASK FARMSTEAD



## The Bark Is Worse

I am planning on using my small sapling thinnings as fence posts. Is there an easy way to remove the bark?

Removing the bark from saplings is essential in order to prevent decay. The best time of year to remove the bark is in the spring and early summer. The tool to use, according to Dan Ramsey, author of *The Complete Book of Fences*, is a barking spud. You can also use a tire iron, or a shovel with a flat or concave cutting edge.

A barking spud is an 11-inch long tool, with blade and handle one piece. Both sides of the spoon-shaped blade are sharpened. One source we know of is Snow and Nealley, 155 Perry Rd., Bangor, ME 04401. Their prices range between \$19.00 and \$22.00.

## Weeds Are Winning

Is there a good, quick way to kill burdock and Canadian thistle? These weeds have taken over a 1/2-acre plot of land.

Even though these pesty weeds grow side by side, their treatment is different. Burdock is a biennial, only vegetative growth occurs the first year; flowering and fruiting occur the second year. You do not have to pull up the weeds of burdock in order to eradicate it. Instead concentrate on removing the flower stalks, preferably before the seed head matures. This will stop the burdock from reproducing. Canadian thistle must be eradicated by starving the storage roots. Since it is not competitive early in the spring, Eric Sideman of the Maine Organic Farmers and Gardeners Association suggests planting oats which can be planted early. The oats grow and shade the thistle. By shading the

leaves from the sun, the food source is cut off. Eventually, over two or three years, the storage roots use up all their energy and the plant dies. Although this may seem like a long time, the end result merits the effort.

## Banana Squash Blues

Could you tell me where I can get a banana squash seed? They are the best squash I ever ate.

This prolific and large-fruited species of *Cucurbita maxima* is listed as blue banana squash in *The Garden Seed Inventory*, edited by Kent Whealy. He describes the squash as having grayish-green skin, 18 to 30 inches long by 6 to 8 inches in diameter, weighing 25-30 pounds. He lists two retail sources: De Giorgi Co., Inc., P.O. Box 413, Council Bluffs, IA 51502 and Seeds Blum, Idaho City Stage, Boise, ID 83707.

## Geese Relief

I am raising geese for pets but the males are killing each other out of mating season and the females in mating season. This has been going on for four years. Do you have any solutions?

There comes a time in livestock management to assess the problems and weigh them against the benefits. Geese can be vicious. For this very reason, some people use geese as guard dogs. It seems that your geese have carried the trait of viciousness to the extreme. I spoke with Mahmoud El-Begearmi, poultry expert at the University of Maine Cooperative Extension Service. He could offer only one solution: fill your freezer and start again. We all feel that you have been exceedingly patient for four years. It's time to make a change.



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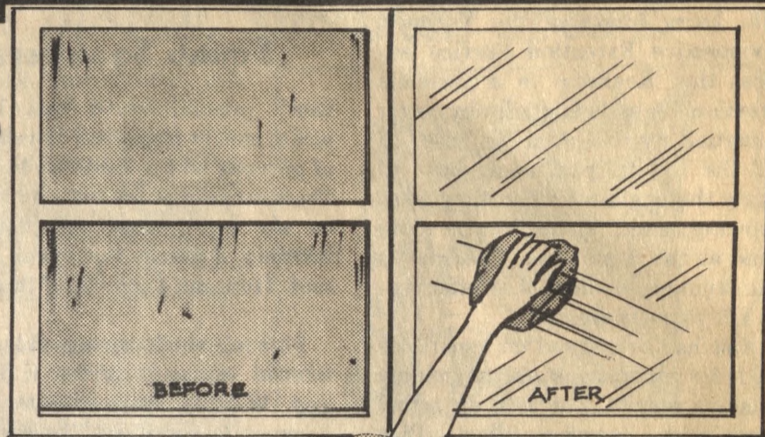
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## Asparagus Tips

I have an asparagus bed about 10 years old. It is quite weedy. Can I use Roundup to kill the weeds? Someone told me to sprinkle salt on the bed in March to keep down weeds. Is that a good idea?

It is not necessary or possible to have a completely weed-free asparagus patch. If you do want to control the weeds, do not use Roundup or salt. Larry Myott of the Vermont Cooperative Extension Service advises that Roundup is a systemic chemical. A systemic kills by being absorbed by the plant. In order to kill the weeds, you would have to apply the chemical when they were growing, which would be the same time as the asparagus. This means the Roundup would just as effectively kill your asparagus.

Salt has been used on asparagus beds for generations with seemingly positive results, but with an actual cumulative negative effect. Dick Villamil, another Vermont extension agent, explains that salt releases magnesium in the soil which bene-

fits the asparagus. Eventually the soil becomes saturated, and the bed seems to slow down or wear out. He recommends hand weeding in combination with heavy mulching with well-watered, composted manure in the fall after the frost. Another suggestion to calm your aching back, is to let chickens graze in the asparagus bed after your harvest is finished for the spring. They will not only keep down the weeds, but they will provide additional fertilizer.

## Squab Squatters

Don't misunderstand me, I love birds, except pigeons. I have a flock of pigeons which lands on my roof. Their droppings are causing a mess on my front steps and they are building nests in the eaves of the roof. How can I get rid of them?

Pigeons which cause problems are labeled vagrants by the U.S. Fish and Wildlife Department. It recommends you check the local and state laws before you take any action.

There are several steps you can

take to stop pigeons from being a nuisance on the roof. According to Linda Bauman of the Suffolk County (Massachusetts) Cooperative Extension Service, traps, glue, electric wires and bristly wires are some of the methods. The most permanent solution appears to be the bristly metal wire. Attach these barbed-wire-like fences to the roof of the house and the pigeons will not be able to rest their feet. Rust-proof screens should be placed over any openings and under eaves to prevent nesting. Both of these solutions will involve some expense, but the end result—no pigeons—should warrant it.

## Repelling Mosquitoes

We would appreciate any ideas you have for repelling mosquitoes. We have two bug lamp candles and a few pennyroyal plants.

There are a couple of things you can try if you don't want to go the aerosol bug spray route. First, there's citronella, an herbal oil that can be rubbed on the skin. It's rather concentrated, so you may want to dilute it with baby oil, otherwise you may drive away more than the mosquitoes. Check your local health food store for it.

Second, be aware of what you wear. Dark clothing seems to be an attractant for mosquitoes, as are perfumes and scented personal products, so avoid wearing them.

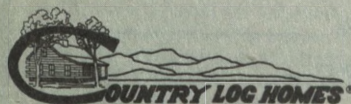
As you probably know, mosquitoes breed in standing water. If you live in a swampy area or have a pond you're bound to have 'squeeters. (If not, check to be sure you're not sitting atop a pool of stagnant water; a drainage problem could be nurturing the pests to life.)

B.t. [*Bacillus thuringiensis*] is helpful in deterring large pest populations, provided it is applied just prior to the larva stage. A microbial insecticide, B.t. is nontoxic to humans and the environment. It comes in several forms and is marketed under the brand names Attack, Dipel or Thuricide. Most garden supply shops and mail order seed companies carry it. Remember that when you use measures such as B.t. you will disrupt the food chain somewhat. Birds and fish feed on bugs, so by drastically debugging you could wind up with less wildlife. □

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F



# Asparagus *thicker than a man's thumb!*

*All-Male Hybrid Asparagus Never Goes to Seed...Puts All It's Energy Into Growing Colossal, Succulent Spears.*

Farmers in Amish communities and parts of Holland had a little trick to growing extra-large spears of asparagus that fetched top prices. They would go down their rows and remove all the female plants — those that produce red berries — leaving only the males to produce stalks. Since the males never “go to seed” they put all their energy into growing fat, succulent spears.

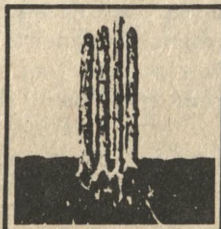
Plant scientists took this idea a little further and produced a variety of asparagus that would grow *only* males, also making it a HYBRID so the productivity of the males could be increased even more. We call our variety “Ben Franklin” in honor of an energetic American patriot.

## **3 to 4 Times More Yield Than Regular Asparagus**

We send you *plants* — not seeds or roots. These plants are already green and leafy with healthy root systems, ready to plant into garden soil. The resulting yields of asparagus are 3 to 4 times more than regular asparagus. A higher percentage of thick spears is assured, many as thick or thicker than a man's thumb. What's more, these hybrids have inbred disease resistance and they are true perennials, coming up year after year, with no replanting. They are hardy in subzero weather, tolerate poor soil (even salty or alkaline) and thrive with no special care.

## **First Public Offering of These Succulent Giants**

We have secured almost all the available supplies of “Ben Franklin,” and



Male asparagus (above left) grows top quality flavorful spears, thick and succulent. Female (above right) has thin, seedbearing stems. New Ben Franklin is a Hybrid with all male stem, and 4 times the yield. Harvest more top quality spears, like these.



*Harvest bunches of 'Grade A' spears like these, each plant of 'Ben Franklin' yields up to 4 times more spears than old varieties.*

this is the first public offering of plants. Until now only a few professional growers and university researchers have had access to them. Be one of the first to grow these succulent giants. Our vigorous young plants cost no more than regular asparagus roots — you can grow as few as six plants to test — or plant a whole patch of 100 plants, but remember that they can yield up to *four times* what the old varieties did. Where you needed 100 plants before to feed a family of four, you only need 25 “Ben Franklin”. Supplies are limited, so be sure to send your order in today.

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MI residents add Sales Tax.



# COUNTRYWAYS

NEWS & INSPIRATIONS FOR BETTER COUNTRY LIVING

## Teaching the "Culture" of Agriculture

**T**he Malachite Small Farm School looks just like the other small farms nestled along the Huerfano River near Gardner, Colorado. Like them, it's a working farm, but it's also a teaching tool for traditional small farm skills.

discussion and a great deal of hands-on work and includes such subjects as organic gardening and experimental crops, beekeeping, small animals, dairy, farm horse power, field crops and land management, and woodworking shop. Students may continue in a

and crafts, nature discovery, hiking and athletics, cooking, gardening and related farm projects.

Malachite has been developing into a self-sustaining entity. Like the farming it teaches, "Between educational grants, tuitions and income from marketing farm produce," says Kent Mace, "we'll not only support ourselves, but be able to expand our programs and facilities."

As a working farm, Malachite grows both traditional and exotic crops, most notably quinoa. Malachite is a major participant in an international cooperative project to improve the domestic cultivation of quinoa, a South American cereal grain with remarkably well-balanced nutritional qualities. The 1986 quinoa crop provided a wealth of research data and 250 pounds of grain that will be sold in health food stores and seed outlets, and consumed on the farm. Malachite staffers, citing prices of over \$3 per pound, believe the strains now being developed have excellent potential as an unusually lucrative cash crop for small farms in the American West.

Malachite is located about 70 miles southwest of the city of Pueblo. At an elevation of 7,500 feet, its remote, rural setting is idyllic enough for a picture postcard.

"Malachite is high, dry and faced with a relatively short growing season," says Kent Mace. "Anyone who masters small farming skills here will have little trouble farming anywhere else."

For further information, contact: Malachite Small Farm School, A.S.R. Box 21, Gardner, Colorado 81040. Phone: (303)746-2389. □

—Steve Voynick

Steve Voynick



**A Malachite instructor and student in the Farm Horse Power "classroom."**

Malachite began in 1978 when the environmentally active Mace family of Aspen, Colorado, decided to actively oppose the steady drift away from sustainable agriculture. With their own funds and those of other contributors, including singer John Denver, they acquired an old, 400-acre farm. For five years, the land was restored and the buildings upgraded. In 1983, the rejuvenated farm began a new life as the Malachite Small Farm School.

"Our approach emphasizes the physical, cultural and spiritual ties between man and the natural world. We think of it as restoring the 'culture' to agriculture," explains Kent Mace, Malachite's director.

Malachite's 17-person staff centers instruction around the five-week-long Farm Introduction Course which is offered twice a year. Teaching is a balance of reading,

one- to six-month apprenticeship program or in an eight-month internship program. Eight three-day weekend workshops offer expert instruction in topics such as draft horse use, cheesemaking, marquetry, the Philosophy of the Green World, and high-altitude organic gardening.

New in 1987 are a week-long Family Program designed to permit families to experience farm life together and the October Farm Festival, a harvest celebration which includes guest speakers, staff presentations, farm tours, art and music. Two scholarship funds have just been established to assist needy students who might otherwise be unable to attend Malachite. In emphasizing the importance of the family to the small farm, Malachite has not forgotten children. Summer activities for children include arts



# A Newspaper Dome Home

**A** lot of people recycle newspaper. Some put it to use in their homes—lining bird cages or walls to be painted. Others cart it to neighborhood recycling centers. But probably very few use it like John Star does. He built a house out of the stuff.

The brainstorm struck while Star was helping a contractor friend build a conventional home. At the end of each day, the contractor flung empty concrete bags into the cement mixer. By the next morning, the bags had all but disintegrated. A day later, the combination of paper and cement that had been dumped on the ground had hardened to a grayish mass resembling Styrofoam. John picked up a piece of the lightweight concoction and wondered whether it couldn't be used for a building material.

The idea lay dormant for a couple of years until the day he spotted a small dome-shaped basket made out of interlocking rings that a friend's wife was using as a macramé frame. It occurred to him that overlapping circles make up the structure of the atom, shells, flowers, and trees and that interlocking rings could create an extremely rigid framework for a house. And what better way to cover the structure than with the newspaper/concrete combo?

Star, with the help of several friends, built a conceptual prototype of a home on some desert land in Tucson. After two years in the punishing Arizona sun, the building stands pure white and unscathed among the cactus.

Lynn Colwell



**John Star built this newspaper dome not only to prove newspaper makes a good building material, but also to test his ideas about dome framework.**

The model, which is 12 feet wide and 9 feet tall, stands on a 12-foot-square wooden platform foundation. "But you could pour a cement foundation if you wanted," Star says.

The framework for the dome was put together on the ground. In an open area, Star drew a circle 10 feet in diameter. Using a pipe bender, he curved  $\frac{3}{4}$ " electrical conduit to match the circle and closed the two ends with conduit couplings. His dome consists of six rings, but a larger room could be constructed by using more. "For a 30-foot dome with a circumference of about 95 feet, I would use 10 rings," he explains, adding, "There should be no more than a 10-foot span across a ring at the base of the dome."

After the ring framework was bolted together, the roof was attached. At this point window and door frames were added and then a wire screen was tied over the framework. The electrical wiring was put into place before the "paper-crete" was applied.

Star's formula is equal parts paper and cement. He starts with three gallons of water in a cement mixer and then adds the paper, allowing it to dissolve. He feeds newspaper into the mixer until it is full and then adds the equal part of cement (by weight).

One of Star's most convincing arguments for this type of shelter is price. The waterproofed, sealed shell cost less than \$3 a square foot. In addition, because it is built in one piece, the finished dome is virtually airtight. The model took only 40 hours to build.

Star is anxious to build a full-scale model of the house, but has not found land far enough out into the county to avoid problems with building codes. Although he is convinced that the rings provide more than adequate structural support, it would take an expensive study to prove this to the satisfaction of inspectors.

Eventually Star plans to market his invention in kits, but for the moment, he is content to simply share the ideas with other people. While he has not proven that you can create a 1,500-square-foot home out of conduit and newspaper, he has created a low cost, simple means for anyone to construct very energy efficient outbuildings such as garages, sheds and one-room offices.

For more information or help in building your own newspaper dome, contact John Star at Polarity Research, 3740 Ironwood Hill, Tucson, AZ 85745.

—Lynn H. Cowell

## The National Country Garden

**L**ooking for gardening ideas? The place to look is in Washington, D.C., where the National Arboretum has created a three-acre National Country Garden. Within this garden you will find showcase after showcase of ideas for personal flower and vegetable plots.

The displays are particularly strong in the area of vertical

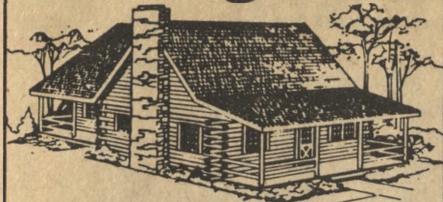
gardening and use of recycled materials for garden aids and accents. Some of the gardens you'll find within the "rooms" of the Country Garden are: historic, townhouse, varietals, \$50 yield, \$100 yield, \$400 yield, greenhouse, exotics and ornamentals, herbs, clothesline—even a gazebo.

Not many public gardens are devoted to home vegetable and

flower gardens. As part of a visit to the nation's capital, a stop at the National Country Garden should be as refreshing as it is inspiring. The National Arboretum is open April through October and is located at 3501 New York Avenue, N.E., Washington, DC 20002. Hours: 8:00 a.m. to 5:00 p.m. weekdays, 10:00 a.m. to 5:00 p.m. weekends. Admission is free.



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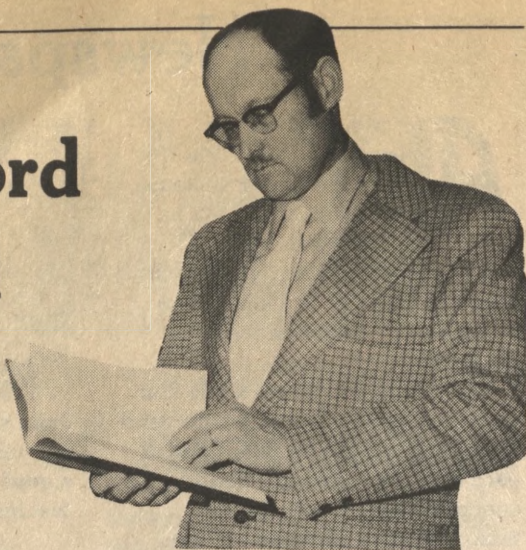
For membership information, write Sierra Club, 530 Bush Street, San Francisco, CA 94108, (415) 981-8634.



