

New Cookstoves--Better Looking & Efficient

# FARMSTEAD

The Magazine of Home Gardening & Country Living

\$2.50

Storehouse

How to Get  
the Most from  
Your Apples:  
Making Cider &  
Keeping Apples

FM 213741 1285 CR5 2 0 AR\*\*  
MAINE ST LIBRARY  
CULTURAL BLDG  
AUGUSTA  
ME 04333



MAINE STATE LIBRARY

SEP 23 1985

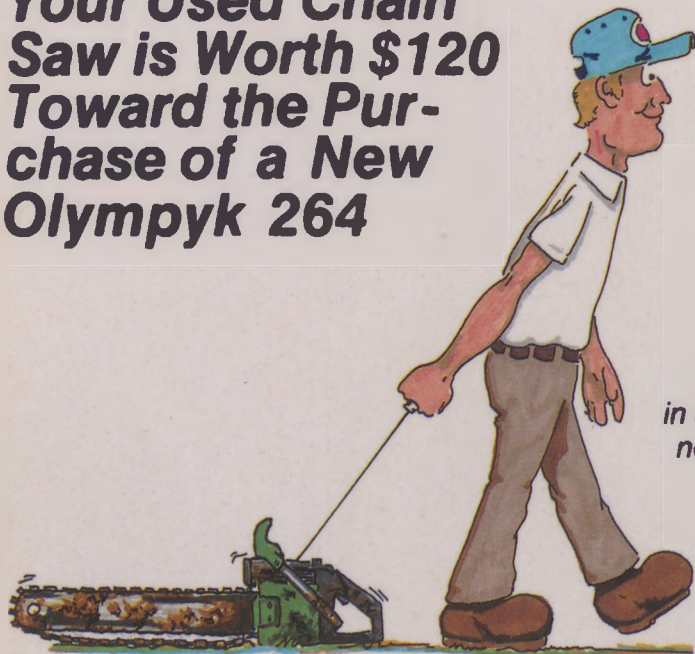
Knife Sharpening Know-How  
Do-It-Yourself Soil Testing  
Storing Your Tractor  
New Life for Antique Stoves  
Colored Sheep for Fancy Wool  
Concord: The Great American Grape

The Billipps family makes cider from their apple harvest.



# BAG IT... or DRAG IT!

**Your Used Chain  
Saw is Worth \$120  
Toward the Pur-  
chase of a New  
Olympyk 264**



Trade in your complete gas or electric chain saw, in any condition, and receive \$120 credit toward a new Olympyk 264. Your final cost for a powerful, smooth-cutting Olympyk 264, equipped with 20" guide bar, is only \$279.95! See your

local Olympyk dealer for details. Consult the Yellow Pages under "Saws", or call toll-free

**1-800-447-1152**  
(In NH call 926-4524)



The Olympyk 264,  
3.7 cu in. Displacement,  
20" Guide Bar.

Offer ends December 31, 1985.

# OLYMPYK



# Stoves Unequaled In Design.



Chances are, if you are considering a stove, you are approaching its purchase in a serious manner. Gone are the days when all stoves were assumed to be equal. Educated consumers know they are not, and that the differences from one brand to the next can be substantial. This is so because some wood stoves have been undergoing a quiet revolution in function, a revolution masked by the constant nature of the outer forms.

## Extraordinary Features

No stoves more reflect this revolution than Consolidated Dutchwest's Federal Airtights. These stoves include a combination of features which just a decade ago would have been impossible to imagine. Today our 100% cast-iron stoves and inserts burn wood and coal and convert from one fuel to the other in a few moments. Depending on size, they hold wood fires from 6 to 14 hours while squeezing as much as three quarters of the potential heat from each log. They vent from the top and back and install freestanding or as fireplace inserts. Front and side door loading, convection systems, fans, ceramic windows, shaker grates, ashdrawers, and polished cooktops are standard features. As well, we reengineered each stove and insert for catalytic operation. Why? Because with a catalytic combustor, airtight operating efficiency can approach 80% while reducing creosote build-up and smoke pollution up to 90%.

## Federal Period Styling

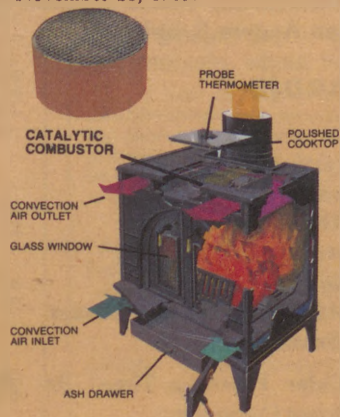
While concentrating on function, we haven't compromised on appearance. We've employed the simple clear lines of Federal period architecture (1810-1830), as elegant today as they were then, to create a unique and beautiful pattern of raised lines and arches. Our distinctive pebble finish and solid brass trim highlight the classic styling. We know our stoves will frequently be sited in living rooms and we've gone to great lengths to assure they belong there. Those of you who eventually own a Consolidated Dutchwest stove will find our trademark pebble finish is not only beautiful, but also increases our stoves' radiant surfaces by a third. Even while stressing appearance we never forget performance.

## Free Corning Catalytic Combustor

**This Fall Save \$80.00.**

Since the emergence of the airtight stove as the woodstove industry's best product, there's been belated but growing awareness of the downside of airtight woodburning—creosote buildup and pollution—problems caused by the lower firing temperatures of controlled combustion. Technology's answer is the inclusion of a catalytic combustor in each airtight stove. The 'combustor' reduces the temperature at which woodsmoke burns from 1,200 degrees F to under 500 degrees F. The result is an almost complete burn, a big boost in operating efficiency, and major reductions in creosote buildup and pollution. In short—a great idea that works. Each Federal Airtight is designed to accept a catalytic combustor in the secondary combustion chamber. This

fall we'll provide a Corning Catalytic Combustor free with each stove and insert purchased. Offer expires November 26, 1985.



## Send For Free Information Package!

We have prepared an information package, including a 76-page color catalogue, "Stovebuyer's Guide," and Installation Planner, to help you with your decision. It's yours Free for the asking. Write or call for your free copy today.

**Call Toll-Free 1-800-225-8277**

**or 1-800-722-5556**

(in Mass. 1-617-747-1963)

## Send Me Your Free Information Package.

I plan on purchasing a stove:

- ☐ within the next 60 days   ☐ within the next 6 months  
☐ within the next year   ☐ in more than one year or uncertain

Name \_\_\_\_\_

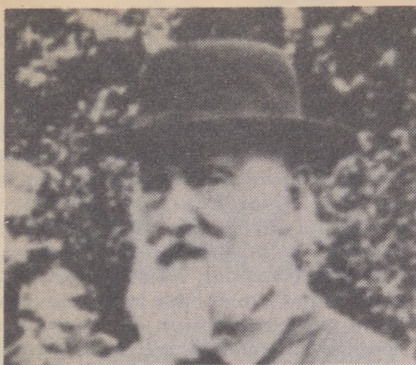
Address \_\_\_\_\_

City/State \_\_\_\_\_ Zip \_\_\_\_\_

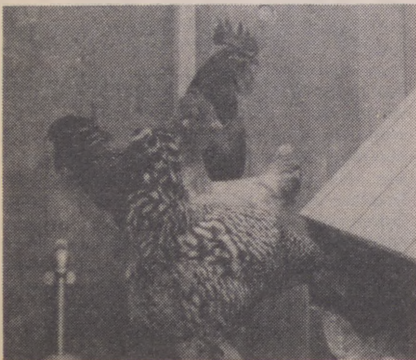


P.O. Box 1019  
 Dept. 5F89  
 Plymouth, MA 02360





Page 26. Ephraim Bull got a good thing going when he gave us the Concord grape.



Page 70. Shelter your chickens in style with the quick and easy Malibu coop.



Page 34. Find out how sweet cider can whet your whistle long past this fall.



Page 84. These wooly rabbits combine beauty with practicality.

# FARMSTEAD

The Magazine of Home Gardening & Country Living

Volume 12, Number 5

Fall 1985

## Gardening/Cash Crop

- 18 Test Your Soil at Home
- 22 Jerusalem Artichokes
- 24 Getting After Aphids
- 26 The Story of the Concord Grape
- 27 Grape Pests
- 28 Trellis Training Systems
- 46 Buy It Fresh at the Growers' Market

Dennis Shayne  
Jo Frohbieter-Mueller  
Melanie Spencer  
Frances X. Sculley  
Samuel L. Skeen  
Samuel L. Skeen  
Jonathan A. Meyers

## Lifestyle

- 38 Outstanding FARMSTEADers
- 38 Brian, Judy and Gregory Rapp
- 39 Jack and Neva Gow
- 40 The Rileys
- 41 Fred Westergaard

Dorothy Lanning  
Jack Gow  
Ruby Riley  
Deborah Collier

## Recipes/Preserving

- 30 Keeping the Apple Harvest
- 34 Making Sweet Cider
- 48 Don't Pass Up the Bargains

Sherri Hudson  
Amy Hauslohner  
Fran Jurga Garvan

## Energy/Shelter

- 52 The Gangnail House
- 60 Cookstoves Yesterday
- 62 They Kept the Home Fires Burning
- 66 Cookstoves Today
- 70 The Malibu Barn Coop

Dan Hibshman  
John R. Wiggins  
Aileen Mallory  
Steve Maviglio  
Robert Smaus

## Tools

- 42 Put Away Your Tractor so it Starts in the Spring
- 50 Knife Sharpening Know-How

Lou and Kathy  
Tonneson  
Caron Virnig

## Livestock

- 82 The Colored Sheep of Smallway Farm
- 84 From Shady Past to Brighter Days
- 84 German Angora Rabbits

Alice Coelho  
Melanie Spencer  
Leslie Samson

## Departments

- 4 Letters
- 6 Ask Farmstead
- 10 Feedbag
- 14 Your Green Garden
- 16 Get Growing
- 65 Kindling Box
- 76 FARMSTEAD's Market Basket
- 91 Your Small Stock

Paul Parent

Cover: Cider Pressing Time by Jim Billipps for Jaffrey Manufacturing Company.



**Publisher & Editor**  
George Frangoulis  
**Managing Editor**  
Heidi N. Brugger  
**Assistant Editor**  
Melanie Spencer  
**Art Director**  
Rod McCormick  
**Production Coordinator**  
Janet S. Robbins  
**Production Department**  
Sharon Adamsky  
Nancy Faulls  
**Director of Marketing**  
Garry Owen Bowles  
**Marketing Representatives**  
Cathy Bennett  
Teri Davis  
Chris Frangoulis  
**Business Manager/**  
**Circulation Director**  
Gigi Meader  
**Business Administration**  
Lori Terry  
**Fulfillment Manager**  
Diane Hull  
**Bookstore & Subscriptions**  
Nancy Faulls  
Lois Hacik  
Jane Ingraham

FARMSTEAD is published six times a year by The Farmstead Press, Box 111, Freedom, Maine 04941. Telephone for publishing and advertising offices is 207-382-6200; for editorial offices is 207-382-6205; for subscription offices is 207-382-6201. Copyright 1985 by The Farmstead Press. All rights reserved. Subscription rate is \$15.00 for one year (six issues), \$30.00 for two years and \$45.00 for three years, in the United States and its possessions. Subscriptions surface mailed to Canada and abroad \$20.00 per year.

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 (6) 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.

# Here's How to Stop Foot Pain INSTANTLY!

**There's really no mystery about what causes foot pain**

Each of your feet has 26 different bones held in balance and position by tendons, muscles and ligaments.

Once something happens to destroy this balance, (no matter what your age) you experience painful feet, unless you do something about it.

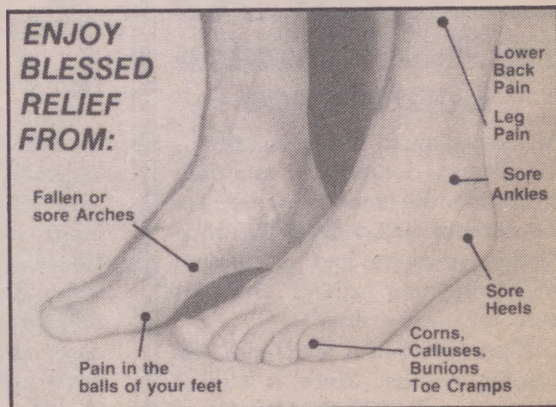
**There's really no mystery about finding relief**

Since 1948, over 3,000,000 people are enjoying blessed relief they never thought possible... thanks to Flexible Featherspring® Foot Supports which are made in West Germany.

How do Feathersprings bring relief? Well, unlike costly special shoes, mass-produced arch preserves, or ready-made, drug store remedies, custom-formed Flexible Feathersprings actually restore and maintain the elastic support your feet had when you were a youth.

No matter how long you've had foot problems—be it 3 months or 30 years—the instant you slip a pair of Feathersprings in your shoes (one pair is all you'll ever need)—you'll be able to stand all day, walk, dance, even jog or run in total comfort.

Feathersprings act as a shock-absorbing, pain-relieving system which structurally realigns your feet. Not only do they restore the



natural balance of your feet, they allow your feet to flex normally in all types of shoes. Thanks to Feather-springs, your aching feet get the continuous, moving support which brings that relief.

**There's really no risk involved in finding out whether Feather-springs can relieve your foot pain.**



We're so certain that Feather-spring Foot Supports will end your foot problems that if you're not completely satisfied... we'll refund your money in full... with no questions asked.

Write us for full information, there's no obligation and no salesman will call. Just fill out and mail the coupon below.

## What people say in unsolicited testimonials, about Feathersprings:

"... I have thoroughly enjoyed the comfort Feathersprings have provided me. You would not believe the difference they have made my feet feel—before I had such pain when walking because I have severe callus' on both of my feet."

M.W.R./Richmond, VA

"I want to thank you for refunding to me the full amount of what I ordered. I admire your company for this with no strings or red tape."

G.K.M./Warwick, Rhode Island

"... At the present time I still wear the Feather-springs and indeed they perform well after seven years of use."

G.M.G., Dallas, Texas

©1985 Featherspring International Corp  
712 N. 34th Street, Seattle, Washington 98103

## SEND NO MONEY!

FEATHERSPRING INTERNATIONAL CORPORATION  
712 N. 34th Street, Dept. FST095  
Seattle, Washington 98103

YES! I want to learn more about Flexible Feather-spring Foot Supports. Please rush me your free packet. I will watch for a **LARGE PINK ENVELOPE**. I understand that there is no obligation and that no salesman will call.

Print Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

When in Seattle visit the Featherspring building.





## Announcing... **FARMSTEAD** The Magazine of Home Gardening & Country Living **1st Home Garden Conference**

We invite you to join us in a first: a Gardening Conference especially geared for the home gardener. The Conference includes exciting workshops, speakers and discussions with gardening experts. Here are some of these events:

☐ A presentation of the Home Test Garden results. Since it started this spring, FARMSTEAD's Home Test Garden Project has drawn the attention of gardeners from all over Maine who wished to test new seed varieties against their old favorites. Here's a chance for you to share in their findings.

☐ Workshops on pest management, composting, organic gardening, weed control, greenhouses and more.

☐ Slide presentations by gardening experts.

☐ Roundtable discussions with fellow gardeners.

For more information on the conference and a registration form, please complete coupon and send to: Farmstead's Home Garden Conference, Box 111, Freedom, Maine 04941

Name

Address

City  State  Zip

Would you like us to send you lodging information?  
☐ YES ☐ NO

**October 19 & 20, 1985**

**University of  
Southern Maine  
Gorham Campus  
Gorham, Maine**



# LETTERS



## For the Record

Dear FARMSTEAD,

I enjoyed Tim Rice's article in the Summer '85 issue, "Choosing a Tractor for Your Market Garden," very much. The article was very informative and well researched. However, I was a little surprised when I read the caption beneath the photograph on page 32. The photo depicts a model 1100 Massey Ferguson tractor, parked next to a Ford 8N. The caption indicated the Ford developed nearly three times the power of the Massey.