## Sierra Club

## COUNTRYWAYS

# Rural Word Wizard



Alan Larsen

**D**onald Wixtrom, Witch Lake, Michigan, is a word wizard. The self-taught linguist can read, write

and understand 22 languages. He speaks many of them fluently.

He is by profession an interpreter of the written word. In 23 years he has translated more than 13 million words into English. . . about the equivalent of 350 books.

Wixtrom lives one mile east of Highway M-95, at the end of a charming country lane. Growing up in a small village hardly left Wixtrom the chance to meet or hear people speak foreign languages. But by the time he was eight he was an avid reader, and was introduced to strange words and phrases while browsing through the Bible and reading newspaper accounts of the Spanish Civil War.

His only formal language training was two years of Latin in high school. He attended college for a year, but felt he wasn't gaining enough practical knowledge, so he quit.

Wixtrom decided to study languages on his own. "I spent hours pouring over grammar books, *Reader's Digest* in foreign editions, listening to my shortwave radio, and using a recorder," he said.

In 1965, Wixtrom became a full-time translator after having mastered 10 languages. Since then he has become skilled in 12 more.

Wixtrom began translating personal letters from overseas penpals of area residents. Later he deciphered articles from foreign metallurgical journals for a nearby iron-ore mining company.

Presently, Wixtrom is employed

During an especially difficult translating assignment, Wixtrom, 57, consults one of the 175 dictionaries in his library.

by a private scientific agency in Washington, metallurgical companies, and patent attorneys. But the major suppliers of work are several East Coast translation agencies.

A vital link with these companies is Wixtrom's rural mailbox, for it enables him to live in the rustic region he loves instead of a large city where such corporations are based.

If the proficient linguist works steadily for eight hours, he can translate 4,000 words, or 16 typed pages. Much of his interpreting is taped. Pay varies from \$25 to \$40 per 1,000 words, depending on the degree of difficulty.

In the winter the linguist spends his free time doing what else? Studying a new language! Each spring, he and his wife, Marilyn, make maple syrup for three weeks as a refreshing pause from the deep concentration translating demands. Summers find Wixtrom cutting firewood for a wood heater and caring for a large vegetable garden, in addition to his daily translating. Each autumn, the Wixtrom's home becomes headquarters for about 20 deer hunters, and he becomes a guide and helps with the accompanying chores.

His talents span many areas, but he does admit to an Achilles heel—his memory. "Funny thing, I can't seem to remember faces," he admits.

—Shirley DeLongchamp





## But Will It Bite?

**A**ny adult who has tried to deal with a three-year old's questions about insects knows how hard it is to find the answers. Most adult references have too much information, and usually don't include the things the kids want to know. The ones written for children often tell too little, and some of them are just plain wrong.

Fourteen insects are covered in *But Will It Bite Me?*, and the book tells all the neat stuff the kids really want to know: how and where the insects live, what they eat and what eats them, and—of primary importance to a kid—will it bite and what happens if it does.

Too many children—and too many adults, for that matter—are afraid of insects. As a result every bug they see gets stepped on or sprayed with some chemical. This book shows how each insect fits into the natural

world, and why we need the insects even though they may make us temporarily uncomfortable. Authors Edith G. Bailes and Louis J. Lipovsky hope the book will spark an interest in and respect for insects in people of all ages.

You can purchase *But Will It Bite Me?* by sending a check for \$9.95 to Cardamom Press, Box D, Richmond, ME 04357. ☐

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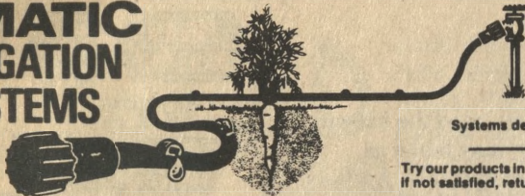
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## COUNTRYWAYS

# Comfrey Is a Comfort



David Hurley

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Dr. Richard Heckmann, research scientist at Brigham Young University, has completed experiments with a patented comfrey extract on laboratory rats, demonstrating that comfrey does, indeed, stimulate the healing of damaged skin.

Dr. Robert Bryner, a physician from Logan, Utah, treated 12 patients with persistent stasis ulcers at Mormon medical missions in Belize and Guatemala in April, 1986. During his 3-week stay, all of Dr. Bryner's patients responded favorably to the comfrey extract treatment. Some showed a definite improvement within 48 hours.

Comfrey extract is reported also effective in treating bedsores, athlete's foot, dermatitis, cuts and insect bites. The extract used in these studies is produced and marketed under the name, Comfrey Skin Care, which can be ordered from Steuart Laboratories, 32 E. Fillmore Ave., Dept. F, St. Paul, MN 55107. Postpaid cost of a one-ounce bottle is \$4.95.

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**Y**ou have only to read through three major seed catalogs to see that the American gardener's palate is geared to the sweet side. Each year we want sweeter sweet corn and less bitter cucumbers. Now that European gourmet vegetable varieties are making inroads in the home garden and with the American palate, we have to cultivate a more sophisticated sense of taste.



Chicory

Heirloom Garden Seeds, one of several seed companies specializing in rare and gourmet seed varieties, recommends this way to better the



Endive

bitter side of your salad bowl:

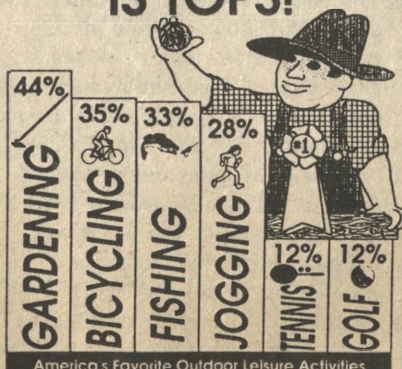
Tear some endive or radicchio leaf into a separate salad bowl. Add enough olive or fine salad oil to coat the bitter leaves entirely. Once the leaves are well coated, add them to the main salad bowl and toss. The oil coating will greatly reduce the sense of taste and render the leaves more palatable. You will be able to gradually work your way into enjoying the bitter flavor, reducing the amount of oil you use each time.

Start by buying some of these salad vegetables in the store—endive, escarole, chicory, dandelion, radicchio—and then, when you have developed a taste for one or more, take the next step and grow them in your garden.

For a seed catalog with these and other gourmet vegetables, send \$1.00 to Heirloom Garden Seeds, P.O. Box 138, Guerneville, CA 95446.

## Gardening Keeps Growing

### GARDENING IS TOPS!



Source: National Gardening Association 1987

**G**ardening ranks as America's number one outdoor leisure activity for the third year in a row.

According to the 1986-1987 National Gardening Survey just released by the National Gardening Association based in Burlington, Vermont, more American households participate in gardening (44%) than jogging (28%), playing golf (12%), fishing (33%), tennis (12%), bicycling (35%) and other outdoor leisure activities.

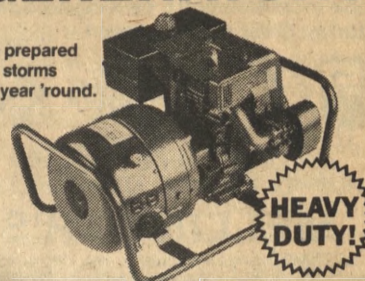
The 1986-1987 National Gardening Survey shows that 44% of America's households have vegetable and/or flower gardens. □

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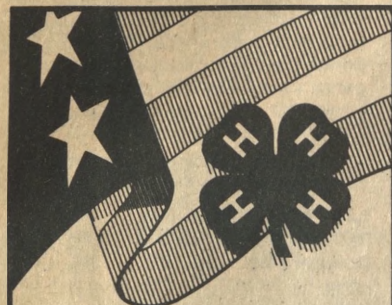
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## COUNTRYWAYS



## Build Your Own Camp

**I**n our neck of the woods, there is a long-standing tradition of having summer and/or hunting camps.

These camps are rugged one-room buildings, usually made of wood, especially logs. They include a sink for wash-up and a bed or a bunk, a wood stove and a couple of chairs. Part of "camp" is in the style of life there. You have to rusticate—sweep with a broom, light with a kerosene or propane lamp, use a privy. And because of that you are free to do more hunting, fishing, hiking and playing.

Not too long ago, Maine writer and illustrator Tom Hennessey wrote an editorial for the *Bangor Daily News* in which he lamented the passing of this tradition in the Maine woods. At the same time, Northern Products Log Homes was designing a camp kit. Because Hennessey's picture of the camp was so like the design on the drawing boards, Northern asked for and received permission to name their camp design after this loved and respected Maine artist.

What intrigues me about this package is that it is very sensibly

priced—\$4,058—considering it includes the logs, the roof framing, the first roof, the shingles, roof felting, floor framing, foundation posts and pads, flooring, three windows with screens, interior/exterior trim, one exterior door, caulking, spikes, gaskets, roof edge drip, stain and starter nail package, sink base, one stainless steel sink bowl, two single bunks, and an airtight shepherds stove. (Price is F.O.B. Bangor, Maine.)

This kit not only offers the chance to create your own recreational camp by your pond or in your woods, but it provides an excellent opportunity to discover how to build a log home without making the large-scale commitment.

The structure wouldn't necessarily have to be a camp either. You could modify it to serve as a sauna—nice near the pond—or as a sugarhouse. You could probably come up with more, and I dare say, better ideas. To learn more about the Hennessey, write to Northern Products Log Homes, Inc., P.O. Box 616-FM, Bomarc Road, Bangor, ME 04401-0616. Or call (207)945-6413. □

—H.N.B.

## Tickle for Guinea Fanciers

**T**here is little in published literature about guinea fowl, but that's about to change thanks to the newly organized American Guinea Club. Angie Papp, founder of the organization, cites its main goal: "to get the guinea fowl admitted into the *Standard of Perfection* so that guinea fanciers can compete right along with other fowl at poultry shows."

At present, the American Poultry Association does not recognize guineas. "They consider them to be game birds," says Papp. According to H. Charles Goan, Tennessee Extension poultry specialist, guinea

fowl are classified as poultry by the U.S. Department of Agriculture.

Through the efforts of the American Guinea Club, guineas are now being shown around the country at those poultry shows that allow them. "Sometimes they outnumber a lot of birds that are in the *Standard*," says Papp, whose organization sponsored its first national meet in November 1986.

Membership in the American Guinea Club, which includes receiving its bimonthly newsletter, costs \$5.00 a year. Contact Angie Papp, 620 Payne Road, New Albany, IN 47150. □

—Gail Luttmann



# When the Lights Go Out . . .

In many areas of the United States, summer is the time of power problems. Heavy rains with high winds, tornadoes, early hurricanes—all take down power lines and interrupt service. And if you live in the country, service may be interrupted for days. That's why generators are an important piece of power equipment for the country dweller—especially for the folks with livestock reliant on ventilation or artificial lighting.

Today's generator doesn't have to be a large unit housed in its own structure or noisily churning out power in your basement. The market has opened to include a selection of fuels and a selection of styles and power ranges.

If you are interested in a large capacity generator and still want economy of operation, you should consider a diesel-powered generator. What about the noise? China Diesel Imports, the longest

standing importer of diesel engines in the United States, publishes a brochure that explains how to achieve "whisper-quiet" operation of any diesel generator for a modest investment of \$300. Hardy Day, president of CDI, will mail you a copy if you write him at 15749 Lyons Valley Road, Jamul, California 92035. Include \$1.00 to cover his costs. Once your qualms about the potential racket are quieted, you can consider diesel generators for their fuel efficiency and for the fact that they are easier to maintain because the diesel engine is mechanically simpler than a gasoline engine. If

CDI's Day notes that an 8,000-watt generator is capable of meeting all the power needs for the average family of four. As a sole source of power, it will require some sort of battery storage system and some clever timing to ration peak use periods, he points out.

This large-capacity bracket of generators are available with gas

engines, too. The gas-powered models are not as fuel efficient, but tend to be quieter when in use.

Generators are making inroads with folks who don't want to be independent power companies, too. Nowadays people are using small, portable generators to temporarily have power in a remote location. For this type of occasional or sporadic need, a small horsepower gasoline-powered generator is more inviting. The generators, often called package types, are introducing a whole new generation of consumers to the notion that you can control the power. Companies producing package generators are too numerous to mention. You can sample what these types of generators offer by writing to Echo, Incorporated, 400 Oakwood Road, Lake Zurich, IL 60047 or Ag-Tronic, Inc., 125 Airport Road, Kearney, NE 68847 and asking to see their catalogs.

—H.N.B.

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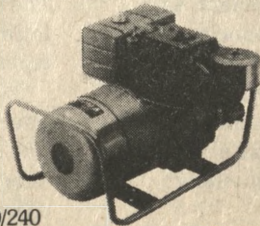
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## COUNTRYWAYS

# Something New Under the Sun

**L**ast year saw the last days of Green River Tool Company, a Vermont firm dedicated to providing quality gardening tools and aids. The company was purchased by another good catalog firm, Plow and Hearth, which also has a quality line but one that is much broader than gardening tools. The result was a loss of selection in the number and types of fine tools available in the United States—especially by mail order.

Enter Jersey Village Gardener to fill the gap. This new mail-order firm carries a full line—more than

200—of high-quality gardening supplies including Felco shears and pruners; Gardena watering systems and tools; Sheffield Pride spades, rakes, forks and shovels; Safer natural pesticides and more. The catalog also features my personal favorite trowel, the Wilcox, which has a durable stainless steel blade and plastic handle grip with wrist thong.

Send for the Jersey Village Gardener free catalog (P.O. Box 40526, Houston, TX 77240). Be sure to note how favorably the prices compare with other firms' offering the same products. —H.N.B.



## Energy Efficiency Increases Sale Value

**M**aking your home more energy efficient, and thereby reducing its thermal integrity factor, increases its sales value. That's what a study by Joe Laquatra of the New York State College of Human Ecology at Cornell University reveals.

Thermal integrity—a home's ability to retain a heated or cooled interior temperature, its air tightness and overall energy efficiency—will probably become one of the major factors that future home buyers will consider, just as today's buyers consider space, location, condition and amenities before making an offer.

What does this mean for homeowners? Don't rely on payback as the sole means of justifying the

worth of an energy improvement. The investment potential of energy improvements is also an important factor.

Most newly constructed homes have a thermal integrity of 6 to 8. The lower the number the more energy-efficient a home is. Highly efficient homes have thermal integrity factors of 3 or less. Adding insulation—for example—to decrease your home's thermal integrity factor from 4 to 3 can increase your home's value by as much as \$2,500.

Of course, thermal integrity alone will not automatically increase the value of your home. Resale value depends on many complex factors. But, says Laquatra, "In general, increasing the thermal integrity of a home does increase its value." □



# GROWING ORGANICALLY



## Green Manures

by Dr. Eric Sideman

**S**ynthetic chemical fertilizers are a relatively recent innovation to farming and gardening. They are now widely used for two main reasons. First, they are easy to use and require little labor. Second, they somewhat accurately supply the mineral needs of particular crops.

Organic farmers and gardeners shy away from such fertilizers because they believe their disadvantages, such as the energy demand of their production and their immediate solubility, outweigh their advantages. Their solubility raises the potential risks of leaching and runoff with lost fertilizer ending up in waterways. Furthermore, the immediate solubility of such highly concentrated fertilizer may disrupt natural nutrient cycles maintained by soil microorganisms.

To maintain soil fertility organic farmers and gardeners turn to slow release fertilizers such as rock powders, manures, and compost. Farm practices such as rotating crops and growing green manures maintain mineral availability from year to year and are at the heart of organic farming because they reduce the need for off-farm sources of plant nutrients.

Besides controlling soil-born diseases and insects, rotating crops varies the type and amount of nutrients drawn from the soil. If the same crop is grown in the same soil year after year, you run the risk of depleting the soil of particular minerals. Rotating crops with different nutrient needs equalizes the drain on the soil.

A simple basic rule to follow in rotating crops is to follow heavy

feeding crops with light feeders and then with soil builders. Never follow light feeders with heavy feeders without some sort of soil replenishment. Some heavy feeders are corn, spinach, squash, and tomatoes. Light feeders include carrots, peppers, radish and lettuce. The soil builders are all in the same family of plants known as legumes and include alfalfa, beans, clover and peas. Due to a symbiotic relationship with bacteria, legumes actually add nitrogen to the soil by taking it from the air as they grow.

Green manures fit well into a crop rotation because they are soil builders. A green manure is a crop grown solely for turning under while it is lush and green for its soil conditioning value. Any type of plant can be grown as a green manure, even weeds. But the best are those that are fast growing and produce succulent topgrowth.

There are three major benefits derived from green manures: adding organic matter, feeding microorganisms and other soil life, and increasing mineral availability. The major portion of the green manure added to the soil is lost to decomposition, so the actual increase in stable organic matter is small. But if you have no other source of organic matter to add, such as animal manure or compost, then growing green manures is very important. Remember: organic matter is the key to good soil.

The fresh organic matter of a green manure lost to decomposition is not wasted. It feeds the organisms living in the soil such as earthworms, bacteria, fungi and insects. This may be the most important

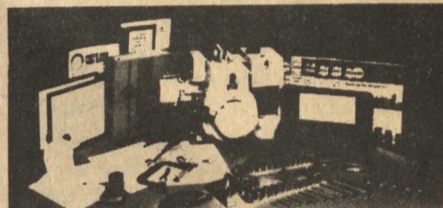
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function of green manures because the living component of the soil is vital for successful organic farming and gardening.