Just to set the record straight, Massey Ferguson's 1100 diesel was powered by a 354 cubic-inch, six cylinder Perkins engine, which developed 93.94 PTO horsepower in its 1965 Nebraska Test. The Ford, weighing in at 2717 pounds, scored only 26.19 horsepower with its 119 cubic-inch Ford "L" head engine.

Thanks again for a great magazine.

Thomas G. Kelley  
3194 North Road 150 West  
Kokomo, Indiana 46901

*Ed. Note: Thanks for correcting us. Our apologies for the mix-up.*

## Adopt a Donkey

Dear FARMSTEAD,

I enjoyed your excellent article on burros (donkeys) in the Garden 1985 edition. My husband and I are very familiar with burros also, particularly wild ones. We assist the federal government and humane organizations in adopting these creatures out to good, loving homes. Our animals are rounded up from public and National Park Service lands because

they aren't wanted there. We also assist people who wish to adopt wild horses through the same program, although applicants must have experience with horses.

The wild burros are excellent "watch dogs" for sheep herds. They instinctively dislike any strange animals in their pastures or pens. Burros will actually patrol and chase intruders off, including coyotes, cutting lamb losses to zero. Given care, shelter and good substantial feed, a burro will be a friend, a guard for your sheep, an alarm clock (if you need one), a willing worker (with patience and training) or a companion for your lonely horse or pony. I should stress, however, that the wild burros love attention so should not be turned out and forgotten.

Kay Cushman  
Box 26  
Canterbury, New Hampshire 03224

## Old-Fashioned Roses

Dear FARMSTEAD,

This is the first time I have ever written to a magazine. My husband recently subscribed and to my surprise I loved it! For years I have gotten *The Mother Earth News*, but they have lost touch with us "little people" (I pray you never do), so I had dropped my subscription to them over a year ago.

My main reason for writing is to know if any of your readers know where I can find cabbage roses and other old-fashioned roses?

Once again, thank you for a fantastically helpful magazine.

Mrs. Jim Chaponis  
9296 Rapid Lightning Creek Rd.  
Sandpoint, Idaho 83864



# Yanmar . . . More Than You Expect

That's what makes Yanmar's compact diesel utility tractors so popular. From 12 to 33 H.P., Yanmar offers 8 tractor series with quality engineered features that give you more than you expect.

## SENSIBLE TRANSMISSION CHOICE

Yanmar gives you a wide choice of standard or POWER SHIFT transmissions. Most models feature Yanmar's field proven exclusive SHUTTLE POWER SHIFT that lets you "shift-on-the go", even into reverse, without clutching. That means no bogging down . . . Just smooth going whatever the load or terrain.

## DURABLE DIESEL ENGINE

Best of all, every Yanmar is powered by a smooth, quiet Yanmar liquid-cooled diesel engine that delivers more power on less fuel than you would expect. And with Yanmar, there's no tune ups to budget for, no spark plugs to replace, no carburetor to clean and adjust.



## FULLY ENCLOSED FRONT AXLE

Every Yanmar 4-wheel drive tractor features a fully enclosed bevel gear front axle design. Yanmar's bevel gear design eliminates universal joints and provides smooth power transfer even on the tightest turns. And it's fully enclosed for virtually maintenance free long life.

## TEST DRIVE

Whether you choose 2 or 4 wheel drive, you'll get more than you expect with Yanmar. Test drive a Yanmar today. Expect a lot!



Tractors and Implements  
More than You Expect





# ASK FARMSTEAD



I would like some information on windmills. We live in an open area and are considering using one to generate electricity. We'd like to know how to install it, what materials are needed and if there are any regulations on them.

Before you invest in any windmill materials or plans, you need to ask yourself some questions. First, how much power do you need to generate? There are many formulas for calculating how much electricity you will need. A good source for such tables is your state energy office. They can supply you with general wind energy information also.

You also need to calculate how much wind energy is available in

your area by doing a wind survey. Again, there are several methods, but the easiest (and perhaps the cheapest) reliable method is a windmeter. Stores that sell hang-gliding equipment often carry these wind speed recording devices. When used over an extended period, the windmeter will give you a fairly accurate average for your area. This figure is then used in calculating available wind power and the ideal size windmill you'll need to harness it. In addition to the windmill itself, you'll also need a method of converting the energy and storage and back-up systems.

After you've made these calculations, you can begin window shopping windmills. Or, if you feel

creative, you can design your own. In any case, there are hundreds of models to choose from.

Unless you live in a highly populated area, there are probably no regulations on the wind-power systems. To be sure, check with your town office or planning commission.



In the Harvest 1984 issue is an article entitled "German Greens for Winter Survival." I am interested in growing some of these plants. Could you tell me where to buy seeds?

Bertha Lopp, the author of the article, says she's been getting many requests for the seeds, and as far as she knows, she's the only one who sells them. She originally got her seeds from an elderly friend.

For \$2.50 and a self-addressed, stamped envelope, you can pur-

## THE MAGIC SPLITTER

Split wood the easy way with our NEW Improved  
ALL STEEL WOODSPLITTING MAUL

**WORKS  
LIKE  
MAGIC**

**INCLUDES  
CUSHION GRIP**

### GUARANTEE

Try our Magic Splitter at our risk. If within one year you are not completely satisfied with our mauls performance return it for a full refund (including shipping charges). Our mauls carry a lifetime guarantee to the original purchaser, and we stand behind it.

- All shipments made within 48 hrs. upon receipt of order.
- Visa, Mastercard & COD's accepted
- Full cash refund if not delighted



### ORDER FORM

Quantity	Description	Delivered to Your Door Price	Factory Pick Up
_____	16 lb. Magic Splitter	27.79	23.79
_____	12 lb. Outdoorsman	25.79	21.79

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

For rush orders call toll free 1-800-367-0666 or please call collect

616-396-1911

**VOGELZANG**

CORP. DEPT. FS-10, 415 WEST 21ST STREET, HOLLAND, MICH 49423



**TAKES THE WORK  
OUT OF  
WOODSPLITTING**

- Flame hardened edge won't break down
- Shape of head eliminates stuck axes.
- High strength steel handle
- Splits most wood with one chop
- Throw away your wedges!
- No More Pulled Muscles
- Cut it, split it, & stack it the easy way

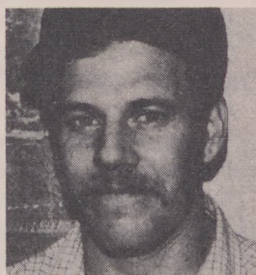
**NEW LONGER HANDLE  
2 FT. 8" WITH  
REINFORCED SLEEVE**

**12 lb. OUTDOORSMAN MAUL  
AVAILABLE FOR THE SMALLER  
AND LIGHTER LOGS.**

Offer for 48 contiguous states  
Canada and Alaska customers please call.



# I found a way to **SELL PART-TIME...** **MAKE FULL-TIME INCOME!**



**earned \$7,700 from  
my first Pace order...plus financial  
security in my own business.**

1st person story by Tedd Mainwaring

**I** worked on an oil drilling crew out west. We drilled 11 wells one year, every one a gusher! But did I strike it rich? Not on your life—I was paid by the hour and struggled to feed a growing family. That started me to thinking, 'Why should I do all the work while someone else gets all the gravy.'

"About that time I got injured and ended up having to move my family to a different area to take a job as a maintenance mechanic. That idea of controlling my own destiny kept gnawing at me. By now I had five children with extra expense of about \$2,400 a year sending the oldest one to a speech and hearing center.

"How could a guy like me save up enough money to start my own business? To get into most businesses you have to own a corner of Fort Knox. If I could only ease into a business without giving up the regular salary I had to count on to put food on the table. And without making any investment. As long as I was dreaming, wouldn't it be great to find something where every single spare time order could bring in *really big* extra money.

"Sound like the impossible dream? Well, I had seen a Pace Products story about a man who earned \$4,154.65 on just one Seamless Spray order. And he didn't have to invest a penny. I sent for the free information. Believe me, when I received their literature and saw how easy their field-tested sales kit made everything—I knew it could all be more than just a dream. I decided to become a Pace distributor. And it was the best decision I ever made.