Roles organisms play in the soil include: 1. aerating the soil by earthworms; 2. initial breaking down of plant matter by earthworms and insects; 3. continued breaking down of plant matter by micro-organisms (which returns minerals back to the soil for use by the next crop); 4. creating biochemical pathways including nitrification and nitrogen fixation, and 5. taking initial steps in the formation of good soil structure. The bodies of micro-organisms are the major constituent of humus. Green manures fuel these biological processes.

Green manures maintain and increase your soil's fertility. Green manures catch minerals that potentially would leach away. Many varieties have very deep roots that can tap resources out of the reach of typical crops. Some species of green manures scavenge for nutrients; they have the ability to accumulate certain minerals beyond the capability of typical crops. And finally, legume green manures can fix atmospheric nitrogen. Alfalfa is a high-protein forage crop with excellent nitrogen fixation potential, and its roots reach down 20-30 feet. Like most legumes, it is best to grow for two seasons to obtain full benefits.

In addition to improving soil fertility and structure, green manures are grown as winter cover crops, in between rows of corn or under crops of grain, as perennial



Alfalfa as a green manure can improve soil fertility and structure.

pasture, and for smothering weeds in preparation for the next season's crops.

Winter cover crops are planted after harvesting the main crop. Annual ryegrass or oats are suited to

gardens because they are killed during the winter cold, leaving a vegetative mat easily tilled in spring.

The best crops for weed control are those that grow dense and tall and simply smother weeds, e.g., buckwheat, Japanese millet, or sudan grass. But don't allow the green manure to go to seed or you will have another weed problem.

Green manuring in the garden is as important as on the farm. One way is to grow an early season legume like peas in a section of garden and to plant a green manure after harvesting and turning under the peas. If your garden can be divided into three sections, you can rotate heavy feeders, light feeders, and then peas or other green manures over three years. □

Dr. Eric Sideman is Director of Technical Services for the Maine Organic Farmers and Gardeners Association. Recognized as a leader among alternative agriculture organizations, MOFGA is known worldwide for its bimonthly newspaper, annual Common Ground Country Fair, assistance to farmers and gardeners, organic crop certification and financial support for research and education. Write to MOFGA, P.O. Box 2176, Augusta, ME 04330 for membership and program information.

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# Enzymes a Growth Miracle?

by **Pat Branin** (Branin was the organic gardening columnist for the *San Diego Union*.)

Some readers will remember a story published in the *San Diego Union* April 6 reporting a new soil conditioner made from enzymes. The first inkling I had concerning this product for gardening and commercial agriculture came from *Acre's, USA*, a farmer's newspaper published monthly in Raytown, MO.

The editor and publisher, Charles Walters, Jr., gave permission to quote the story about Frank Finger, a biodynamic farmer near Larned, Kan., and his experiments with enzymes on his soybean and alfalfa fields.

The difference between an inkling of information and an in-depth probe is about the same as Mark Twain's definition of the difference between a lightning bug and lightning. So when the opportunity offered, I made a trip to Frank Finger's farm.

There I set foot on the first enzyme-treated soil I have ever knowingly trod upon. All of central and eastern Kansas looks like a beautifully planned and meticulously maintained park, and Frank Finger's farm seemed to have an extra glow of well-being.

To understand what agricultural enzymes are and what they do, you must first know what they are not. Enzymes are not a fertilizer nor a plant nutrient.

They are a catalyst in the form of positively charged electrical particles called ions. They have been on Earth since the beginning of time. Without enzymes, life could not happen in any form, so there's no question of which came first, as in the chicken or the egg argument. Enzymes came first.

The importance of enzymes to animal life has been known for centuries, but their adaptation for improving the soil is a very recent discovery. Research on enzymes for many different uses is going on at a fast rate throughout the world under the general name of enzymology.

Used over a period of time, enzymes can relieve problems of shallow soil by penetrating hardpan and even marl. Finger demonstrated this on a field where he had hardpan near the surface. He pushed a 3/8 inch steel rod its full length of 36 inches into the ground without effort. This could be a boon to hundreds of thousands of acres of land in Southern California.

Agricultural enzymes also will detoxify soils that

have been chemicalized to death with inorganic fertilizers, herbicides and pesticides. They also will adjust the acid-alkaline balance to a favorable pH 6.5 to 7, which nearly all plants prefer. Even high alkali soils can be restored to production.

They will cause heavy soils to flocculate (to loosen and break down) so the structure is loose and plants can develop a more massive root system and irrigation water or rain can penetrate more quickly, evenly and deeply.

Perhaps the most important thing of all that enzymes do is improve the soil's "cation-exchange" capacity. Cation-exchange means the release of the natural minerals and plant nutrients by unlocking them and converting them to a form the plant can use to make its food by photosynthesis.

No matter how bad your soil is, it is almost certain that you have considerable ancient minerals and trace elements which it needs but which are locked in by an imbalance caused by a lack of organic material and enzymes. By adding both to the soil, the enzymes supply the magic key to unlock these things and thereby adjust the cation-exchange capacity.

Researchers have identified about 8,000 types and species of enzymes and all of them serve different purposes. No doubt mankind is just beginning to understand life processes, and learning to control them will be beneficial. We will likely see enzymes at work in medicine, animal husbandry, pollution control and sewage purification.

Whether you are a giant agricultural producer or just a little guy like me with a small city lot, you can be sure that enzymes are going to make your soil healthier and more productive.

More meaningful to you will be the following experiences of hard-headed farmers with a "show-me" attitude. These are all exact quotes, because some of the reports are spectacular and I don't choose to be accused of stretching things.

Joseph B Mahaney of the Colorado-New Mexico Land Co. in Pueblo says:

"Nitron was applied to a 50-acre, second-year hay field; the east one-third was poorly drained. The year following alfalfa planting we cut 800 bales the first cutting and considered plowing it out. I decided to test Nitron on the bad side of that field. The next season the field had alfalfa in places we had seeded

twice, and we got more penetration in the same irrigation time with less runoff. The happy part was 4,000 bales the first cutting."

Robert Herlocker of Girard, Kan.:

"I applied Nitron to 200 acres of soybean ground at the rate of 1/2 gallon per acre in two applications. They received approximately 1 1/2" of rain before harvest; the normal for this period is 5 inches. Even though these beans were hailed on, there was no lodging (bruising or loss of foliage), and the 200 acres averaged 35 bushels per acre."

Frank Finger's wife, Gay, takes care of the vegetable garden, shrubs and house plants:

"Last spring I sprinkled my row of carrot seeds with 1 1/2 gallons of water with 1/4 cup of Nitron added before covering the carrots. In five days the carrots were up so thick I had to thin them several times. We ate them through the season and mulched them when freezing weather came. We have been digging and eating them all winter."

Also, she has a cucumber story: "I accidentally over-treated one of my cucumber plants with a mixture of half water and half Nitron which I had intended to dilute; however, I watered the area deeply and that cucumber plant took over the whole patch. One day in July I picked 79 from it and picked 50 on each of three other days that week. I pulled up all my other cucumber plants to give this one room to spread."

There are many other stories about enzymes that border on fantasy. Perhaps I can tell about them later. Richard G. Wellman, my wife's brother, farms several thousand acres near Alden, Kansas. He visited the Finger farm with me and listened to Frank's rapid-fire enthusiasm.

When we were ready to leave for home, Wellman had decided to treat a problem field down on the bank of the Arkansas River which is so alkaline it has never produced anything. I hope to report his experience with enzymes on that land. I expect it will be positive.

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# The Magical Tomato

by Greg McManus

**You put the magic into them, because  
the best tomatoes are the ones you grow yourself.**

**O**riginating in the American tropics, tomatoes were introduced into Europe by Spanish conquistadors and were brought to North America by European colonists. Belonging to the nightshade family, *Solanaceae*, tomatoes were thought to be poisonous and magical. Not until the early 1800s were tomatoes widely accepted as food, and then they really began to work their magic.

Low in calories, tomatoes taste good and are rich in potassium and Vitamins A, B1 and B2. Eat them raw off the vine and you consume every bit of Vitamin C cooking takes away.

Many tomato varieties produce 10 to 15 pounds of fruit per plant. Beefsteak tomatoes are the largest varieties, weighing from 10 to 32 ounces, are globular to oblate in

shape, and are good either fresh or canned. Standard tomatoes weigh four to eight ounces, are globular to oblate, are good fresh or canned and have the widest color selection. Cherry tomatoes weigh an ounce or less, are perfectly round, thin-skinned and sweet. Plum and pear tomatoes are shaped like their namesakes, weigh two to six ounces, are thick walled and meaty and best for cooking, canning and paste.

Tomatoes come in yellow, white, golden, pink, and orange as well as red. Pink, yellow, and orange varieties taste milder and are less acid than red varieties.

From the day plants are set out in your garden, early tomatoes take 45 to 65 days to mature; mid-season tomatoes take 66 to 80 days, and late tomatoes take 81 to 100 days. Home gardeners in all states can produce

early to late summer crops, depending on the length of the growing season.

## Planting and Transplanting

Tomatoes are a warm-season crop. Plant them outdoors after all danger of frost is past. Only in warm climates should you sow your seeds directly in your garden.

In cooler regions start your plants under glass or in beds indoors six to eight weeks before planting. If you're in a short growing season region, start your plants 10 to 12 weeks before putting them in the ground. The plants may blossom before you transplant.

In warm, moist soil most tomato seeds germinate in 5 to 12 days. Water your seed bed carefully and





# Relish Your Green Tomatoes

by Clarice L. Moon



## Chicago Hot

- 1 peck green tomatoes
- 4 ripe red peppers
- 2 cups celery
- 2 cups onion
- 1 cup salt
- 6 cups vinegar
- 2 cups sugar
- ½ cup white mustard

Chop green tomatoes, red peppers, celery and onion. Pour salt over vegetables and let stand overnight. In the morning drain and rinse.

Put vinegar in a kettle and add sugar and white mustard. If too sour, cut vinegar with water. Stir to dissolve sugar. Heat to boiling. Add vegetables and simmer for 10 minutes. Pack in sterilized jars and process.

## Hot Dog Relish

- 12 quarts green tomatoes
- 12 green peppers
- 6 red peppers
- 4 cups ground onion
- 1 medium cabbage
- 2 cups water
- 2 cups cider vinegar
- 6 cups sugar
- ½ cup coarse salt
- 2 tablespoons celery seed
- 1½ teaspoons tumeric

Grind all vegetables and add salt. Let stand overnight. In the morning drain and rinse. Add water, cider vinegar, sugar, celery seed, and tumeric. Mix well. Heat to a boil and simmer 10 minutes. Pack in sterilized jars and process.

## Piccalilli

- 1 quart chopped green tomatoes
- 1 cup chopped small pickles
- 1 chopped green pepper
- 1 chopped large onion
- 1 cup cider vinegar
- 2 tablespoons salt
- 2 tablespoons sugar
- ½ tablespoon peppercorns
- ½ teaspoon mustard seed
- 6 whole cloves

Mix vegetables with salt and let stand overnight. Drain well in the morning and then press out extra liquid. Heat vinegar with spices. Add vegetables and bring to a boil. Cook for 10 minutes. Pack in sterilized jars and process.



## India Relish

- 2 quarts green tomatoes
- 12 large onions
- 12 large cucumbers
- 1 quart vinegar
- 3 cups granulated sugar
- 1 tablespoon ground mustard
- 1 scant tablespoon black pepper
- 2 tablespoons mustard seed
- 1 tablespoon tumeric
- 2 tablespoons celery seed

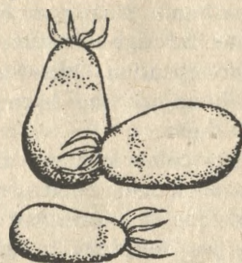
Chop tomatoes, onions and cucumbers and salt to taste. Let stand overnight and drain. Add vinegar, sugar, and spices. If vinegar is too strong, dilute with water. Heat to a boil and simmer for 10 minutes. Pack in sterilized jars and process. □

Clarice Moon is a garden writer from Delavan, Wisconsin. Illustrations by Valerie Almond.

**D**on't leave your green tomatoes in the garden to freeze. I usually pick all sizes of green tomatoes before a frost with intentions of letting them ripen, but I have so many ways of using them I never seem to have enough. One whiff of the appetizing odors of spices spread throughout the house, and I'm busy chopping vegetables for relishes.

Can your relishes by the hot-pack method in hot, sterilized pint jars. After packing the relishes hot, seal and process the jars for 10 minutes in a boiling water bath, beginning your count when the water boils. Remove jars from bath, seal, and cool on a wire rack.

Try these five green tomato recipes and enjoy the fruits of your garden year round.



## Green Tomato Relish

- 4 pounds chopped green tomatoes
- 5 pounds chopped onion
- 1 cup sugar
- ¾ cup chopped green pepper
- ¼ cup mustard seed
- ¼ teaspoon black pepper
- ¼ teaspoon cloves
- 1 cup vinegar

Mix all ingredients together in a large kettle. Bring to a boil and simmer for about 25 minutes until tomatoes are tender. Pack in sterilized jars and process.





cover with plastic or glass to keep in moisture and heat.

Tomatoes love sunlight. Once your seedlings have sprouted, move them to a sunny place. Separate them to avoid crowding. When your plants are about two inches tall, transplant them to small pots. Disturb the roots as little as possible and bury the seedling to the first true leaves so that roots may develop from the buried part of the stem.

Tomatoes need to be acclimatized gradually to cool nights, the sun, and the elements. Put your plants out on the porch, for longer and longer periods each day, before transplanting them into their permanent garden site.

You can grow tomatoes in all types of soil, but in areas with a short growing season, lighter, warmer soils are better. Your soil should have good drainage. Apply limestone or calcium amendments before planting. After transplanting apply phosphorus rich amendments such as bone meal, phosphate rock, or soft phosphate to help develop the root system and improve yield. Organic matter will increase the moisture holding capacity of coarse soils and improve the drainage of fine, heavy soils.

When conditions are favorable for transplanting, allow for the plant's deep root system. A well-developed system enables the plant to withstand temperature extremes and heavy rainfall. In a cold, harsh climate with a short growing season, use cloches or hot caps to protect your individual plants from freezing. To protect your whole crop, cover with plastic, nonwoven polyester (such as Reemay or Agronet) or some other protective material.

## Growth Habits

Tomatoes may be indeterminate or determinate.

Three leaf stems growing between flower clusters from the main stem identify indeterminate varieties. Indeterminate plants grow, flower, and produce fruit throughout your growing season until the frost kills them.

This constant growth means you must be vigilant about pruning. Select one to three main stems for growing and cultivate them. Prune by pinching out shoots from the axils

of the leaves—the U between the main stem and the branch—with your fingers (blades and shears can spread disease). Pruning will result in larger tomatoes.

To support growth and to keep your fruits off the ground, train your indeterminate varieties to a stake. Put stakes in when you plant your tomatoes in the ground. Bamboo, pipe, or wooden poles between five and seven feet long make ideal stakes. Push them at least one foot into the ground and no closer than four inches from the plant. Tie the plant stem to the stake with string or old bits of cloth in a figure 8 pattern. You can space your staked plants one to two feet apart in rows.

National Gardening Bureau



To identify a normal indeterminate plant, locate a flower cluster growing from the main stem. There will be three leaf stems growing above the flower cluster, then another flower cluster.

Determinate tomato varieties are small and compact or full and bushy. Compact determinates grow to a predetermined height or a number of fruit clusters and then stop.

The fruit of determinates ripens in a short time, and the harvest may last only a few weeks. Bushier determinates produce fruit longer. Usually producing earlier, determinates are a good choice where growing seasons are short.

Determinates are easy to grow. You just put a cage around them when you plant them in the ground and let them grow. You can buy a number of different size cages or make your own from a sturdy wire

mesh. You might want to stake the cage itself to keep it in place. Determinates don't need pruning.

Determinates may also be planted as close as 12 inches apart in rows.

## Pests and Problems

Severed stems near the soil line, holes in leaves, and ragged leaf edges are evidence of a cutworm presence. Cutworms are one-half to two inches long; are gray, brown or black; feed only at night and hide in the top two inches of soil during the day.

To keep the cutworms from your plants, push bottomless paper cups two inches into the soil around your tomato plants to give them a protective collar. Wrapping the stem two inches above and two inches below the soil line with aluminum foil will also add a layer of protection.

A few hornworms can devastate your garden. Hornworms can be nearly five inches long, are green or brown with white strips like chevrons, and have a red or brown horn on their tail end. Wasps can control hornworms through a natural process of parasitization. Otherwise you need to handpick the hornworms and crush them.

Tomatoes come in many disease resistant varieties. Seed catalogs provide a code to inform you which varieties are resistant to specific diseases.

Blossom End Rot is a tomato affliction characterized by light tan lesions that become dark sunken areas at the blossom end of the fruit.

Applying calcium or limestone amendments before planting, watering during dry weather, and mulching to ensure uniform moisture will control Blossom End Rot.

## Harvesting

Pick and handle your tomatoes carefully. If you pick them when they are mature and green, they will ripen on your windowsill and have a good quality flavor. If you pick them after some red is showing, they will possess nearly their full flavor when ripe. If you pick them at full maturity and before they soften, they will have their full flavor. □

Greg McManus is Associate Editor of Farmstead Magazine.



# The Top Ten Tomatoes

**W**hen we began talking about this story here at FARMSTEAD, we didn't have to worry about finding a source for the top 10 tomatoes. Vince and Linda Sapp's Tomato Growers Supply Co. of Fort Myers, Florida, came immediately to mind.

Tomato Growers Supply carries more tomato varieties than any other seed catalog. They stock 112 varieties and classify them under Early, Mid, and Late Season Varieties, plus Beefsteak, Processing, Yellow and Orange, and Small Fruited Varieties.

Linda Sapp told us that when she and her husband started the business, they wanted "to fill a niche, to fill a need," and they decided to concentrate on tomatoes, to give their customers the widest selection possible, and to extend a personal touch. "We didn't want to compete with big companies," Linda said, and offering all types of vegetable and fruit seed would have put them in that position.

Vince and Linda cater to the home gardener—their catalog is filled with useful information on tomatoes, starting seeds, equipment, supplies, and sources. But beyond that, Linda takes the time to answer every query, every letter about tomatoes she receives, trying to help people choose the right seed for where they live or to fulfill a specific need.

According to their sales records for the past 15 months, Linda told us nine of Tomato Growers Supply's Top 10 Tomatoes were all hybrids with disease-resistant capabilities.

Number 1 on the list is the **Champion VFNT**, an indeterminate, early season variety. Linda noted the Champion is a great sandwich tomato, easy to slice large, but equally good for salads. **LaRoma VF** came in second and is a processing variety. Maturing in 62 days, the LaRoma has large yields of three- to four-ounce fruit and, according to Linda, is an excellent paste tomato. **Lemon Boy VFN**, the first lemon yellow and not golden variety, placed third and is an indeterminate producing appealing,

delicious fruit weighing seven or more ounces.

The **Celebrity VFFNTA**, with excellent disease resistance, and the **Better Boy VFN** finished fourth and fifth on Linda's list. The determinate Celebrity produces 7- to 8-ounce fruit, and the indeterminate Better Boy produces 12- to 16-ounce fruit. Both are highly productive.

Number 6, **Beefmaster VFN**, produces fruit up to two pounds. Number 7, **Early Girl V**, matures in

52 days and keeps producing until frost. Eighth ranking **Super Fantastic VF** can adapt to all parts of the country and produces large, round juicy fruit.

Linda pointed out that Burpee's standard **Long-Keeper**, number 9, will store for months through the winter without changing flavor or texture. **Floramerica VFFA** was number 10 and is excellent for fresh use, canning or juicing. Not in the top 10, **Sweet 100** is the most popular hybrid cherry tomato.

Linda told us two old-fashioned favorites among her customers were the late season indeterminates **Oxheart** and **Pink Ponderosa** which yield pink fruits up to two pounds.

Some of the more unusual varieties Vince and Linda stock are **White Beauty**, **Burgess Stuffing Tomato**, **Basket Pak**, and **Florida Petite**. Linda described White Beauty as having a creamy white color inside and outside with a mild, sweet taste. The Burgess Stuffing Tomato, with its hollow pepper-like interior and few seeds, is perfect for baking as you would stuffed peppers. Basket Pak is a cherry tomato you can grow in a hanging basket; it produces 1½-inch fruit. Florida Petites are cherry tomatoes that can grow in 4-inch pots and become no more than eight or nine inches tall or wide, yet they produce fruit 1¼-inch in diameter.

A Tomato Growers Supply up-and-comer is the **Heartland VFN**, a dwarf variety that was the subject of a name-the-tomato contest in *Family Circle* magazine. Linda characterized the Heartland as a space-saver that yields abundant 6- to 8-ounce fruit.

One of the things that carries Linda through those tough days of running a family-owned business is the letters she receives from satisfied customers. If you want to try one of her top 10 or one of the other varieties we talked about here, or if you have a question about them, drop her a line. You're sure to find her at Tomato Growers Supply Company, P.O. Box 2237, Fort Myers, FL 33902. □

—Greg McManus

## Seed Sources

**T**he following suppliers also carry some of the varieties listed in the Tomato Growers Supply Company's Top 10. The varieties these companies carry are numbered as they appeared in the article: Number 1-Champion, Number 2-LaRoma, Number 3-Lemon Boy, and so on.

**Vermont Bean Seed Co.**  
26 Garden Lane  
Fair Haven, VT 05743  
Numbers 1,3,4,5,6,7,10.

**W. Atlee Burpee Seed Co.**  
200 Park Ave.  
Warminster, PA 18974  
Numbers 4,5,6,7,9.

**Gurney's Seed & Nursery Co.**  
Dept. 85, 1121 Page St.  
Yankton, SD 57079  
Numbers 3,5,6,7,9.

**Nichols Garden Nursery**  
1190 North Pacific Hwy  
Albany, OR 97321  
Numbers 1,3,4,5,7.

**Lockhart Seeds Inc.**  
P.O. Box 1361  
3 North Wilson Way  
Stockton, CA 95205  
Numbers 4,5,6,10.

**George W. Park Seed Co.**  
Cokesbury Road  
Greenwood, SC 29647-0001  
Numbers 3,4,5,6,7,10. □



# Constructing Your Own Farm Pond

by Terry Kerns

Chuck Peacock



**A well-built farm pond  
can provide a lifetime of benefits and pleasure  
with a minimum of maintenance.**



**F**ew farmstead improvements offer as many long-term benefits at a reasonable cost as a pond does. A pond prevents erosion and stores water for livestock or irrigation. Properly stocked, a pond supports decades of fishing as well as providing a place to swim in the summer and ice skate in the winter. A pond provides habitat for wildlife from bullfrogs to migrating waterfowl to wild deer.

The U.S. Soil Conservation Service (SCS) provides technical advice for pond builders at no cost,

Stabilization and Conservation Service (ASCS), may provide cost-sharing monies for ponds that meet certain criteria.

## Site Selection

The economics of pond-building are simple—the best pond holds the maximum amount of water with the minimal amount of soil having to be moved. An ideal pond site has an adequate water supply and a suitable soil to hold water.

Kurt Mason, SCS conservation specialist in Kentucky, says, "The ideal pond site would be one where a

erally better than one large one. If you place one pond above the other, the second catches any water that seeps through or runs over the first dam. When two or more ponds are built in such a series, the lowest pond retains water the longest in dry spells.

Design your pond to be at least eight feet deep, especially if you plan to keep fish. According to Mason, steeply sloping sides minimize areas of shallow water, reducing evaporation and helping to prevent unwanted water plants from proliferating.



Coming together to form a dam site, two steep slopes backed by a flat area of land, here drained by a stream, make up the ideal pond site. Superimposed are pond and fishermen with the upper level of the dam represented by the dotted line in the foreground.

including information on soils, runoff and other basic considerations. If your pond is destined for agricultural purposes, the SCS may provide engineering and design help and actually oversee construction. The SCS also can help you regarding special state or local regulations and permits that may be necessary. In some areas of the country, another federal agency, the Agricultural

dam can be built across a narrow section of land where two steep slopes come together and there is a large area of rather flat land behind the dam." The soil forming the pond basin should consist primarily of clay or clay loam. Sand, gravel and fractured rock are unsuitable basin materials.

Bigger is not always better with ponds. Two small ponds are gen-



Center your eight-foot wide trench in the middle of the dam site on bedrock or good clay and anchor it in the slopes on either side. Fill the trench with layers of clay free of organic material. Over the packed trench build your dam with a base three times as wide as the height.

## Embankments and Excavations

Begin constructing your pond by stripping away the topsoil down to the clay layer that will form the basin. For an embankment pond stockpile the topsoil to use later to dress the dam and other disturbed areas. Save the best non-porous soil composed of clay or clay loam to



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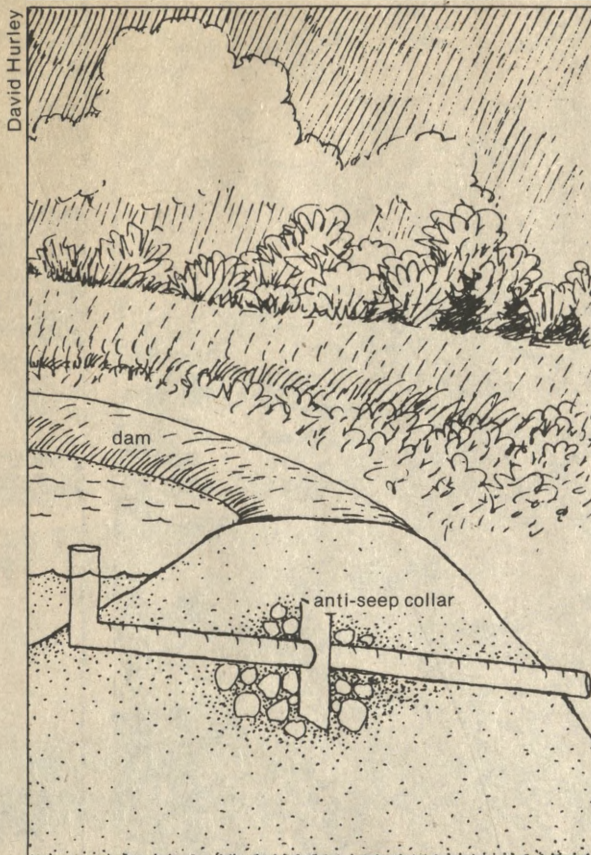
build the dam. Ideally the pond site itself will yield enough such material. If not, you will have to bring in suitable soil from another site, increasing costs significantly.

To build your dam, first cut a trench beneath the site of the dam until you reach either bedrock or good clay. Mason warns, "If the rock layer beneath the trench is fragmented, it may have to be chipped off or other efforts taken that increase the cost." The trench, normally eight feet wide, is located at the center of the dam and is anchored in the hills on either side. Fill and pack this trench, one thin

pond builder should consult his SCS representative.

Dams are usually built with a base approximately three times as wide as the actual height. A dam should be at least 10 feet wide at the top and sloped to allow for easy mowing below the pond. The 10-foot width not only allows you to drive a tractor across the top but reduces the amount of seepage and the chances that roots or animals will tunnel through it.

Normally, farm ponds include a natural spillway on the dam. The spillway is a grassed-over part of the dam that is a few feet lower than the



This L-shaped overflow pipe is equipped with an anti-seep collar. The horizontal end of the pipe should extend well beyond the dam to prevent drainage from eroding the embankment itself.

layer after another, with the best clay soil you have available. The soil you use must be free of stumps or other organic material that will decay and allow the earth to settle or water a place to seep through.

Once the trench is packed, the dam can be built above it. Many states require a permit for dams above a certain height or if the pond catches run-off from more than a set number of acres. These standards vary from state to state, and the

rest. Once water gets to a certain height, it flows over the spillway.

For larger dams, especially those catching major runoffs, a spillway is not enough. Too much water rushing over a spillway can erode the dam. In these cases, you need overflow pipes.

To build an overflow pipe, join two pieces of pipe into an L-shape and set it into the dam. Locate the vertical part of the L in the ponds with the top of the pipe at a level just



below full dam capacity. Imbed the horizontal part of the L through the dam. Use extra care in packing earth around the pipe; leaks can develop around it. As the water rises in the pond, it flows down the vertical pipe and out the horizontal pipe below the embankment.

In level areas where embankment ponds are not viable, you can build an excavated or dugout pond. Since their size is somewhat limited, these ponds are best suited to areas where water needs are minimal. But they are easier to construct, have low maintenance costs and do not pose a safety question during flooding.

Excavated ponds cost less than embankment ponds. You can offset part of the cost of building a dugout pond by using the top soil you remove. Even a small dugout pond will produce tons of good soil that you can either sell or use to build up or level other areas on your farmstead.

Excavated ponds are fed by springs and run-off or groundwater aquifers.

## Special Considerations

No matter which type of pond you build, you need to consider a number of other factors. Good grass cover around the pond will pay dividends. The cover makes the pond more attractive and reduces the amount of soil washed into it. If cover is adequate on the surrounding watershed, a pond can last a lifetime. If the watershed is disturbed and the soil bare, a pond may require draining and dredging within a few years.

If a pond is used to water livestock, it should be fenced so that animals cannot drink directly from the pond. When livestock have free access, they can tear up the banks, eroding them and fouling the water with their wastes. Build a watering trough fed by a trickle tube below the dam to provide livestock water without the problems.

If attracting wildlife is a primary aim, let the cover around the edges of the pond grow. Tall grasses and small brush provide necessary cover for wild ducks and other animals. A pond hardly has time to fill before various species of frogs and turtles begin calling it home. Waterfowl make ponds brief stopping points on their seasonal migrations. If the pond is a bit isolated and the cover

adequate, a nesting pair of ducks or even geese can become a part of pond life. With suitable cover the pond will attract rabbits, groundhogs, deer, fox, raccoon, skunks and even mink.

Not all wildlife is welcome. Muskrats dig their dens into the sides of the pond. If they dig their tunnels into the dam, leakage problems can develop. Uprooting water plants and mowing the pond edges will discourage muskrats. Snapping turtles are not as easily removed. These turtles feed on fish and, as they grow larger, are a serious predator of young ducks.

Water plants, large and small, can be a problem. Cattails and water lillies spread quickly, creating a solid mat around the edges of a pond. Lillies can spread into even the deepest parts of a farm pond, creating a solid blanket of leaves and making the pond unsuitable for fishing, swimming or even most wildlife. Getting rid of the unwanted plants is difficult at best.

Quick removal of those that do appear will save countless headaches later.

Algae and duckweed are as widespread as ponds. These plants may cause a pond to be unsightly at certain times of the year but are beneficial for the most part. Algae is a major food source for pond fish, and duckweed is a favorite food of many waterfowl.

Stocking a pond with fish is one of the first things most owners consider. A proper balance of bass, bluegill and catfish will provide years of exciting fishing in most areas of the country. Generally you can obtain fish at minimal cost from state wildlife and fisheries departments. You can also raise fish in a confined area. In a simple compartment floating in the pond, you can grow catfish quickly and efficiently (see *Farmstead*, Harvest 1985).

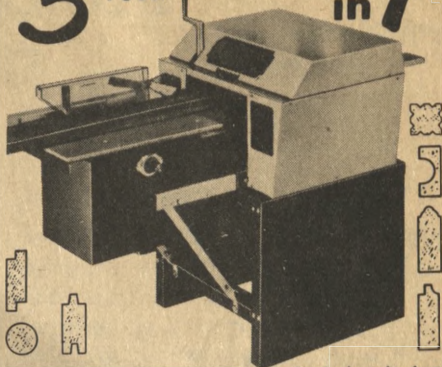
Building a dock or raft can add much to the enjoyment of a pond you use for fishing and swimming. If you use your pond for swimming and skating, take time to insure that a long pole, a rope or other device is available for rescue.

## Pond Maintenance

While a pond does not require constant and costly maintenance, basic care can insure a long and productive life. Check the dam,

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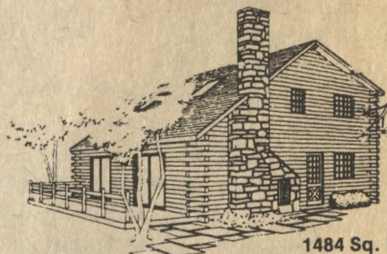
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# Improving Your Pond's Fish Production

by Sam Skeen

**Y**ou can construct the most economical and effective fish-attracting covers from brush or worn-out automobile tires. Both are readily available and neither require heavy equipment for placement. If you are in the process of planning or building your pond, place your larger fish attractors in the pond before filling it.

You can use any kind of brush, but hardwoods such as oak and hickory will last longer. Cedar trees make ideal attractors. Bind your brush together with durable nylon rope or plastic binding and weight it down.

to form a triangular unit (Figure 1). The tire pyramid (Figure 3) and the tire high-rise (Figure 4) are not as easy to handle or place.

You can use tires to make artificial spawning beds for large-mouth bass. Tires laid on their sides and filled with sand or gravel will provide nesting sites for this popular game fish.

Once you have put together your attractors, place them on firm surfaces near the shore. Avoid placing any underwater structure where it might be a hazard to swimmers or divers.

Fertilizing your farm pond regu-

content will dissolve immediately in the water with the remainder releasing over time. Phosphorus becomes quickly insoluble. You might need to supplement with a more soluble source of phosphorus such as bone meal. Your state soil-testing lab can analyze your manure for the ratio of concentrations of N-P-K. The analysis most widely used in farm ponds is 16-16-4. Any fertilizer with a 4:4:1 N-P-K ratio may be used providing the amount is adjusted accordingly.

Broadcast your fertilizer on the pond basin before you fill it. After you fill the pond, plan to fertilize it

## Tire Fish Attractors

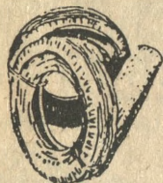


Figure 1. Triangular Unit

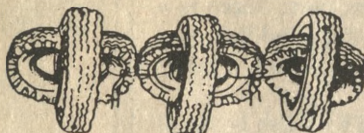


Figure 2. Tire Chain

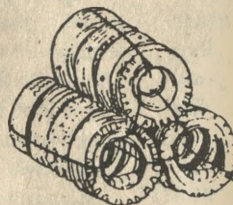


Figure 3. Tire Pyramid

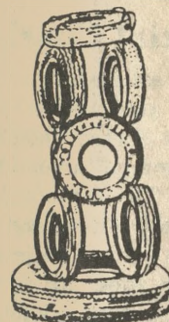


Figure 4. Tire High-Rise

Christmas trees make good brush covers, but they deteriorate after three to five years. Remove the tinsel and decoration on discarded trees to keep the fish from feeding on it. For best results group your Christmas trees in circular clusters of five or more with each cluster acting as one attractor. Securely fasten enough weight to the base to keep them in an upright position under water.