## **YOU NEED ABSOLUTELY NO EXPERIENCE**

"Now I haven't mentioned anything about Pace—I've saved the best for last. As you know, it costs a fortune these days for schools, hospitals, plants and other commercial buildings to have roof contractors repair or re-do their roofs. Pace *saves* them that fortune—by-passing the contractor. The building owner uses Pace's Seamless Spray process to apply Pace Roof Renewal Sealant right over the old roof. The cost is so low, the proven results so satisfactory for such well-known firms as General Motors, American Airlines, Holiday Inns and hundreds more, that there is little if any sales resistance.

"Pace ships the Pace Seamless Spray equipment on Free Loan. The customer pays only for the roofing products from Pace. His own men apply it. And the clincher—I would get my big commissions up front. Paid in advance. Weekly.

"With my mechanic's job, I was able to start out with Pace in my spare time. I didn't know a thing about roofs, but Pace told me everything I had to know. They showed me how easy

it is to set up a business and keep it running profitably. So all I had to do was go out and find somebody with a leaky roof, and tell him about Pace products.

"Quite frankly, my first prospect didn't buy. But I made a call for a school building with a roof the size of a football field. They called it the "Bucket Leaker," because every time it rained they had to put out buckets—in classrooms, hallways, even the cafeteria—to catch the water. I got the job and made \$7,700 on it.

"That school building is now leak-free for the first time in 25 years, so they had me do five other roofs with Pace's Seamless Spray. I was on my way. Today my family and I are enjoying a life we never thought possible before—all thanks to my accepting Pace's invitation to return that little coupon in the ad I read."

*Tedd Mainwaring*

## **MAIL COUPON TODAY FOR FREE FACTS—NO OBLIGATION**

Would you like to earn big money, starting out in your spare time, like Tedd Mainwaring? Would you like the freedom and independence of your own business? It can be yours. Let us mail you the facts. Simply send in the coupon below and we'll rush you all the details. There's no obligation. No salesman will call.

Our field-tested sales kit gives you all the know-how you need to get into the Pace business. There's no waiting, no training needed. And no investment required. You can get into the Pace business that offers a way to make \$1,000 or more on one sale—even up to \$7,700 like Tedd Mainwaring—and more!

This is your once-in-a-lifetime opportunity. Get all the facts. Study them in the privacy of your own home and then decide for yourself. But don't delay. Mail the coupon now.

**Pace Products Inc., Dept. FA-985  
Quality Plaza, 112th & College Blvd.  
P.O. Box 10925, Overland Park, Ks. 66210**

Additional Coupon  
on Page 43.

**WITHOUT OBLIGATION** send free material that tells how  
I can have my own Pace business. No salesman will call.

PLEASE PRINT

Name

Address

City

State  Zip



Ms. Lopp suggests you refer to the article for specific cooking instructions. Back issues of the magazine in which it appears can be ordered from the Market Basket on page 76. Basically, the greens can

I would like to know more about Black walnut and English walnut trees. I have a triangular section [one quarter of a city block] that I want to plant walnut trees on. What fertilizers would work best and how much rain do these trees need weekly? Will they stand a hot and

Walnut trees require well-drained, neutral or slightly acidic soil with an ample supply of moisture. The amount of water needed will depend on the variety of tree you choose to plant. There are over six common varieties of Black walnut trees alone. The Thomas, Ohio and Myers are the three most widely planted. You'll get the best results by choosing varieties that originated in your area. English, (also called Persian or Carpathian) walnuts should do well in your climate as they need long, warm and generally dry summers, plus cool-to-cold winters.

Generally, for good growth and nut production, Black walnut trees should be at least 60 feet apart and English walnut trees 50 feet apart.



**HOMEOWNERS!**

# **Now...turn unsightly brush piles into valuable *FREE* wood chips and organic mulch!**

**...with the amazing New SUPER TOMAHAWK  
Chipper/Shredder...exclusively from Garden Way!**

- **2 great machines in one:** completely separate shredding and chipping chambers for superior performance!
- **It's a powerful chipper...** handles big branches up to 3" in diameter with ease!
- **It's an efficient shredder...** turns almost any organic matter into perfect mulch and compost almost immediately!
- **Revolutionary New Compact Design...** 7 ways better than bulky "old-style" chipper/shredders!
- **Beautify your property...** get rid of ugly brush piles...use the resulting wood chip

mulch around trees and borders to give your home a "professionally landscaped" look!

- **Make mountains of *FREE* mulch and compost...** Have your most productive garden ever... without having to buy expensive store bought mulch and fertilizer!
- **Save time and work...** shredded mulch means less weeding and watering!
- **Shred all those fall leaves** into fine textured mulch or compost material instantly!
- **Professional quality... Industrial strength construction...** designed, sized, and priced for the homeowner!
- **NO RISK 30 Day TRIAL OFFER!**
- **Exclusively from the makers of the famous Troy-Bilt® Tiller!**

**Why put up with unsightly brush piles** any longer? Turn all your organic throw-aways into useful wood chip mulch and compost material...have the kind of place you've always dreamed of...with the quick and efficient **SUPER TOMAHAWK Chipper/Shredder!**



**Turn a brush pile like this...**

**INTO  
FREE  
MULCH**  
  
**in less  
than  
one  
hour!**



**Send for *FREE*  
details today!  
SPECIAL  
SAVINGS  
OFFER  
now in effect!**



**Garden Way Mfg. Co., Dept. A125**  
102nd St. & 9th Ave., Troy, N.Y. 12180

☐ **YES!** Please send me complete  
SUPER TOMAHAWK Chipper/Shredder  
details including prices, models and  
SPECIAL SAVINGS OFFER right away!

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_





# Superkits™

No complicated patterns. No nonsense. Heads **PRE-SEWN**. Fabric **PRE-CUT**. Complete Color Catalog of Easy **Superkits** **FREE** with order of 12" Lamb at Special Intro Price. Only \$12.95 pp. Catalog \$1 (ref. w/order).

**Oz Enterprises Inc.**

Dept. 9 F P.O. Box 637 Sandpoint, ID 83864

## GREEN RIVER TRADING CO.™

MANUFACTURERS OF QUALITY LOG HOMES

Send \$5 for Complete Catalog

BOSTON CORNERS ROAD  
MILLERTON, NEW YORK 12546  
518-789-3311



## HOMESTEAD CARTS

Send for free brochure and price list to:

**HOMESTEAD CARTS**  
Dept. FM-7  
6098 Topaz St. N.E.  
Salem, OR 97305  
(503) 390-5586

[Continued from page 10.]

## Pick a Pumpkin

Beginning October 1, the search is on for the Great Pumpkin. Across the globe, green-thumbed gardeners will be weighing in their prize-sized gourds in the 1985 World's Largest Pumpkin Competition. Sponsored by the World Pumpkin Confederation (WPC) the competition is divided into seven official weigh-offs worldwide. At last year's New England competition, the winner was a 433-pound "Atlantic Giant."

According to national figures, pumpkin growing is on the rise, with four million pounds of pumpkin and squash produced annually. Personal consumption is over one-half pound of pumpkin a year.

To find out the location, date and time of the pumpkin weigh-off nearest you, contact WPC, 14050 Gowanda State Rd., Collins, NY 14034.

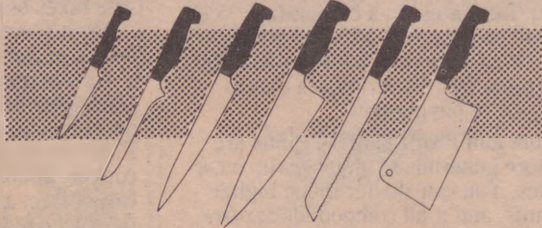
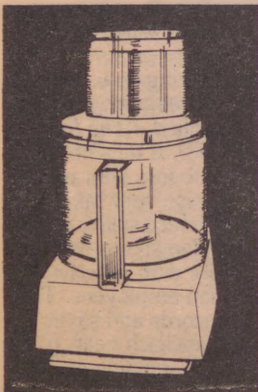
## Trees Around The World



The United Nations has launched a worldwide campaign for tree planting as part of International Youth Year 1985. Called the New Forests Fund, the project's goal is to distribute seed kits and information to U.N. missions in countries currently facing environmental deterioration. So far, 35 projects are underway in 21 countries.