Tires, like brush and Christmas trees, must be weighted to keep them on the bottom. Rocks, concrete blocks, or cans filled with concrete placed between the tire walls should suffice. Slit or drill at least six holes across the tread to reduce buoyancy.

One of the easiest attractors to make and handle consists of three tires tied, wired or bolted together

larly will control water weeds and increase the pond's potential fish production. Waterweeds decrease your pond's fertility, interfere with fishing, and foster the growth of mosquitoes.

An unfertilized pond will support about 150 pounds of fish and yield 15 to 30 pounds of fish per surface acre each year. Fertilized waters will support 300 to 400 pounds of fish and yield 150 pounds annually.

Fertilizer stimulates the growth of microscopic plant life called phytoplankton. Minute animal life called zooplankton feeds on the phytoplankton and becomes a food source for fish.

You can fertilize your pond organically with manures. A minor portion of the manures' nitrogen content and a major portion of its potassium

each spring. Broadcast the fertilizer by hand from the shore as you walk up one side and down the other. Don't be concerned with trying to cover the entire pond. Repeat every 10 days until the desired phytoplankton bloom is produced.

Deep green colored water usually indicates the phytoplankton is in bloom. To be certain whether or not another application is needed, fasten a small white disk to the end of a yardstick and submerge it. You don't need any more fertilizer if you cannot see the disk 12 inches below the surface. If you can see the disk at a depth of 18 inches, you do need another application. □

Sam Skeen is a free-lance writer who occasionally wets a line from Ripley, West Virginia.



spillway and overflow pipes on a regular basis, especially after heavy rains and flooding. Remove any debris from an overflow pipe to prevent unwanted overflow of the dam itself. Regular mowing and fertilizing will keep the spillway and dam protected by good sod.

If the pond is large and located in an area where the wind creates regular wave action, you may need to place stones along the edges to prevent erosion, especially if their activity affects the dam.

Maintain good conservation practices on the watershed that feeds your pond. If you protect your soil from erosion, plant trees and shrubs for cover and beauty, and appreciate the balance that comes from blending your needs with nature's demands, you will find that an established pond adds much and requires little. □

Terry Kerns is a free-lance writer from Louisville, Kentucky.

## For More Info

**T**he Soil Conservation Service of the USDA provides a number of free sources through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402-9329, including: *Building a Pond*, Handbook 2250; *Ponds--Planning, Design, Construction*, Agricultural Handbook 590; *Sealing Leaking Ponds and Reservoirs*, Bulletin SCS-TP-150; *Trout Ponds for Recreation*, Bulletin 2249; *Warm Water Fishponds*, Bulletin 2250; and *Catfish Farming*, Bulletin 2260.

Other sources of pond information include:

*Dam Safety--Who Is Responsible?* National Association of Conservation Districts, 1025 Vermont Avenue, N.W., Room 730, Washington, D.C. 20005.

*Earth Ponds--The Country Pond Maker's Guide*. Tim Matson. Countryman Press, Woodstock, VT, 1982. (\$12.95, paperback.)

*Getting Food from Water--A Guide to Backyard Aquaculture*. Gene Logsdon. Rodale Press, Emmaus, PA, 1978. (\$9.95, hardback.) □

—Terry Kerns

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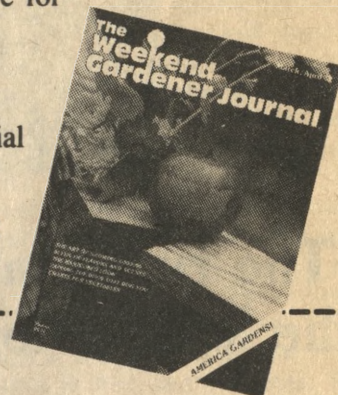
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# Inside Log Homes

Greatwood Log Homes



**The rustic interior is only part of the picture — the look of log homes can encompass a lot more.**

**by Heidi N. Brugger**

**L**og homes offer many benefits to homeowners—their thermal mass makes them very energy-efficient; the logs allow the home to “breathe,” increasing air exchange and creating a healthy indoor environment. Even so, many people are reluctant to consider a log home as a serious option because they are afraid of living surrounded by “all those

logs.”

This mistaken notion is fed by log home dealers and manufacturers which fill their planning kits and brochures with rustic country interiors—all set against log walls. I don’t blame these companies; after all, they are trying to appeal to people who are investigating *log* homes, so they show lots of logs. However, country homes don’t have

to be decorated in “early Rusticana” and neither do log homes.

Log homes actually have as much interior aesthetic range as they have in floor-plan and exterior options. This diversity begins with the shape of the log itself.

## **Any Way You Cut It**

There are many variations in the names for and refinements in the





Light wood tones can be used to create a modern feeling, which furnishings complement.

basic milling of the solid logs that eventually become course after course in a home. The log can retain its natural cylindrical shape; it can be slightly flattened with beveled edges or curves; it can be oval, or it can be flat like a tongue-in-groove wall.

Heather Pillar, design consultant for Ward Log Homes, notes that each shape gives a home a distinctive style. Rounded and rough-hewn interior walls enhance a rustic look. And a rough-hewn wall doesn't have to conjure up thoughts of huts at Valley Forge—a hand-peeled log can break away from this stereotype, adding a lightness reminiscent of a birch forest in sunlight and creating a modern feeling.

For some homeowners, the roundness, not the natural wood tone, is the drawback to logs. These folks can have their log walls flattened—a little or a lot. The three-sided curve or the beveled edge cuts offer a taste of both full dimension and greater decorating flexibility. And, of course, a tongue-in-groove flat wall has the same versatility of any flat wall surface. Flat surfaces work better for hanging cabinets and artwork and for creating clean corners.

Even with a strictly flat surface, log home companies give you a choice or two. Some, like Appalachian Log Homes, offer a hand-hewn beam look with striking white chinking between the courses. This variation of a traditional look has all the benefits of modern materials and computer-aided design and, in spite of its authentic look, works well with modern interiors.

If you are willing to pay the extra cost, you can mix and match milling or shape styles, says Lee Abernethy, marketing manager for Vermont Log Buildings, Inc. This costs more because it reduces efficiency at the mill where the logs are cut and numbered, but for some people it's worth the extra. The mix-and-match idea allows for a first floor cut as a full rounded or rustic log and a second-story bedroom cut as a flat wall. There are limits to how much you can combine styles; one log length cannot have more than one style of milling. This means that if the kitchen and the dining/living area share a wall, they must share milling style as well. Even so, the combination milling offers a wider selection of interior make-up.

## Color Plays a Part

"Nothing defines the atmosphere of a home like personal style," says Bob Bene of Country Log Homes. For some, color is an important part of personal style. Not everyone likes the honey brown or yellow tones that are the log's natural coloring, but many companies, such as R & L Log Buildings, offer a red cedar that expands the natural palette.

Even the silver grays of a log left to weather naturally can leave some folks cold. For this group, Fred Mann of Atla Log Homes has a word of advice: "Logs can be stained in various hues." The benefit to using a stain is that you can still enjoy the grain and natural patterning of the wood. There is nothing to say that you can't use an opaque paint and make an even stronger color statement.



Chinking between logs creates a bold striping, a strong statement with no extra work for you to do.

## The Whole Picture

"It's important to remember that the log walls are just the perimeter walls of a log home. Once you include the interior wall partitions, you have as many options as you would with conventional tract housing, probably more," says Kay Soldier of L.C. Andrew, Maine Cedar Log Homes.

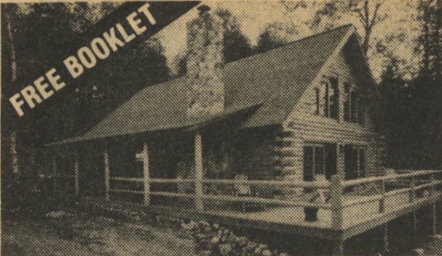
The interior partitions can be wallpapered, stenciled, painted, paneled, log-faced—you name it. That means that in most log homes, even if the company manufacturer doesn't provide a wealth of options in the milling, you will have a variety of wall surfaces to consider in your home's interior plan.

Sometimes a design statement can be made with finishing touches. When speaking structurally this includes beams running across cathedral ceiling areas and risers and railings on stairways. Beams can run the gamut from round hand-peeled to hand-hewn square either rough or dressed, notes Don Wildenstein of R&L Log Buildings. The rough and hand-peeled styles tend to work best with the more rustic interiors; the dressed square beam serves the more contemporary home.

"The day of the tract home is past," says Glenn Mays of Cedar-dale Homes, Inc. "Americans are expressing their individuality through their homes—an individuality that has been demonstrated by the resurgence of interest in the pioneer standby, the log home. And that individuality can be shown through the divergence in log



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# Five Ideas for Log Home Interiors

**A** log home is completed when all the logs are in place. "Most owners simply treat their walls with a natural finish, but more can be done to add interest and excitement to a log home interior," notes Heather Pillar, design consultant for Ward Log Homes.

Many log home owners insist on natural wood interior walls, ceilings, Real Log Homes

actually dye the log. The difference is that semi-transparent stains let the wood grain show through where semi-solid stains cover the wood grain."

**Stenciling.** The effect of stenciling can be similar to wallpaper. Pillar says, "The design ideas are limitless. Anything can be stenciled; dining room walls, kitchen cabinets, the mantle or even the floor." The do-it-yourselfer can stencil the surface by consulting an arts and crafts store, or a professional can be hired.



Hanging quilts and wallpaper [left] open up the design impact of your log home's walls. Even a restful expanse of white drywall [below] can become an interior accent.

Ward Log Homes



and floors. We sometimes suggest using contrasting textures and colors. For instance, a fieldstone fireplace is traditional in log homes, but one of our customers used white stucco on a contemporary fireplace to contrast with the wood," says Pillar.

Here are five ideas for log home interiors:

**Dry wall.** "Putting up dry wall or sheetrock and plaster in areas is a nice contrast with wood and can accentuate the log home feeling. Walls can be painted or wallpapered," notes Pillar.

**Staining.** Stains can be any color. For a weathered look, a gray stain works well. "Photography and prints stand out against a neutral gray background," says Pillar, "And a white stain will brighten rooms." A spokesman for Cabot Stains in Boston explains, "Semi-transparent and semi-solid stains penetrate and

**Tongue & groove walls.** Some log home companies will panel the inside walls. "The vertical grooves of the interior are a subtle contrast with the horizontal logs of the outer walls," notes Pillar.

**Hanging blankets and quilts.** Hanging quilts and Indian blankets add a cozy touch to log walls. "There are so many ways to decorate log homes," says Pillar, "The owners should use their imagination to create a comfortable and personal setting." ☐

—Dick Pirozzolo





Kitchens, frequently done in a rustic style, can use wallpapering for a conventional look.

shapes available, styles of construction and the variety of woods used."

When selecting a milling style, a type of wood or even the company whose services you will rely on, consider your personal style. Most log home companies are ready and willing to work with your unique ideas. You can choose a floor plan and then refine the style of the home by choosing from the mill and wood options a company offers. Most companies are able to customize a standard plan to meet your personal style requirements. Some can custom design from your own sketches, basically creating the entire home from your ideas.

## The Idea Starters

Where do you go to get ideas? How do you know which log home companies offer custom design; which ones offer hand-peeling, and so on? A sampling of companies and their milling options is included in this article (see table on page 36), but there are so many companies and so many choices to weigh in your decisions that you really need a more specialized source as a reference. For this type of coverage of the log home industry, you need to contact:

•Home Buyer Publications, Inc., 140 Little Falls Street, P.O. Box 250, Falls Church, VA 22046. This company publishes the 1987 *Annual Log Homes: A Complete Guide to Buying, Building & Maintaining Log Homes*. A copy costs \$8.95 plus \$2 for shipping and handling. In addition to various articles about log homes, this annual includes a directory of companies with a short description of each.

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# The Style Is in the Cut: Who Has What

These styles are simplifications of the available shapes. Each log home company makes a unique statement and offers variations of these styles. Some offer logs in two widths; others make a point to differentiate chamfered edges from flat and rounded styles. The chart is a general guide. Contact the companies listed to discover the special features and details each offers.

Company						Comments
<b>Alta Industries, Ltd.</b> Box 88 Halcottsville, NY 12438				◻		
<b>American Lincoln Homes</b> P.O. Box 669 Brattleboro, NC 27809	◻	◻	◻			Also available in double clapboard variation on style 3.
<b>Appalachian Log Structures</b> P.O. Box 281 Ripley, WV 25272		◻	◻			Also available in Mountaineer Dove-tail, unique to ALS.
<b>Cedardale Homes, Inc.</b> P.O. Box 18606 Greensboro, NC 27409	◻	◻			◻	
<b>Country Log Homes</b> Rt. 7, Box 158 Ashley Falls, MA 01222	◻	◻			◻	Can be handpeeled on exterior, styles 1 & 2, interior, style 1. Also available with chamfers on exterior & interior as options.
<b>Greatwood Log Homes</b> P.O. Box 707 Elkhart, WI 53202	◻	◻	◻		◻	
<b>Honest Abe Log Homes, Inc.</b> Rt. 1, Box 84 Moss, TN 38575		◻			◻	Rough sawn exterior with smooth planed interior; Permachinking with color options. Also makes post & beam timber framed houses.
<b>Jim Barna Log Systems</b> Drawer 10-11 Oneida, TN 37841-1011	◻	◻			◻	
<b>Lincoln Log Ltd.</b> Riverside Drive Chestertown, NY 12817		◻	◻			
<b>Lok-N-Logs, Inc.</b> P.O. Box 613 Sherburne, NY 13460	◻	◻				Handpeeled exterior & interior options style 1; exterior only style 2.
<b>L.C. Andrew/Maine Cedar Log Homes</b> 35 Main Street Windham, ME 04082		◻				
<b>New England Log Homes, Inc.</b> P.O. Box 5056 Hamdan, CT 06518	◻	◻	◻		◻	Handpeeled exterior options in styles 1 & 2.
<b>Northern Products Log Homes, Inc.</b> P.O. Box 616 Bangor, ME 04401-0616	◻	◻				
<b>Original Log Homes</b> Box 1301, 100-Mile House British Columbia, Canada V0K 2E0	◻					This shape an approximation. Log is rough, natural shape with handpeeling.
<b>R &amp; L Log Buildings</b> P.O. Box 237 Mt. Vernon, NY 13809	◻	◻				
<b>Real Log Homes/Headquarters</b> P.O. Box 202 Hartland, VT 05048	◻	◻				
<b>Stonemill Log Homes</b> 7015 Stonemill Road Knoxville, TN 37919					◻	Available hand-hewn, machined or planed in combination; Permachinking with color options.
<b>Timber Log Homes</b> P.O. Box 300 Marlborough, CT 06447	◻	◻	◻			
<b>Ward Log Homes</b> P.O. Box 72 Houlton, ME 04730		◻				
<b>Wilderness Log Homes</b> Rt. 2 Plymouth, WI 53073	◻					Also has Insulog, unique to WLH. Rounded exterior with insulation followed by drywall interior.





Your interior style is limited only by imagination. This livingroom is in a log home, but you'd never know it if you weren't told.

•Muir Publishing Co., Ltd., P.O. Box 1150, Plattsburgh, NY 12901. The Muir family publishes *The Log Home Guide for Builders & Buyers*. This is a quarterly publication; four issues, which includes the Winter directory (a listing of companies similar to the one mentioned above) is available for \$18.00 a year. The directory issue alone is \$10.00 postpaid. In addition to the *Log Home Guide*, the Muirs also publish *Log Home Decor*, a special magazine that focuses on interiors.

You can get even more assistance in generating ideas by writing to the Log Home Guide Information Center, Junction 321 & 32, Crosby, TN 37722. The information center has an extensive reference library—possibly the world's largest collection of log structure related materials. If the center doesn't have it, it hasn't been thought of yet.

And that brings it all back to you. Your home design ideas are a statement of your personal style, a reflection of that personality to others and a comfort to you because they surround you with the favorite and the familiar.

"Designing and building a log home that looks great, works well and conveys your unique taste is fun and satisfying," says Country Log Homes' Bene. "And it all starts with style." ☐

Heidi N. Brugger is Managing Editor of *The Farmstead Press* in Freedom, ME.

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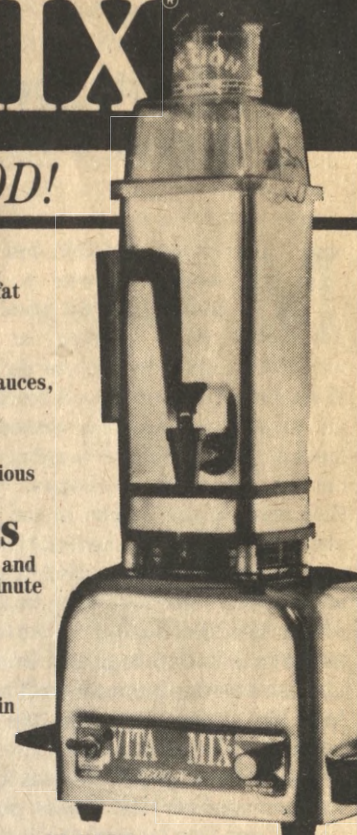
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# The Old-Fashioned Way

by Jo Ann M. Unger

Cool off with the delicious, natural goodness of your own homemade ice cream.



**M**y Grandpa told me that when he was a boy, making really good ice cream started in the wintertime. Back in the old days in West Virginia, men sawed blocks of ice out of the pond folks skated on, loaded them onto the wagon, and hauled them to the ice house. There they layered the blocks of ice with about six inches of sawdust insulation. When summer rolled around and the days got hot, they brushed off the sawdust, hauled the ice to the house in a burlap bag, and broke it up with a sledge hammer until it was just the right size for the old handcrank ice cream freezer.

All the family and friends came for the summer ice cream social. Great Grandma layered the ice with rock salt in the freezer and added her favorite vanilla ice cream recipe.

Each child had a chance to turn the old freezer's handcrank, and they turned it and turned it and turned it until it was just too hard for them to turn any more. Then the older kids had their chance. When they couldn't turn the crank any more, the adults would turn it, sometimes with one of the children sitting on the top of the freezer to hold it down. Then more ice and rock salt were added and it was left to sit. About an hour later the ice cream was cool, smooth, rich and delicious—just perfect.

But good homemade ice cream doesn't have to be a memory. You can make your own homemade ice cream today.

Making your own beat-the-summer-heat treats is easier and faster now. You don't need to saw blocks of ice out of your farm pond. In modern ice cream freezers you can use chipped block ice or refrigerator ice cubes. Handcrank or electric models that can make two, four, or six quarts of ice cream are inexpensive to buy. The modern handcrankers are much easier to turn, and the electric freezers require no handcranking at all.

Modern freezers are designed to make smooth ice cream and to assure even freezing, but they are basically the same as the old fashioned machines. Mom's ice cream mix goes the same place Great Grandma's did in the cream pan in the center of the freezer, and you layer the ice and salt around the sides of the container. Instead of rock salt ordinary table salt will do in many machines.

Caring for your ice cream freezer is simple. Most have a few removable, easy-to-clean parts, and the cream pan in many models is stainless steel and guaranteed. If you take good care of your freezer, it will give you many years of trouble-free service.

The types and flavors of ice cream

you can make are practically limitless. Years ago people were restricted to a few flavors. The best part about making homemade ice cream now—besides the raves of your family and friends—is experimenting with flavors. The range of flavors is as varied as your imagination and your pantry's larder.

The recipe you use, the outside temperature, the size of the ice, the temperature of the salt water, and the temperature of the ice cream mixture before it is churned all affect the firmness and texture of the ice cream, varying it from batch to batch. If the salt water is not cold enough, your ice cream may be too soft. Then you'll need to add more salt. If the salt water becomes too cold too fast, the ice cream will be too grainy, icy or hard. Then you'll need to reduce the amount of salt.

For creamier ice cream remember that the amount of sugar you add to the mix works not only as a sweetener but also controls the softness of the ice cream. If your mix doesn't have enough sugar, your ice cream will freeze too hard. If you have too much sugar, it will not freeze. Salt slows down freezing, too, but a little added to the mix will enhance the flavor. Ice cream with wine or spirits will not freeze hard. If you prepare your ice cream mix a day ahead, the ice cream will turn out smoother and you will increase



# Simply Delicious Sherbet

**F**irst cousins to elegant homemade ice creams are the healthful, tasty sherbets. The recipes here, from Phyllis Hobson's *Making Ice Cream, Ices & Sherbets*, include ice sherbets and milk sherbets. Ice sherbets require stabilizers such as gelatin or egg whites or both to insure smoothness. Milk sherbets may or may not call for such stabilizers.

## Rhubarb Sherbet

- 1 tablespoon (1 envelope) unflavored gelatin
- 4 cups diced rhubarb
- 2½ cups water
- 2 cups sugar
- 4 egg whites

Soften gelatin in ½ cup cold water. Add remaining water to rhubarb and slowly bring to a boil. Simmer, stirring occasionally, over low heat until rhubarb is well cooked. Strain, add sugar to liquid and stir until sugar is dissolved. Remove from heat and add softened gelatin. Chill until cold, then freeze to the mushy stage. Remove to a chilled bowl and add egg whites, unbeaten. Beat until fluffy, then return to freezer or freeze in an ice cream freezer. Makes 2 quarts.

## Cranberry Sherbet

- 1 tablespoon (1 envelope) unflavored gelatin
- 3 cups water
- 2 cups sugar
- 1 cup orange juice
- Grated rind of 1 orange
- ½ cup lemon juice
- 4 cups (1 pound) fresh cranberries
- 4 egg whites

Soften gelatin in ¼ cup cold water. Combine sugar, remaining water and cranberries and cook until sugar is dissolved and cranberries burst. Strain and add softened gelatin. Stir well to dissolve gelatin. Chill. When cold, add orange and lemon juices and rind. Freeze until mixture begins to get firm. Break up and put in chilled bowl with unbeaten egg whites. Beat until thick and fluffy. Freeze. Makes 2 quarts.

## Watermelon Sherbet

- 1 tablespoon (1 envelope) unflavored gelatin
- 5 cups watermelon juice (pressed from fresh melon)
- 2 cups sugar
- ½ cup lemon juice
- 4 egg whites
- Few drops red food coloring

Soften gelatin in ½ cup juice. Heat remaining juice to boiling, then add sugar and stir until sugar is dissolved. Add softened gelatin. Chill. Add lemon juice and enough coloring to make it a delicate pink. Freeze until mushy. Place mixture and unbeaten egg whites in a chilled bowl and beat until frothy. Freeze until firm in ice cream freezer or refrigerator freezer area. Makes about 1½ quarts.



## Buttermilk Sherbet

- 4 cups buttermilk
- 1 cup sugar
- 3 cups crushed unsweetened pineapple
- 2 egg whites
- 3 teaspoons pure vanilla extract

Combine buttermilk, sugar and pineapple and let stand until sugar is dissolved. Freeze to mushy stage. Remove to a chilled bowl, add unbeaten egg whites and vanilla and beat until light and fluffy. Freeze. Makes 2 quarts.

## Lemon Cream Sherbet

- 4 cups milk
- 2 cups light cream
- 2½ cups sugar
- 2 cups lemon juice

Heat two cups milk to scalding. Remove from heat. Add sugar and stir until dissolved. Add remaining ingredients. Freeze in ice cream freezer or in freezer section of refrigerator. If frozen in ice cube trays, the mixture should be partially frozen, then removed, beaten until fluffy and returned to complete the freezing. Makes 2½ quarts.

## Yogurt Sherbet

Add one cup sweetened fruit to each quart of homemade or commercial yogurt for a delicious sherbet. Freeze without beating.

## Mint Sherbet

- 1 tablespoon (1 envelope) unflavored gelatin
- 4 cups water
- ½ cup chopped fresh mint
- 2 cups sugar
- 1 cup lemon juice
- 4 egg whites
- Few drops green food coloring

Soften gelatin in ¼ cup cold water. Add remaining water to sugar and bring to a boil, stirring well to dissolve sugar. Add chopped mint, remove from heat and let steep one hour. Strain. Heat 1 cup mint water to boiling and add to gelatin mixture. Stir well to dissolve gelatin, then pour back into mint mixture. Stir well. Chill until cold. Add lemon juice and coloring to tint a light green. Freeze until mushy. Break up frozen mixture into a chilled bowl and add unbeaten egg whites. Beat until fluffy. Freeze in ice cream freezer or refrigerator freezer area. Makes about 2 quarts.

Reprinted from *Making Ice Cream, Ices & Sherbets* [1977] by Phyllis Hobson, and used by permission of Garden Way Publishing/Shorey Communications, Inc., Pownal, VT 05261. Available from the publisher or the FARMSTEAD Market Basket.



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this basic recipe and keep on adding  
to it.

## Basic Country Style Vanilla Ice Cream

2 eggs

1 cup sugar

2 cups whipping cream

2 tablespoons vanilla

1/8 teaspoon salt

2 cups milk

In a large bowl beat the eggs until  
foamy. Slowly add the sugar. Beat to  
a thicker consistency. Mix in the  
whipping cream, vanilla and salt.  
Pour mixture into freezer and add  
milk while stirring and begin to  
churn. Makes 2 quarts.

## Fruit Ice Cream

For any type of fruit ice cream,  
add fresh bananas, apricots, coconut  
or any other fruit or flavors you  
desire to the basic recipe. Add about  
a cup of fruit for each quart of ice  
cream.

## Coffee Ice Cream

Add 1/4 cup of powdered instant  
coffee while adding the sugar to the  
basic recipe.

## Peppermint Stick Ice Cream

Add 1 1/2 cups of crushed pepper-  
mint stick candy to the mix after it  
has been frozen about 15 minutes.

## Honey Ice Cream

Substitute 3/4 cup of honey for  
the sugar. With honey the ice cream  
will take longer to freeze, so put  
more salt with the ice.

And never stop experimenting.  
Change the amount of ingredients  
according to your individual taste,  
and decide what you prefer for  
texture and creaminess. And on a  
hot summer's day, enjoy. ☐

Jo Ann M. Unger is a country  
lifestyle and garden writer from  
California City, California.



# Vaccinating Your Domestic Animals

by Gary Cotton, DVM

**A handy guide to preventing disease  
in your animals safely, simply and economically**

**A**ll four-legged creatures can catch potentially fatal diseases that can be prevented, usually for just pennies per animal. Perhaps the biggest single development in maintaining world health in this half-century is the advent and use of vaccination. Vaccines are a safe, effective, readily available, and inexpensive means of protecting your animals from disease.

A vaccine works by stimulating the animal's own immune system to produce disease fighting antibodies that will protect the entire body against future invasion from a specific disease agent.

Several types of vaccines are available. A modified live vaccine contains actual living cultures of the disease agent such as a bacterium or virus. The agents are usually specially treated to render them incapable of causing the full-fledged disease. A killed vaccine contains bacteria or virus destroyed by chemical or physical means. A sub-unit vaccine uses only a part of the virus or bacteria to stimulate immunity against the entire agent. Most vaccines are available in only one or two forms. Local conditions and circumstances will dictate which type of vaccine you should use for your animals.

## Immunization Success

All animals are individuals and each can have a different reaction to the same stimulus. Vaccines are not 100 percent guaranteed protection but most have been thoroughly tested and have passed stringent standards of protection across a general population.

Other factors can affect immunization success. Vaccines demand proper handling and storage. Most need to be refrigerated. If they are kept at higher temperatures for very long, or if they are frozen, they may be rendered worthless.

Vaccines must be given properly—such as under the skin (SQ) instead of in the muscle (IM), whichever is specified—if you want them to work properly.

Sometimes antibodies received from the mother's colostrum at birth can neutralize a vaccination's effectiveness. For example, this neutralizing effect can occur in Parvo virus vaccine for dogs. For most Parvo vaccines a booster is recommended every four weeks until four months of age, when most of the maternal antibodies are gone.

Finally, the animal must be in good physical condition and free of disease for a vaccine to be able to stimulate a suitable response. Vac-

cines will not cure a disease if the animal already has it, which sometimes is hard to tell. Many diseases have incubation periods (the time that the animal is exposed to the disease to the time it shows signs of the disease) of 7-10 days. A new puppy from the shelter could be carrying Parvo when the animal comes home. A vaccination at that point would be worthless or may even cause harm. A quarantine period of 1-2 weeks is often recommended to be sure of good health.

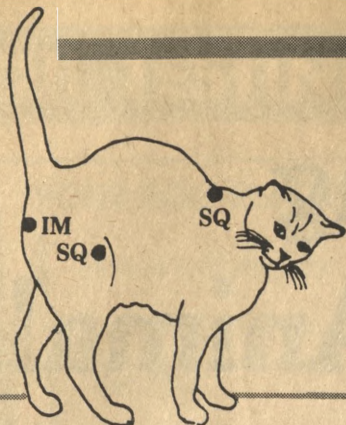
## Giving Vaccinations

Most people can give shots easily. The trick to giving vaccinations and injections is proper restraint. With dogs, cats and horses, a person who knows how to handle the animal restrains it while you give the injection. With cattle, sheep, goats and pigs, mechanical restraint—such as a squeeze chute, head catch, stanchion, nose tongs or ropes—often is needed.

Before getting started, you should thoroughly familiarize yourself with the product used. Read all the fine print on the package label and insert; both contain important information.

•**Expiration Date:** The date after





## Cats

Most cat vaccines are given SQ, under the skin, the best place under the loose skin behind the neck or at the flank.

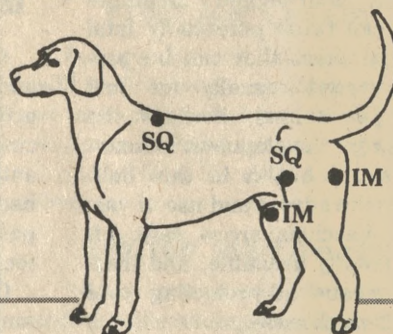
	Rhinotracheitis* [Rhino]	Calici*	Panleukopenia* [Distemper]	Leukemia	Rabies	Chlamydia*
8 weeks	X	X	X			X
9 weeks				X		
12 weeks	X	X	X	X		X
16 weeks					X	
24 weeks				X		
first year					X	
annually	X	X	X	X		X
every 3 years					X	

\*Usually available combined as a single shot.

## Recommended Needle Sizes

Species	Route of Administration	Size
dog, cat	SQ	3/4" 22 gauge
horse	IM	1 1/2" 20 or 18 gauge
cattle, sheep	IM	1 1/2" 18 gauge
cattle, sheep	SQ	1/2" 18 or 16 gauge
goats	SQ or IM	3/4" 22 gauge
pigs	IM	1 1/2" 18 gauge
pigs	SQ	1/2" 18 gauge

# General Guidelines for Immunizing Domestic Animals



## Dogs

Most dog vaccines are given SQ, under the skin, the best place under the loose skin behind the neck or at the flank.

	Distemper*	Parvo*	Lepto*	Parainfluenza*	Hepatitis*	Bordetella	Corona	Rabies
8 weeks	X	X	X	X	X	X	X	
12 weeks	X	X	X	X	X	X	X	
16 weeks	X	X	X	X	X			X
first year								X
annually	X	X	X	X	X	X	X	
every 3 years								X

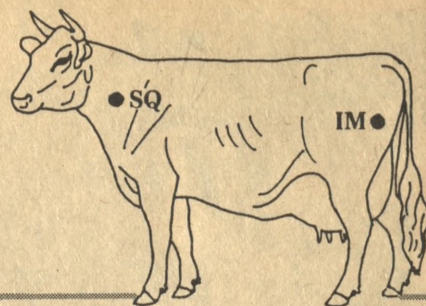
\*Usually available combined as a single shot.



These charts are general guidelines. Local conditions and circumstances will dictate which vaccine(s) to use. Read package labels and inserts for important information regarding expiration dates, routes of administration, dosage, contraindications, timing, storage and cautions.

Animals must be in good physical condition and free of disease for vaccines to be effective. The proper use of restraint will allow you to give shots easily and prevent injury to your animal.

Consult your veterinarian for advice.

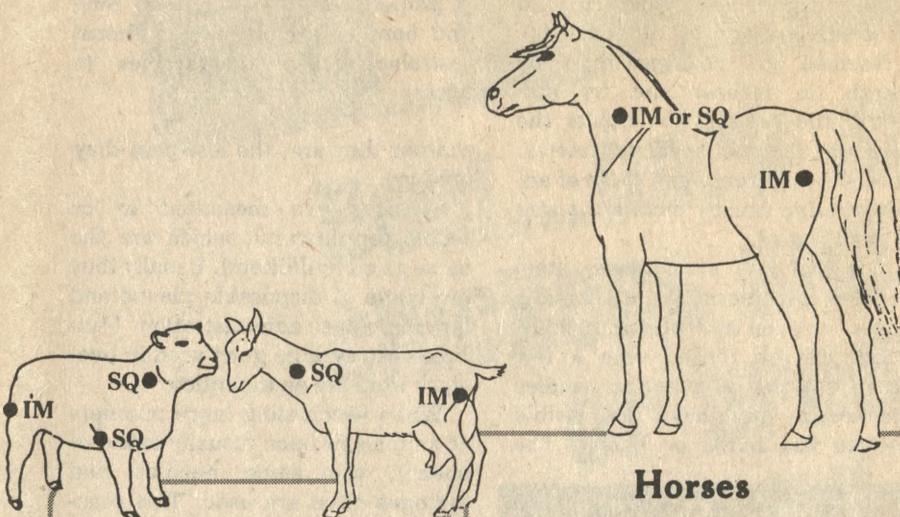


## Cattle

Food animals have mixed routes of administration, but SQ injections can be given best in the neck area and IM shots in the lower hip.

	Clostridial Diseases*	Pneumonia	Lepto	IBR [Rhino]	BVD [Viral Diarrhea]	Scours
3 months	X	X	X	X	X	
5 months	X	X	X	X	X	
annually	X	X	X	X	X	
variable check labels						X

\*Usually available combined as a single shot. More than 100 vaccines for cattle are available. The chart lists some of the more common diseases. Clostridial diseases include Malignant Edema, Black Leg, Red Water, and Black Disease. Especially for food animals, local circumstances, economics, and perhaps your facilities have a large bearing on which vaccine you use.



## Horses

Most equine vaccines are given IM, in the muscle, generally the large neck muscles.

	Encephalitis* [Sleeping Sickness]	Influenza*	Tetanus* [Lock Jaw]	Rhinipneumonitis [Rhino]	Strangles
3 months	X	X	X	X	X
5 months	X	X	X	X	X
annually	X	X	X	X	X
check label for pregnancy				X	

\*Usually available combined as a single shot.

## Sheep & Goats

Food animals have mixed routes of administration, but SQ injections can be given best in the neck area and IM shots in the lower hip. Sheep may receive SQ shots under the foreleg.

	Clostridial Diseases*	Pneumonia	Sore Mouth	Chlamydia	Foot Rot**
2 months	X	X			
4 months	X	X			
annually	X	X	X	X	X

\*Usually available combined as a single shot.