In addition, fund coordinators are involving Boy and Girl Scouts, Jaycees and other organizations in the project. To find out more about the fund or to make a contribution, write New Forests Fund, 418 Tenth St., S.E., Washington, DC 20003.

## SPECIAL ADVERTISING PROMOTION



**You could buy this famous food processor and set of knives for about \$300...OR WE'LL GIVE YOU A KITCHEN WIZARD THAT DOES MOST EVERYTHING THEY CAN DO...and more for just \$795**

### IT'S INCREDIBLE!

THE "Mitsu" KITCHEN WIZARD is a masterpiece of ingenuity. It CUTS — SLICES — DICES — GRATES — SHREDS — CARVES — PARES — CHOPS — MINCES — CUBES — TENDERIZES — ETC.

### WHY SUCH A GIVE-AWAY?

The famous Mitsuboshi company of Japan has made available to us the fabulous KITCHEN WIZARD to be literally "given away" for only \$7.95 each, until Dec. 31, 1985 to those applicants who agree to answer a simple questionnaire regarding the ways you have used, and expect to use this versatile product.

### WOULD YOU DO A TV COMMERCIAL FOR US?

The results of the questionnaire you return will help us prepare an extensive national TV, magazine and newspaper advertising campaign. If the answers in your questionnaire warrant, you may be asked to appear in one of our TV commercials, or for permission to use your answers; for which you will be compensated.

### 30 DAYS MONEY BACK GUARANTEE!

You take no risk whatsoever. If you don't agree that the "Mitsu" KITCHEN WIZARD is the greatest kitchen aid of the decade, just send it back for a prompt refund of your product price.

Send us your name and address plus a \$7.95 check or money order for one KITCHEN WIZARD (Limit 2 per name for \$13.95). Add \$1.50 for postage and handling. N.Y. residents add sales tax. After the WIZARD arrives, use it in every way. Then, fill out accompanying questionnaire and return to us.

Mail to MEDIA MARKETING ADVERTISING, Dept. 4197

10-10 44th Ave., L.I.C., N.Y. 11101

© 1984 Media Mktg. NY



Call 1-800-533-5545 today and . . .

# SAVE 20-50%

**On These Brand Name Parts,  
Tools & Equipment!**

## HEAVY DUTY LOG SPLITTER SALE!

ONLY  
**\$789.00**

A  
\$1300.00  
VALUE!

SOME  
ASSEMBLY  
REQUIRED



**16 TON!  
NEW!**

SPLITS LOGS UP TO 25"  
32,000 POUNDS OF  
SPLITTING FORCE!

- 8 TON ELECTRIC, (110 Volt), #1110.....\$459.00  
12 TON (Low speed wheels), #1128.....\$729.00  
12 TON (High speed wheels), #1125.....\$749.00  
15 TON (High Profile), #1130.....\$869.00  
15 TON (Vertical Splitter), #1160.....\$1190.00  
NEW! 16 TON SPLITTER, (Pictured), #1134.....\$789.00



## BARREL STOVE KITS

**STANDARD KIT, IS!))% cast iron and will convert any 55 or 30 gallon barrel drum into an efficient and economical wood burning heater. A SUPER VALUE!**

±15056, Wt. 32 lbs., List \$49.95.....**\$27.95**

**DOUBLE BARREL KIT**, when used with above kit will convert it into a double barrel stove. The secondary gases are trapped and create greater efficiency as they travel through the top barrel.

#15057, Wt. 19 lbs., List \$39.95.....**\$18.95**



## GAS ENGINES

(HORIZONTAL)

- 5 HP Tecumseh, 3/4" Shaft, #6051.....\$139.95  
5 HP Briggs, 3/4" Shaft, #6052.....\$139.95  
5 HP Briggs I/C, 3/4" Shaft, #6054.....\$181.95  
8 HP Briggs, 1" Shaft, #6080.....\$215.95  
10 HP Tecumseh, 1" Shaft, #6010.....\$232.95  
10 HP Tec., (Elec. Start), 1" Shaft, #60101...\$278.95



3-20 HP Horizontal & Vertical gas engines available at Super Low Discount Prices!!!



## CHIMNEY CLEANERS

Fits This Size &

Item	Type	All Sizes In Between	Price
1540	Round	6", 7", 8", 9", 10", 11"	\$19.95
1541	Square	6", 7", 8", 9", 10", 11"	\$19.95
1542	Rectangular	6 x 10, 7 x 11, 8 x 12 9 x 13, 10 x 14	\$19.95

## LOG SPLITTER PARTS



- 11 GPM 2 Stage Pump, #1012.....\$99.50  
13 GPM 2 Stage Pump, #1013.....\$127.00  
16 GPM 2 Stage Pump, #1015.....\$157.00

- Standard 4-Way Control Valve, #2010.....\$45.50  
Auto-Detent Valve, #2020.....\$59.00  
4x24x2" Cylinder (Welded Type), Item #902424 (Can ship UPS).....**ONLY \$119.95**  
5x24x2" Cylinder (Tie Rod Type), Item #909524 **ON SALE NOW.....\$222.00**  
Many Other In Stock at Low Discount Prices!

## AMMO BOXES

Government surplus, heavy gauge steel with rubber gaskets for waterproof storage of ammo, tools, camera, fishing tackle, etc. **GOOD BARGAIN!**  
30 Cal., 3 1/2"W x 6 3/4"D x 10"L Item #0311.....Sh.Wt. 6 Lbs.....**\$4.50**  
50 Cal., 5 1/2"W x 7"D x 11"L Item #0312.....Sh.Wt. 5 lbs.....**\$4.95**  
20 MM, 14 1/2"W x 8"D x 17"L Item #0313.....Sh.Wt. 22 lbs.....**\$9.95**



## COMPRESSORS

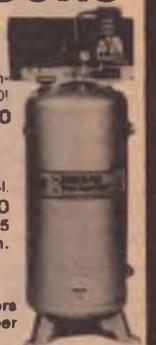
### 5 HP, 60 GALLON

Vertical Campbell/Hausfeld two cylinder single stage. Lists for \$1160.00!  
Item #15955.....**ONLY \$498.00**

### 5 HP, 60 GALLON

IMC, 2-stage, 17.3 CFM at 100 PSI. #15975, \$1202 List.....**\$964.00**  
(Will ship above compressors 45 States \$50, Cal., Oregon & Wash. \$60.00 Prepaid with order.)

We carry many other compressors and a full line of air tools at Super Low Discount Prices! Act Today!



## GENERATORS

4000 Watt, 8 HP Briggs, 33 amps @ 120 volts, 16.6 amps @ 240 volts.....Item #16402 Lists \$1009.....**SALE \$447.00**  
(With Elec. Start).....**\$559.95**

5000 Watt, 11 HP Briggs, 42 amps @ 120 volts, 21 amps @ 240 volts.....Item #16404 Lists \$1174.....**SALE \$689.00**  
(With Elec. Start).....**\$789.00**  
(Will Ship 48 states \$45)



**NH Northern  
Hydraulics  
INC.**

801 East Cliff Road, Box 1219, Burnsville, MN 55337

Call our order dept. at 1-800-533-5545  
In MN 612-894-8310

**SALE EXPIRES  
SEPT. 30th  
1985!**

**PHONE ORDERS:**  
Monday-Friday: 8:00am-8:30pm  
Saturdays: 8:00am-3:00pm

## ORDER TOLL FREE 1-800-533-5545

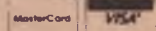
Shipping & Handling not included unless stated otherwise.

Send for free catalog or send \$6.00 and receive catalog and splitter design booklet.

Mail To: Northern Hydraulics, 801 E. Cliff Rd., Box 1219, Burnsville, MN 55337, Dept. #4795  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

Please rush me my FREE Discount Catalog!

Use your Mastercard or Visa







# YOUR GREEN GARDEN

A Newsletter for the Home Gardener

## Tree Wrap-Up

Broken limbs. Girdled trunks. Split bark. This awful list of winter tree troubles can be quickly and inexpensively solved with just a few hours work.