\*\*Booster required the first year.



## Pigs

Because of the variability of products for swine, follow label directions and the advice of experts when vaccinating pigs.





A homemade head catch helps out when vaccinating goats.

which the vaccine should no longer be used.

•**Route of Administration:** Vaccines and injections can be given in several ways, usually abbreviated:

SQ--subcutaneous or under the skin;

IM--intramuscular or in the muscle;

ID--intra-dermal or in the skin;

IN--intranasal or in the nose.

•**Dosage:** The amount to be given (check to see if it is different for young animals or different species).

•**Contraindications:** Are there certain conditions under which the product should not be used, such as during pregnancy or breeding season?

•**Timing:** Usually the label states when the product should be used and when it should be boosted.

•**Storage Recommendations.**

•**Cautions:** Often slaughter withholding times are listed for food animals.

•**Other Information:** Research data, disease descriptions, manufacturer's name and address, serial numbers and more.

Most of the vaccines given to your household pets are administered SQ. The best place to give these is under the loose skin behind the neck or at the flank (see guidelines chart on pages 42 and 43).

Most equine vaccines are given IM. They are generally injected into the large neck muscles (see guidelines).

The food animal group has mixed routes of administrations but SQ

injections can be given best around the neck area, under the foreleg (in sheep) or in the flank fold. IM shots are usually given in the lower hip (see guidelines).

One last point to consider for do-it-yourselfers: if you give your own annual boosters, the animals may miss their periodic health checks by a veterinarian. Veterinarians can often detect health problems early and treat them before they become serious.

## Equipment Needs

Besides mechanical restraining devices, you need alcohol and cotton to disinfect the injection site and needles and syringes, which come in all sizes, to administer the vaccine.

Needles are measured first by length (in inches) and by diameter (the gauge). The higher the gauge is, the smaller the diameter. Personal preference and route of administration usually dictate the size of needle used.

You can buy all stainless steel needles, which can be reused many times, or steel and plastic needles which can be reused only a few times. Always be sure the needles are sharp and have no visible defects like barbs or bends. The



A properly fitted halter, lead rope and handler are usually sufficient restraint for giving vaccines to horses.

sharper they are, the less pain they produce.

Syringes are measured in cc (cubic centimeters), which are the same as ml (milliliters). Usually they are made of disposable plastic and for single dose administration. Multiple dose syringe guns used in livestock work are an exception.

When vaccinating large numbers of animals at once (usually cattle or sheep), the same needles and syringes often are used. This practice can lead to herd infections. To prevent infections only sterile equipment should be used. Most needles and syringes can be reused if they are resterilized, which can be done by boiling them in water for 20-30 minutes. Frequent disinfection and changing of needles can lessen the chances of a catastrophe.

Hundreds of vaccines are available for our domestic animals. Many have more than one immunization included in each injection. For instance, the typical dog vaccine has five or six vaccines in one injection.

The guidelines that accompany this article list some of the more common diseases we vaccinate against, but it is not a complete listing. Local conditions should dictate which vaccines to use. Advice from your veterinarian and local producers can steer you to the ones you need. ☐

Gary Cotton, D.V.M., is a freelance writer and practicing veterinarian from Myrtle Point, Oregon.

## Supply Sources

You can get vaccination supplies from your local veterinarian and most feed stores. Other sources of supplies are:

**ConCot Products**  
Box 514  
Myrtle Point, OR 97458

**Omaha Vaccine Company**  
3030 "L" Street  
P.O. Box 7228  
Omaha, NE 68107-0228

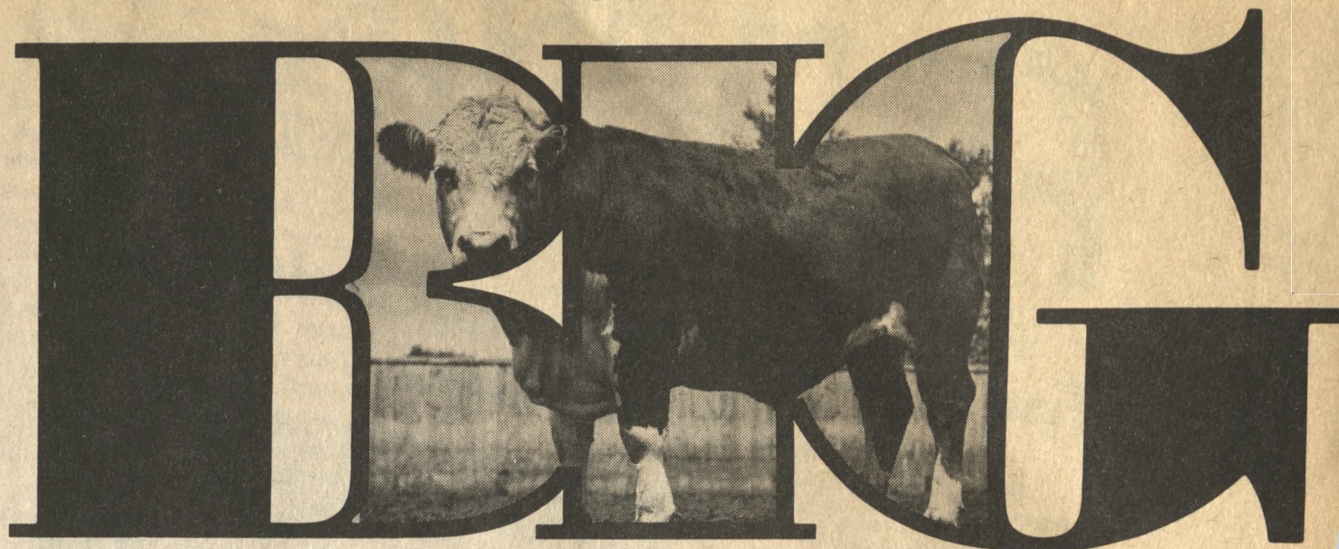
**Foster & Smith**  
1848 N. Stevens Street  
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**Jeffers Vet Supply**  
1452 Gibson  
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—Gary Cotton



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TIMELESS AND PRACTICAL ADVICE

## The Wise and Useful Farm and Garden Guide for May and June

### May

**M**ay is decidedly a working month. The husbandman must commit his seed to the earth in faith (and works) if he would reap a harvest in Autumn. In putting in seed, be it grain, corn, or roots, it is of the first importance that it be well done, for no after-labor, however thoroughly performed, can wholly compensate for wrong planting. To do this properly, prepare the ground by manuring well where needed, and with plow, subsoiler, and harrow or cultivator, loosen and pulverize the soil deeply and thoroughly. If good seed be properly put in now and the weeds kept down, failures will be comparatively few.

Beans are easily injured by the cold, and it is best not to plant very



### NATURE'S GARDEN

#### Honeysuckle: *Lonicera utalensis*



**O**ther Common Names:  
Honeysuckle Twinberry,  
Twinberry.

**Habitat:** Throughout North America in moist areas and in thickets, forests, and along streams.

**Flowering Season:** May to July. Fruits appear in autumn.

**Description:** A climbing shrub with the leaves opposite each other and oblong. The leaves are smooth on

top and hairy underneath. The fruits are red and always paired. Some people have allergic reactions to black honeysuckle berries; they are not recommended for eating. Berries still inside their leafy green cup should not be eaten.

**Edible Parts and Preparation:** The red berries can be eaten raw or dried or cooked with meats. For a sweet treat melt one package of chocolate chips, dip the berries into the chocolate, place on wax paper, and refrigerate.

To can the berries, first wash and drain them. Pack them into jars leaving about 3/4-inch space at the top. Pour in 1/2 cup boiling corn syrup. Seal the jars.



early. Cover lightly, say one-half to three-fourths of an inch.

For corn, better let the ground be warm and dry before planting. It will come up stronger and succeed better. Let the ground be well-plowed and enriched. Test the seeds by sprouting before planting.

**Cabbage and Cauliflower**—Sow, for late use. Plant out from hotbeds and cold frames if any remain. Scatter dry ashes or lime over the seed rows to protect the plants from the garden flea. Hoe former plantings and examine for cutworm.

**Root crops**—Sow any carrots not put in; sow beets; leave turnips, except for early market or family use, until June. Remember that one acre of roots will go further as stock feed than several acres of hay. Let the soil be deeply and finely plowed and well-supplied with rotten manure.

Cattle are mostly turned to the pasture. Allow them fodder still, if the grass is insufficient. Continue to give wet bran and shorts to milch cows until green food is abundant.

Fences not now in order are teaching cattle to be unruly. A little care in this particular may prevent the loss of a cow by breaking into a green clover field, or the rooting up of the garden by a drove of hogs.

Manures properly prepared are plant food. The greater the quantity manufactured and properly used, the more abundant the return from the land. Every decaying animal and vegetable substance on the farm furnishes a supply. Save, make, and use all that can be made available.

## Bring Your Flower Garden Indoors

**T**he flowers so attractive in your garden can be cut for indoor bouquets. Select plants with long stems. If you want to match your indoor decor, choose complementary flower colors, but don't forget the effect of contrasting colors or the subtlety of pastels. Variety of texture and shape and the ability to last are important.

The best flower arrangements combine spiked, rounded and filler forms. Vertical plants such as delphinium, lupine, larkspur and foxglove emphasize lines. The most popular flowering annual for this purpose is the snapdragon.

Complementing the vertical lines of the spiky flowers are the rounded masses of flowers like geraniums, marigolds, mums and zinnias.

For filler material use something light and airy such as ageratum, baby's breath or ferns.

Extend the indoor life of your bouquet by cutting flowers in the early morning or late afternoon with sharp scissors. Harden off the cut flowers in a cool spot for a couple hours. Place the finished arrangement out of drafts and direct sunlight. Change or add water often and use a floral preservative. □

—PanAmerican Seed Co.

## June

**T**he properly cultivated garden is now yielding its first products. Early greens, asparagus, rhubarb, lettuce and radishes, etc., have added to the attractions of the table; strawberries give promise of an early treat, and the rapidly growing vegetables and fruits that fill a well-assorted collection will keep up the pleasant succession.

The husbandman has very little leisure between putting in his late crops and commencing to till his first plantings. Even now, the first day of June, before buckwheat and turnip fields are sown, the corn and potatoes, carrots and cabbages, require going through with the plow

and cultivator, followed by the hoe. See that the ground is well-lightened up before the roots have extended too far, and early keep down weeds.

**Beans**—Train running varieties to poles or trellises.

**Cucumbers, Melons, and Squashes**—Put in cucumbers for pickles. Examine early every morning for striped bug and other insects, and apply the thumb and finger remedy.

Haying should commence as soon as the seed begins to form on grass or clover, that is, just as the bloom passes away. Hay, especially clover, cured without much exposure to the sun, will be sweeter. Pout it up in narrow cocks, and provide hay caps for protection from rain. □

—American Agriculturist, 1880s

## Honeysuckle Wine

- 8 cups honeysuckle berries
- 1 gallon boiling water
- 2 tablespoons powdered yeast
- 4 lbs. sugar (about 4½ cups)

Place fruit and sugar in a large plastic container or crock. Pour boiling water over berries and sugar and mix well. When cool, mix in yeast and stir for about 5 minutes. Let stand uncovered for about 10 days, stirring at least twice a day. Pour into bottles, but try not to agitate sediment. Place lids loosely on the bottles. Open bottles several times a day to release "gas." Seal bottles when no more gas is released (about 1 week).

## Honeysuckle Fritters

- 1 cup honeysuckle berries
- 1 cup flour
- 3 tablespoons sugar
- 1½ teaspoon baking soda
- 1/3 cup milk

Mix ingredients well. Drop into hot fat until brown. For pancakes add more milk until batter is thin enough.



**Medical Uses:** Plant extracts have been used to treat asthma, alleviation, cathartic, and emetic problems. Juice from the stems has been used as an antidote for bee stings. **Early Uses:** Miners and hunters have used honeysuckle as a food source. The stems of the honeysuckle plants sometimes "twine" around the trunk, producing a spiral stem. These were used for walking canes. Fragrance from the flowers has been used in making perfumes.

**Wildlife Uses:** Birds such as woodpeckers, blue jays, and others eat the fruit. Squirrels, raccoon, and bear are some of the many animals that feast on the berries. □

—Valerie Almond



# BAR-B-QUE BRUSH KIT SPECIAL

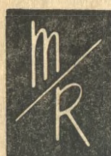
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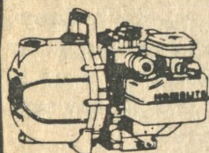
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## ALMANAC

# The Striped Cucumber Beetle

**T**he most serious pest of cucurbit you'll find east of Rockies is the striped cucumber beetle: a similar species occurs in the west. Cucumber beetles and their young attack your cucumbers, muskmelons, squashes, pumpkins, gourds and watermelons.

Larvae and adult beetles cause the damage. During the summer larvae feeding on the roots and tunneling through the stems of your cucurbit can reduce yields and kill your plants. In the spring adults feeding on your new seedlings can destroy them before they have a chance to grow. During the summer adults feed on your crop's leaves and blossoms, reducing yields. In the fall they often gnaw holes in the rind of the fruit.

The complete life cycle of the cucumber beetle consists of egg, larva, pupa and adult. Adult beetles live through the winter under protecting trash near a food source. Black and yellow with three longitudinal black stripes on the wing covers, the adults are about 1/5-inch long and in April begin to fly and feed on the pollen and leaves of a variety of plants. When your cucurbits begin to grow, the beetles devour the leaves and stems. Female beetles lay their orange-yellow eggs around the base of or in the soil near cucurbits.

White with brown head and tail ends, the 1/3-inch larvae hatch in seven to ten days and feed on the roots and underground stem for two to six weeks as they pass through several stages of development. They then construct protective cells in the soil and change to the pupae or resting stage, becoming all white. Adults emerge from the pupae in about two weeks.

The number of egg-to-adult cycles occurring in a year depends on climate. If you live in northern states, you'll experience only one generation. In southern states you'll have to deal with up to four generations.

Cucumber beetles also transmit a bacterial wilt disease which can cause severe losses to your crop.

The beetles spread the wilt living in their stomachs from plant to plant and from field to field as they feed. They also transmit another plant disease called cucumber mosaic.

You can reduce cucumber beetle populations and the damage they cause through organic cultural and biological techniques.

Plant cucurbit varieties resistant to beetles. 'Stone,' 'Fletcher' and 'Niagara' cucumbers, 'Hearts of Gold' muskmelon, 'Royal Acorn' and 'Early Golden Bush Scallop' squash are all beetle resistant varieties. Several of the newer cantaloupe varieties are also resistant to beetles or bacterial wilt.



This striped cucumber beetle is shown considerably enlarged. It is actually the length of the line drawn beside the illustration.

Eliminate weedy areas to help reduce the number of overwintering sites for adults. Cover your plants with wire or cloth-screen cages when they emerge in the spring to protect them from beetles when they begin to fly. Once the plants are off to a good start, you can remove the protectors.

To eliminate pests without harming the environment, use selective, natural, organic insecticides such as Rotenone, Ryania, Sabadilla and Hellebore. Mix these materials with water and then spray them on the plants. You may need to repeat applications to control beetles flying into the area. Safe, biodegradable extracts from neem seeds and tung nuts are promising antifeedants against striped cucumber beetle.

You can also use wood ashes to control cucumber beetles. Mix a handful of wood ashes and a handful of hydrated lime in two gallons of water. Then spray both the upper and lower sides of the plant leaves.

—Daniel F. Mayer



## Fishy Business



**N**ow that you've built that farm pond, stock it with fish that will thrive in a pond environment. Al Lopinot of *Farm Pond Harvest* suggests four species including large-

mouth bass, bluegill, redear sunfish and channel catfish for good sport fishing over a long period of time. Pond fertility and species determine the number of fish you'll be able to put in your pond. □

## Lawn Mower Safety Tips

**H**ere's some safety advice from John Deere for the lawn mower operators in your family.

With a walk-behind lawnmower mow across hillsides so that you're less likely to tangle with the mower if you slip and fall. Riding mowers and lawn tractors are more stable going up and down slopes.

Before you start mowing your lawn, walk around and pick up debris, sticks, stones, dog bones, anything that can be hurled by the mowing blades. Be sure your mower's discharge chute is equipped with a downward curving plate that will deflect objects to the ground.

If you mow close to a tree trunk, you can scrape off bark and damage the tree. The lower branches can scratch you or throw you off balance. Remove the grass around trees in a 2 to 6-foot diameter circle, depending on the tree's height, and fill the circle with a soft mulch like shredded bark. You'll trim the grass more easily and protect the tree.

Before you move across gravel, turn off the mower blades so they don't broadcast a hail storm of tiny stones.

Refuel your mower in a driveway where there's good ventilation and any spilled fuel can be wiped up

without harming the lawn. Before refueling, wait for the engine to cool. If you smoke, leave your matches or lighter in the house.

Be sure the cutter blades are turned off before you clear a clog. Disconnect the spark plug wire on walk-behind mowers. Turn off the engagement switch on riding mowers or tractors. Never put your fingers under the mower deck if the blades can turn under power. The blades move very close to the deck housing.

Keep children out of the mowing area. Don't give them rides on tractors or dumpcarts. Show them the sharp blades under the deck and tell them they rotate at high speed and are dangerous.

Mowing forward provides better visibility. If you have to go backward, look before moving and keep looking around. Move forward again as soon as possible.

Wear long slacks, hard shoes, and close fitting clothing that won't snag easily on controls or branches but will protect your body.