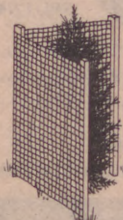
Bark splitting usually occurs when high winter temperatures warm the cells on the tree's south side, causing trapped fluids to expand and burst. To prevent this from happening to your young trees, wrap their trunks spiral-fashion with burlap strips.

Similarly, columnar junipers, yews and other basic evergreens can be wrapped with nylon or polyethylene twine. Never wrap your evergreens in plastic bags. The greenhouse effect that results may break dormancy of the shrubs and ruin them when temperatures fall.

In high wind areas, build wind screens 6 to 8 inches from the plants. Of course, newly planted trees and shrubs should be staked and guyed to eliminate

blow-downs. Use three stakes, spaced equally around the tree and angled toward it at the same angle as the guy wires. This angle helps absorb shock when the tree is battered by shifting winds. Run guy wires through protective sleeves looped around the trunk and above the lower branches and twist to secure the loop.

Staking kits, screens and wraps can be purchased at your local nursery or hardware store.



--Eaton Brothers, Corp.  
Hamburg, New York



## SOTZ MONSTER MAUL



FAST-N EASY WOOD SPLITTING  
HIGH STRENGTH STEEL HANDLE

AS LOW AS **\$16.95**  
FACTORY PICK-UP

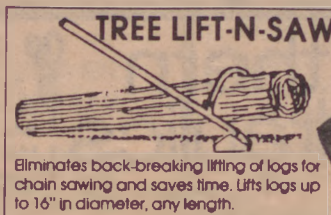
Our 29th Year

- Ends broken handles, stuck axes and flying wedges.
- Hardened splitting edge lasts and lasts. Resists deforming.
- Splits most logs in one lick.
- No struggling lifting heavy logs up to high priced power splitters.
- No gasoline, no set-up, no takedown.
- Shape of head prevents sticking.
- Drop'em, saw'em, stand'em up and split'em.
- No gimmicks, just simple physics.

	GUARANTEE	FACTORY PICK-UP	DEL TO YOUR DOOR
* NEW Professional Maul, handle mounted in silicone rubber, acts as shock absorber. 17 Lbs.	25 Years	\$23.95	\$28.95
* Original Monster Maul - over 1,000,000 sold 16 Lbs.	10 Years	\$19.95	\$24.95
* Lady's Maul - for smaller logs. 11 Lbs.	10 Years	\$17.95	\$21.95
* NEW Economy Maul - built for weekend use. Pound for pound priced below any counterfeit.			
12 Lbs.	1 Year	\$16.95	\$20.95
* Deluxe Cushion Grip, for handle.		\$2.90	\$2.90
* Tree Lift-N-Saw		26.94	\$29.97

**\$12 Special \$4 1/2**  
Discount Coupon  
BUY ANY MAUL  
AND LIFT-N-SAW  
AT THE SAME TIME  
AND DEDUCT \$12

VISA or MASTERCARD RUSH ORDERS  
CALL TOLL FREE 1-800-321-9892  
Inside Ohio 1-216-236-5021  
or SEND CHECK OR MONEY ORDER  
Sorry No C.O.D.'s



Eliminates back-breaking lifting of logs for chain sawing and saves time. Lifts logs up to 16" in diameter, any length.

"NOW" ALSO MADE IN CANADA  
Prices: Call 1-807-222-2323 or write:  
"SOTZ" P.O. Box 1000 Dept. O7-86  
Ear Falls, Ontario POV10

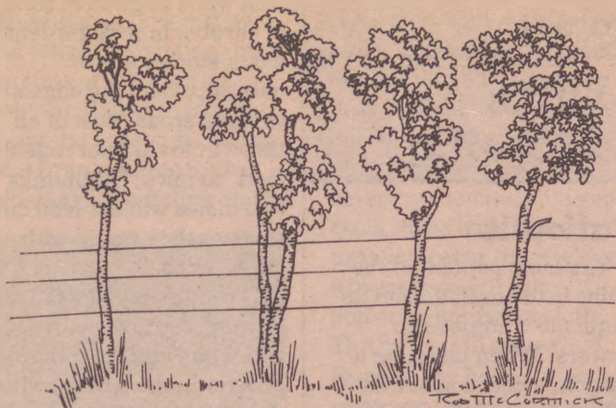
Sotz Inc., 13626-S85 Station Rd., Columbia Station, OH 44028



24" OAK



## Living Fences



The concept is simple, the benefits numerous. Living trees are fenceposts and barbed wire fastened or stapled to their trunks creates the "fence." Commonly seen throughout tropical America, fencepost trees such as the *Erythrina* also provide abundant firewood with annual prunings. And from a distance, these coral trees create the illusion of a fenceless world, with fields separated only by rows of lush green trees and colorful flowers.

Also, since coral trees are members of the legume, or pea family, bacteria in their roots convert nitrogen gas from the air into nutrients for other plants. As a result, pasture grasses, coffee and tobacco plants and grapevines growing at the tree's base receive a nitrogen boost and ample shade.

Northern species can be used in much the same way, boosting plant growth and providing shade for livestock, too. Cool climate relatives include honeylocust, redbud, yellowwood and Kentucky coffee trees. And where extra nitrogen isn't needed, deciduous fruit and nut trees make excellent substitutes, providing shade only during warm growing seasons.

If carefully selected, the living fence can provide shade, forage, firewood, nitrogen, edible fruits and nuts, wind protection, cover for wildlife and, most of all, beauty.

Margarita Mondrus Engle  
La Quinta, California

## Nematode Check

Fall is the best time to check your garden for nematodes, which may pose a threat to next year's crops. During the winter, the parasitic worms will die, but their eggs will survive, hatching in time to attack the roots of your first seedlings. By spring, detection will be more difficult.

Usually, soil samples can be processed through your local extension service. If fall nematode populations are high, you can predict they'll be troublesome in the spring. In that case, treat your garden before planting again.

--Louisiana Cooperative Extension Service

## Your Reward

After all those hours of working and dreaming why settle for an ordinary home when you can afford the luxury and benefits of a genuine Ward Cedar Log home? No matter what your price range or design needs we can help you build the home of your dreams.

Start getting the **rewards** you deserve today.  
Call us Toll Free for more information.  
1-800-341-1566



WARD CABIN CO.



WARD CABIN CO.

Box 72/09 Houlton, ME 04730

(207)532-6531

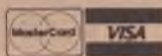
- ☐ Send Ward's complete Presentation Book with 100 floor plans (for which \$7.95 is enclosed).
- ☐ Send more free information.
- ☐ Send Ward's dealer information kit, including Presentation Book (for which \$15 is enclosed).

Name \_\_\_\_\_ Street \_\_\_\_\_

City \_\_\_\_\_ County \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_ Phone ( ) \_\_\_\_\_

MC/VISA # \_\_\_\_\_ EXP. DATE \_\_\_\_\_



M.O.'s and Checks  
also accepted.

## THE BETTER SHREDDER

Easy handling Roto-Hoe Cut 'N' Shred Shredders do mulch more. For less! Their exclusive side-feed design makes short work of stalks, stems and small limbs. The wide top hopper takes care of leaves, grass, clippings, everything else.

Low rotor RPM delivers extra torque for the big jobs, with less throwback for added safety. And special grate bars minimize clogging.

Plus many other quality features like heavy steel main frames, high carbon hammers, shafts and cut-off knives insure a long service life. Four rugged models available. 4 to 8 hp.



**Roto-Hoe**

Dept. FP

100 Auburn Rd., Newbury, OH 44065

Please send information:

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



**J**ust about the farthest thing from your mind right now is your spring flower garden. After all, the summer flower garden is still full of flowers, the lawn is green and even the roses are still blooming. But you can get a jump on winter doldrums by planning now and planting some early flowering bulbs.

Even the beginner gardener can grow spring flower bulbs successfully. No matter what type of soil you have, if you can grow weeds you can grow some type of bulb successfully. Bulbs can grow almost anywhere: in sun to partial shade, in moist or dry soils, in between patio stones or in planters. Once planted, they require little or no effort on your part because the bulb is ready to grow and will care for itself.

Each bulb contains everything it needs to

# GET GROWING

by Paul Parent

## The Best Bulbs for a Beautiful Spring

grow: a tiny dormant plant that is surrounded with stored food and a clock to tell it when to sprout--no matter where it's planted or what the weather conditions are above ground.

Because there are over 100 different types of bulbs and many varieties of each to choose from, it can be confusing for the beginning bulb grower. I suggest that you begin with these three basic bulbs: daffodils, tulips and crocuses. Here are a few hints on how to plant them and possible problems you may encounter.

### Daffodils

The most popular of the bulbs is the daffodil and its exquisite trumpet-like flowers. When planning a garden, select a spot that will receive a little shade during the day. This will keep the plant cooler, so the flowers will last longer and stay fresher. When you plant daffodils, it is best to plant them in groups of five to seven bulbs. Blooming in groups, they will be more showy and make spring planting of annuals easier without damaging the bulbs. Also, clusters of flowers will brace each other during stormy

periods.

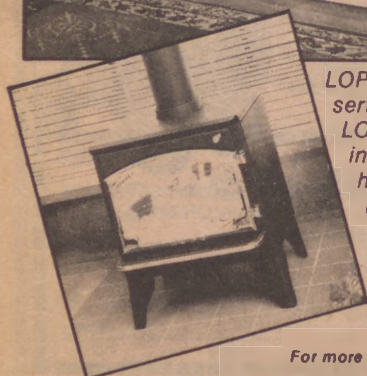
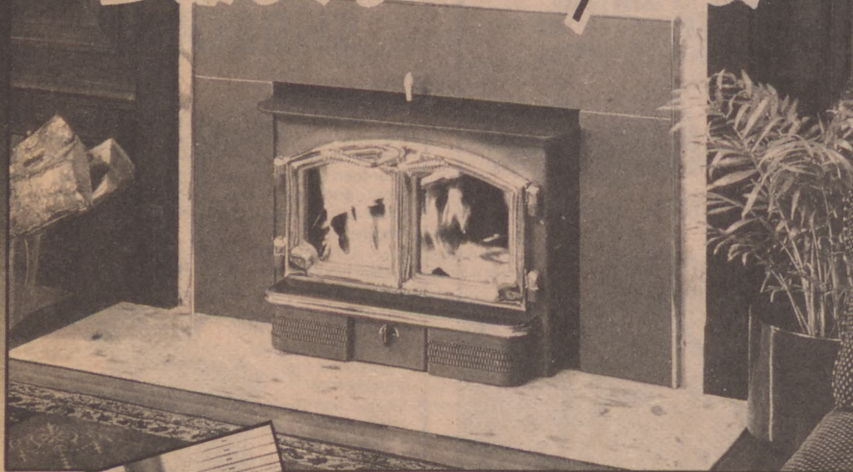
Daffodils will blend in well when planted in front of shrubs, in rock gardens, along stone walls or naturalized on the edge of wooded areas. Best of all these bulbs are not rodent food, so mice, chipmunks and moles will not feed on them as they would with other bulbs.

If you remove the faded flowers, fertilize yearly with bone meal or bulb booster in the spring, when the plant is actively growing. Allow the foliage to ripen for six to eight weeks after the flowers have faded before removing them. Using this method, the bulbs should actively flower for ten years or more.

### Tulips

Tulips may be second in popularity, but when in bloom they are second to none. When selecting

## Dare to Compare!

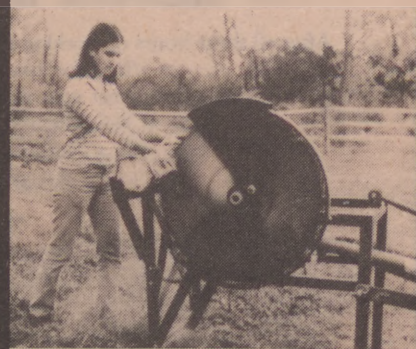


LOPI's complete line of woodstoves and fireplace inserts feature the attention to detail that has made LOPI the nation's number one choice in home heat ing. LOPI's commitment to safety and efficiency has produced a line of highly efficient, clean burning wood heating appliances built to last a lifetime. Unmatched elegance, unrivaled efficiency — LOPI.

**LOPI**  
ENERGY SYSTEMS™

For more information write to: **LOPI International Ltd.**  
10850 117th Place N.E. • Kirkland, WA 98033

## It's a Yankee Wood Saw!



Check these special features on the **YANKEE WOOD SAW:**

- Extra long, springloaded, swinging table
- Retractable steel blade guard
- Heavy duty off-bearing guard
- PTO or engine driven
- Regreasable sealed bearings
- Heavy duty enclosed gear box [in oil]
- Two matched industrial belts
- Shielded U joint

Contact: James F. Nelson

**YANKEE WOOD SAW CO.**

Rd 2 Box 104, Hoosick Falls, NY 12090  
Phone 518/686-9557



tulips for your garden, you choose the flower color, plant height, flower type and foliage coloration, plus the time of the year you want the flower to bloom. Blooming season for tulips runs from mid-March to mid-May, depending on the



variety. Tulips bloom for two to three weeks. With proper planning your garden can be in color all spring long.

Tulips will grow best when planted in a light soil that does not stay wet for long periods of time. Otherwise the delicate

roots will rot and the bulbs will die. In heavy clay soils, plant the bulbs in raised beds or, better still, loosen the soil by adding sand, peat moss or compost before planting. When first planted, tulips may be eaten by rodents, so if you think there will be a problem cover them with a wire cage made from half-inch hardware cloth. The bulbs will grow right through the holes in the cage and the rodents will be foiled in their attempt to eat the bulbs.

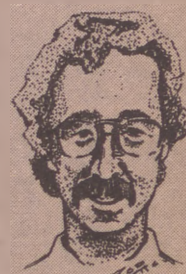
Early in the spring as the foliage begins to appear, rabbits may nibble on leaves, so keep the plantings near the house to prevent this or provide temporary fencing around the plants until wild plants begin to provide food for our furry friends. Tulips will blossom for two to three years when cared for in this way.

## Crocuses

How would you like to find honest-to-goodness flowers popping up through the snow? This is possible when you grow crocuses--and you don't even need a garden. Try planting them between flagstones on your patio, along walkways, in between shrubs or in your lawn. If your lawn is in full sun or partial shade, try removing small strips of sod three to four feet tall and plant your bulbs three inches deep into the soil. Replace the sod and water well for a couple of weeks to ensure proper rooting. Without your spouse knowing, write "I Love You" in crocus flowers, and come April you will be greatly appreciated.

When you purchase your bulbs from local garden centers or through the mail, insist on top-size bulbs

only. The few cents it will cost you will make a big difference in the quality of the bulb. In any case, make your spring flower garden exciting. Plan now and winter will seem shorter with anticipation of what is to come.



Paul Parent manages a five-acre nursery, garden center and greenhouse complex. He is also a garden writer and the host of a two-hour garden talk show on WRKO radio in Boston. He lives in Marshfield, Massachusetts.



**Wood-Mizer®**

Turn Logs Into  
Lumber — And Cash  
Portable • Precise

Accurately  
cuts a log  
30" dia. X 16' long

"We manufacture quality sawmills, so you can cut quality lumber. That's why we sell more portable bandsaw mills than anyone else in the world."

For more information send \$1.00 to: WOOD-MIZER, Dept. AXS 8180 W. 10th Street Indianapolis, IN 46224 Or Call (317) 271-1542



**Bandsaw Mill**

**CEDAR FOR CHRISTMAS**  
makes your world  
smell great! Spicy, fresh  
green cedar needle sachets repel  
moths naturally, control dampness.  
Write or call today, 505/867-2925  
CLEAR LIGHT CEDAR COMPANY  
Box 551 FC, Placitas, New Mexico, 87043

## COUNTRY DESIGNS



A Collection of Complete Building Plans

BARNs, SHEDs, GARAGES  
and other accessory buildings.

Send \$3.00 For Catalog To:  
COUNTRY DESIGNS Box 774-F9, Essex, CT 06426

## WATER WELLS FOR EVERYONE!

"Easy  
to  
use!"



Our little drills go **EVERYWHERE**,  
drill **EVERYTHING**!

Homeowners! Drill your  
own water well!

Drill water, monitor  
or heat pump wells  
for less than 25¢ per ft.!