The operator's manual, decals on the machine itself, and a free *Safety Know-How* booklet from John Deere, Dept. 574, 1400 3rd Ave., Moline, IL 61265, are other available sources of safety information. □

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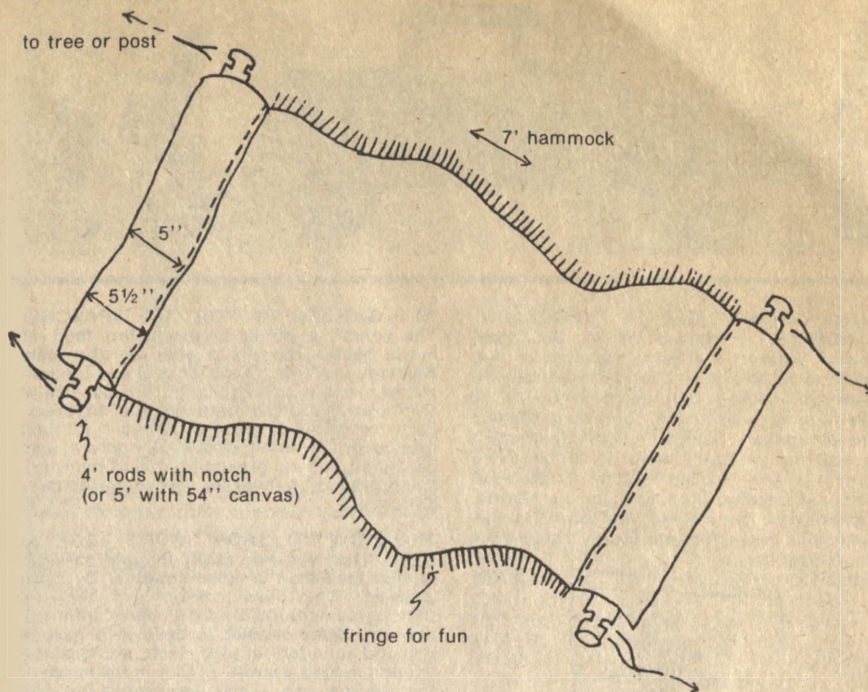
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# Bring on the Hammock



**G**rab your favorite drink, a good book, and wrap yourself in a hammock, the old-fashioned way of beating summer heat in comfort. You can buy a hammock made of canvas, macrame or nylon, or you can make your own with a minimum of time and effort.

First you need sturdy, rugged canvas. You can get canvas in either 36- or 45-inch wide rolls. On occasion, 54-inch wide rolls are available. Make sure your cloth measures 8 feet long.

For the shorter width canvas you need two strong, 4-foot-long wooden rods. For 54-inch wide canvas, the wooden rods should be 5 feet long. The rods should be two inches in diameter and made of hardwood such as oak or maple. Approximately two inches from either end of the rods, make a  $\frac{1}{4}$ -inch deep notch.

Finally you need rope for both ends of the hammock, the lengths depending on where you put your hammock.

Take your canvas and fold over both ends  $5\frac{1}{2}$  inches. Stitch 5 inches from the folds, double stitching for strength. Flip the canvas over so the stitched side is not in view and add any frills you may desire, such as fringe along the outer edge.

Slide the wooden rods through the casings created by the stitched folds. Tie the rope ends over the notched areas with a good supporting hitch or bend knot.

If you have two slender, stable trees within eight feet of each other, hitch your hammock to them by winding the end ropes around the trees or put two large wood-screw hooks into the trunks and tie the rope securely with a bowline knot to the hooks.

If your trees aren't ideally located, try sinking two heavy stakes, such as fence posts, deep enough into the ground to support your weight. Use wood-screw hooks or notch the posts and tie on the hammock ropes. Since the hammock will sag with your weight, make sure you hang it high enough off the ground.

Many department stores also sell free-standing wood or metal hammock frames. Their portability allows you to move your hammock from screened porch to gazebo to backyard garden.

Wherever you choose to place your hammock, be careful not to get too close to certain plants; bees can be an annoying distraction on a warm summer day. ☐

—Patricia Barnes

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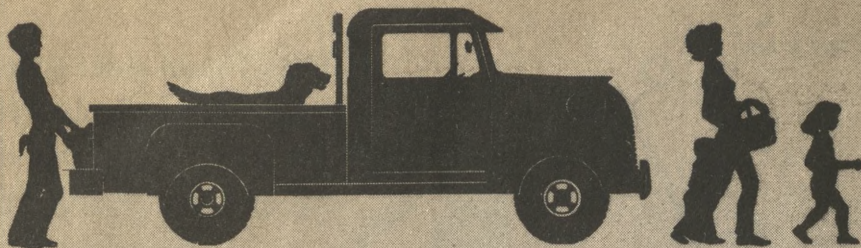
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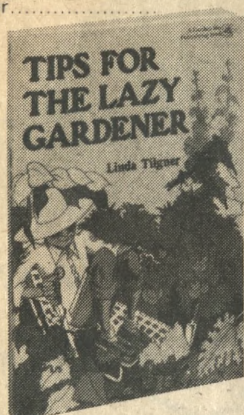
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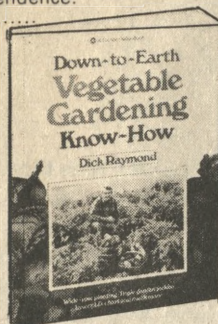
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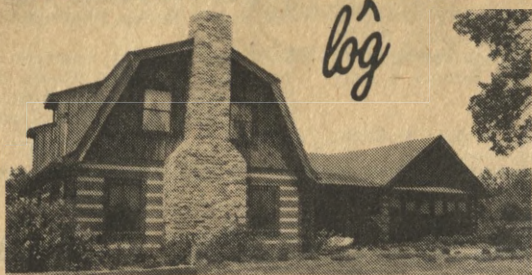
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# Gender 'Hijinks'

Being born a female doesn't mean a lifetime as a female, at least not in the animal kingdom. For some creatures, sex can be remarkably flexible, according to an article in *International Wildlife* magazine. A barnyard hen, for example, can become a fully functioning rooster if her ovary is removed. On the other hand, the sex of many baby reptiles depends on the temperature of the eggs. If American alligator eggs are incubated below 86 degrees F, they produce all females. But if the temperature rises above 93 degrees, the eggs hatch as males.

In contrast, the Atlantic loggerhead turtle determines its sex just the opposite way: cool temperatures produce males. The gender of its kin, the American snapping turtle, is based on a different internal thermometer. Eggs incubated at high or low temperatures develop into females, while moderate conditions produce males.

Why is this? Scientists speculate that incubation temperatures go hand-in-hand with the ideal conditions for the continuation of the species. In alligators, for example, the cool conditions that produce females also cause the offspring to be larger.

Other creatures actually change sex during their lifetimes. Whether they're male or female depends on which sex happens to be more productive at any given moment. For example, the bluestreak cleaner fish, found on tropical reefs, lives in groups that typically consist of one male and five or six females.

The male, which is the largest fish, mates regularly with all the females. The females have a pecking order much like one in a chicken coop, but it's based on size. When a female dies, each fish of lower social status moves up a notch. But when a male dies, the largest female becomes male. Within an hour of his death, the dominant female begins acting like a male fish would. Within two weeks, the female-turned-male fish begins producing sperm. □

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To reduce heat stress, hang misting hoses above the pens of growing and breeding pigs. Set with a timer to provide five minutes of water misting every hour. Wallows and natural or manmade shades also help reduce heat stress.

In the farrowing quarters set up a five-gallon bucket of water with a pin hole in the bottom to drip water on the top lines of sows. But use some common sense. You don't want the drip to become a Chinese water torture for the sow or to create a chilling swamp for the pigs.

You can also direct water droplets or air on the sow's nose to keep her cool. Use box-type fans or squirrel cage blowers to keep air circulating in farrowing quarters. ☐

—Kelly Klobber

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**I**t's no joke if you're an armadillo. But this multi-talented, nocturnal mammal can either walk, float or swim across water. According to *Ranger Rick* magazine, armadillos can gulp down air and blow up their stomachs and intestines like inner tubes. Then they float across a river, armor and all. They can also dog paddle or hold their breath long enough to walk across the bottom of smaller rivers. ☐

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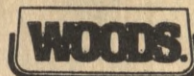
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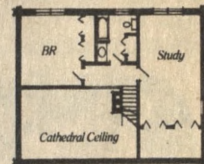
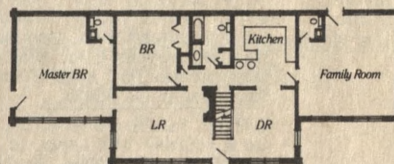
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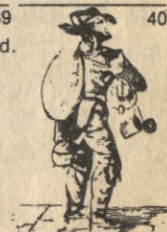
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Continued from p. 59.

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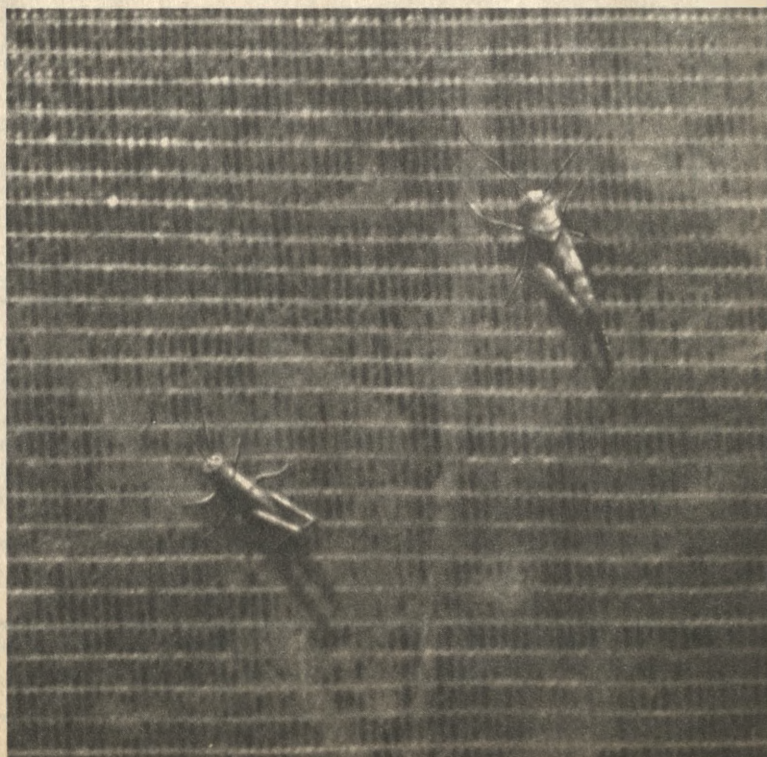
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## Hot and Spicy Horseradish

Someone once called horseradish "a pungent root that carries a hot message." But historically it has been more than that. Most experts believe that in the Middle Ages horseradish was prized for its medicinal value. Somewhere around the 15th century, it took on new life as a condiment. Hot, spicy, capable of taunting the tongue and bringing tears to the eyes, it is a proper companion for cold meats, fish, poultry and any number of sausages.

Horseradish [*armoracia lapathifolia*] is a member of the mustard family. A hardy perennial, it has a great fleshy taproot which gives the

plant its zesty reputation. It's very easy to grow. Give this 24-inch plant plenty of room as it will take over your backyard.

Don't harvest your horseradish until after the first frost, for the cold helps set texture and flavor. It is then washed, grated, and placed in glass jars with vinegar and some salt.

One grandmother supplies her own recipe for horseradish dressing: grate 1/4 of a big root. Add 1/2 a grated apple, 3 tablespoons of sour cream, salt to taste. "Marvelous," she says, as hot tears mix with warm memories. □

—Rayner Brothers

## Power Failure Tips

If your power fails suddenly this summer and you realize that your freezer is full of food, your prospects for saving it need not be dark—especially if you follow these bright ideas:

1. Most food will stay frozen from one to three days in most freezers if you keep the cold air inside by not opening the door.

2. A full freezer stays colder longer than one that isn't, and the colder the food is the longer it will last. Make it a practice to keep the temperature in your freezer 0 degrees F or lower.

3. Try not to position the freezer near a hot water heater or furnace or in direct sunlight, and be sure the freezer is properly insulated.

4. If the power does stay off so long that it starts thawing, use a standby generator or check with local companies, schools or hospitals to see if they have freezer space.

5. If a generator or extra space isn't available, use dry ice.

6. If using dry ice, cover the freezer with crumpled newspapers and then blankets to provide additional insulation.

7. Check food when power comes back on. If you see ice crystals or it is still below 40 degrees, the food can be refrozen.

8. Any food left at room temperature for more than two hours may have to be discarded, with the exception of baked goods, nuts and some fruits. □

—University of Georgia, Athens

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# In Case of Emergency

**I**f you're planning to move to a rural area, or even if you've lived in the country for some time, take time to look for help before you need it.

Find out which law enforcement agency, fire department and ambulance service are responsible for your area. Don't rely only on your neighbors or the emergency phone numbers listed in your telephone directory; call the agencies to verify your information.

Most rural areas don't have a local police department. Law enforcement in your neck of the woods may be the job of a constable, a justice of the peace, the county sheriff's department, or the state police.

Your fire department may be volunteer and also may provide emergency medical assistance. A private ambulance company or a regional hospital may serve as your emergency medical resource.

Once you know which agencies

cover your area, post their phone numbers by your telephone and have handy a set of directions telling them how to find your home. These written directions are especially important in case the person calling for help is a child or visitor.

In rural areas where locator aids such as street signs and house numbers may not exist, probably the best way to tell others where you live is to describe the route they would take to get there. For instance, drive yourself from the fire station to your home. Note your odometer readings between turns and at distinctive landmarks. Write down posted road names and numbers. If the road isn't posted and you don't know its name, check your local tax office. Survey maps usually note road and street names you can use to help guide others to you.

Mileage is important to remember when giving directions. At night or in bad weather, road signs and distinctive landmarks may be diffi-

cult to spot, but odometer readings can let your searcher know he's in the right area and to watch for a turn or the driveway to your house.

If your house sits out of sight of the road, try to make the turn onto your property easy to find. You might paint your mailbox a bright color that's visible from a distance in the daylight and add reflective letters or red plastic reflectors that catch headlight beams at night. A simple cairn of white rocks to mark the end of your drive can be as effective as more elaborate pillars and gateways.

In addition to aiding the prompt arrival of firemen, ambulance drivers, or law enforcement officials you'll find your written directions next to the telephone are invaluable for telling delivery truck drivers and visiting friends and relatives how to reach you. And should you be faced with an emergency, you'll be prepared to respond to it. □

—Cindy Myers



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# A Country Fourth

by Shirley Stimpert

**W**e all look forward to the Fourth of July. It's summer in the country at its best. Plans are made weeks ahead. The fireworks catalogs come in the mail. Our boys choose carefully this year's assortment. The menu for our country celebration is traditional, made up with foods we have grown or raised on our farmstead. Anticipation rises with the heat.

arranging them according to the order they want them fired. Everyone feels the tingle of excitement. Our dogs run around barking, sensing company before they come. Dogs and little boys chase each other, running through the herbs. The unmistakable odor of crushed catnip mingles with the heat to bring forth memories of other July afternoons. Every summer should be blessed with little boys, dogs and

look for the first star, eager to start our fireworks display. It's fun to watch grown men reliving childhood memories, as they help the boys light fireworks. Rockets whiz in all directions. The display is accompanied by laughter and squeals of appreciation. Our country life seems perfect tonight.

The deepening darkness gives background to the dancing colors. The snap of firecrackers reminds us



Our country celebration divides summer much as Christmas does winter. Things seem to fall into categories—"Before the Fourth" and "After the Fourth." Anything seems possible before the Fourth. The lush green of the newly born summer might just last until frost; at least we dare to hope for that before July.

The Fourth is a time for gathering together. Friends and neighbors are invited. I'm reminded of pioneer country parties, as we move the long table to the shady side of the lawn and drape the red gingham cloth over it. The old American elm shelters the table from the prairie sun.

Laughter accents the day, as final preparations for the party continue. Jared and Trevor, two of our sons, sort through the box of fireworks,

Fourth of July country socials.

Good food, raised and prepared with care, has always been an important part of country fellowship. On the Fourth, we feast! The ice cream freezer is filled with the creamy richness of our Jersey's milk. Home-grown beef, grilled outdoors, floods the breeze with the smell of good times. Vegetables, freshly picked in the fleeting crispness of early morning, cover one end of the table. Loaves of whole-wheat bread, made from grain grown on our farm, create a country still life against the checkered cloth. Neighbors arrive. Bursting with life, our July party begins. Later, after the evening meal, everyone seems content to rest and chat, enjoying the simplicity of summer.

The children are wild with expectation; it's almost twilight. They

of our heritage. Fun and fellowship mix to complete our farmstead Fourth. Cicada drone. We all linger in the softness of the night, not wanting to go inside.

After the Fourth, we are resigned to brown patches in the lawn, more weeds in the vegetables than should be there and the reality that summer doesn't last forever. The boys even acknowledge the start of a new school year next month. Summer settles after; the hot days will be inescapable now. The heat has a cleansing effect. We find satisfaction in hard farm work. The rewards of our labors are bounteous—our very surroundings. We like it that way! □

Shirley Stimpert is a frequent FARMSTEAD contributor and homesteads in Bucklin, Kansas.





## What is Farmstead?

**farmstead** \ fārm -,sted \ n: 1. a place in the country; 2. the buildings and land tract adjacent to a home devoted to gardening and/or raising of domestic livestock; 3. **The Magazine of American Country Ways.**

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