For  
**FREE**  
brochures  
and prices

CALL TOLL-FREE  
**1-800-821-7700**  
(Ask for Operator 5857)  
Or Write



**DeepRock**

5857 Anderson Road, Opelika, Alabama 36802



Save  
**50%**

**"World's leading manufacturer  
of low-cost drills since 1962."**



# Test Your Soil



D. K. Shayne

## At Home

**H**ow many times have you picked up a handful of crumbly black soil and said, "Now this is rich soil!"? It just might be.

The appearance and "feel" of a soil seems to be the most popular and universally accepted method of soil analysis. But it is totally unreliable. I found this out by comparing soils through growth testing in an organic gardening class at College of the Redwoods in northern California.

Except for air and sun, all of a plant's growth depends on what's in the soil--the water and nutrients. Picking up a mound of earth in your hand may give you a rough idea of a soil's ability to hold water and nutrients, but it gives you little proof of whether there are actually any nutrients in the soil and, more importantly, whether those nutrients are in a form readily available to the plant.

Modern labs now have the capability of analyzing soil for every nutrient in it. Cost can run high--a local farmer here paid \$300 for such extensive soil analysis. But, for most of us, that is quite unnecessary.

Although these lab tests will tell you the nutrients that are available

to the plants, it cannot tell you whether the plants are actually using them. This is where growth testing comes in. This test may not give you actual nutrient figures, but it will tell you one thing--whether your plants are suffering from nutrient deficiencies and, in the long run, how to grow a better garden.

### The Testing Procedure

The first thing you'll need to do is fill up five one-gallon planters with soil, trying to keep the quantity of soil in each container approximately the same. This is important, as gross variations in the amount of soil can bias your results and not give you reliable information. Next, you are going to add certain nutrients, but this requires an explanation of plant nutrition first.

What mainly concerns us are those nutrients that are needed by plants in relatively large amounts and can be depleted easily. These are called the **primary macronutrients**: nitrogen, phosphorus and potassium. Commercially prepared fertilizers note the ratio of these nutrients on a percentage by weight basis. If you, like me, are unwilling

to start scattering chemicals on the vegetables you'll eat later, then you will have to look elsewhere to supply those nutrients.

But, before you start spreading on fertilizer, you'd better know what you need and how much. Too much can be as bad as (or worse) than too little. So, even if you consider the "organic" method to be a lot of bunk, this procedure can prove valuable. (There are other nutrients besides the three primary ones that plants need. If you have compensated for the main ones and still have problems, go to your nearest agricultural extension office.)

Now to the test. Take your five containers of soil and mark them from one through five. Number one will be the control batch. This will show you how the soil stands on its own. The second sample will contain known amounts of added nitrogen, phosphorus and potassium. The other three will contain two of the three nutrients in different combinations.

In order to supply the nutrients under controlled conditions I suggest you use commercial chemicals. All of these chemicals to be added can be found at a nursery. You will need very little so buy the smallest quantity. You may also be able to obtain these for free from your local high school or community college. The three chemicals you need are **potassium chloride (0-21-0)**, **ammonium nitrate (33-0-0)** OR **ammonium sulfate (21-0-0)** OR **single super phosphate (0-21-0)**. See Table 1 for amounts to add.

Along with the chemicals you will need measuring spoons (the metal kind) and an ice cream stick to use for very small quantities. You will need to draw a line across the ice cream stick one-half inch from the end. Measure carefully--this is important as overfertilization can ruin the test. Make level one-half tea-

**Photo top left:**

Author Dennis Shayne displays the wonderful results possible from rich, balanced soil and good soil management techniques.



# Enzymes a Growth Miracle?

by Pat Branin

Branin was the organic gardening columnist for the San Diego Union.

spoon and one-quarter teaspoon measurements by scooping up the chemicals and then drawing a straight-edged utensil over the top to take off the excess. When you use the ice cream stick ("ics" in Table 1), bury the stick up to the one-half inch mark and withdraw it, keeping as much on the stick as possible. If too much falls off, start over again. These measurements are approximations of the weights needed for the test; the more attention you pay here, the better your test will turn out. Be careful.

Now add the chemicals to their respective containers. Dump out the soil from container number two on a clean surface and add the chemicals for container number two to the soil. Mix thoroughly, making sure the chemicals are evenly distributed. Place the soil back into container number two. Proceed with containers three through five in the same manner, making sure each sample is thoroughly mixed and the specimens are not contaminated with each other. When you are done, the containers will be ready to plant.

Now, you will plant seeds from "indicator" plants. These plants are called "indicators" because they show deficiencies very well. I suggest using romaine lettuce, barley, sunflowers, sudan grass, or, ideally, corn. You will need a total of 15 seeds, three to a pot. Plant three seeds in each pot, one-half inch deep in a triangular spacing pattern. Pack the soil firmly and water. Water regularly, but don't flood--the chemicals can be washed away.

You can expect germination in a week to ten days. Wait a week or two after sprouting and then thin the plants, leaving the best single specimen in each pot. Keep your pots weeded--competition is not necessary. In six to eight weeks, deficiencies will show up: stunted growth, yellowing leaves, leaves tinged with red or purple and dying leaves. If none of these symptoms occur, you may be doing things right in your garden. Chances are, though, some will be visible. If so, you've got some work to do.

The deficiencies of the three macronutrients (nitrogen, phosphorus, and potassium) will primarily show up on the older growth, so pay close attention to the bottom leaves.

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 Acres, U.S.A., 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 soy bean 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 is no question here 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 because of 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 inches 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.

For complete information, write:

**Nitron Industries, Inc.**  
P.O. Box 400, Fayetteville, AR 72702  
or call: 1-800-835-0123



# Table 1

POT # AND TREATMENT	KIND AND AMOUNT OF CHEMICALS TO BE ADDED				
	NITROGEN SOURCE		PHOS. SOURCE		POTASSIUM SOURCE
	Ammonium Nitrate	Ammonium Sulfate	Treble Super Phosphate	Single Super Phosphate	Potassium Chloride
1. Untreated	none	none	none	none	none
2. Full treatment	¼ tsp	¼ tsp + 2 ics	¼ tsp	½ tsp	1 ics
3. No nitrogen added [tests your soil's ability to supply N]	none	none	¼ tsp	½ tsp	1 ics
4. No phosphorus added [tests your soil's ability to supply P]	¼ tsp	¼ tsp + 2 ics	none	none	1 ics
5. No potassium added [tests your soil's ability to supply K]	¼ tsp	¼ tsp + 2 ics	¼ tsp	½ tsp	none

# Table 2

PRIMARY MACRONUTRIENT	SYMPTOMS AND TREATMENTS	OTHER GOOD SOURCES
NITROGEN	General yellowing of the plant. Lower leaves yellow, beginning at veins and extending to margins, finally withering and dying. Plant may also appear short, weak and stunted. For this deficiency add 7 pounds cottonseed meal for every 100 square feet or 3½ pounds blood meal for every 100 square feet (equivalent to 200 pounds nitrogen per acre).	Animal fertilizers, fish emulsion, green manures, sludge*
POTASSIUM	Plant is dark green, turning reddish to purple. Color develops first in the leaf veins and extends to the margins. Stalks of plants may be short and slender. For this deficiency add 3 pounds rock phosphate for every 100 square feet or 3½ pounds bone meal for every 100 square feet (equivalent to 300 pounds phosphorus as P <sub>2</sub> O <sub>5</sub> per acre).	Superphosphate (not for organic gardeners)
PHOSPHORUS	Old leaves first turn yellow at the margins, then wither and die. Spots and holes develop between the veins. For this deficiency add 5 pounds green sand for every 100 square feet or 3½ pounds wood ashes for every 100 square feet **(equivalent to 100 pounds potassium as K <sub>2</sub> O per acre).	Manures, especially with the urine portion
*--Sludge may contain heavy metals that are harmful. Use with caution. **--Wood ashes can vary in potassium content with the type of wood burned.		



Table 2 outlines the symptoms you might see with deficiencies of primary macronutrients and some good sources for those nutrients.

By the time your indicator plants are eight to ten weeks old you should have a pretty good idea what your problems are. Remember--multiple symptoms may appear. If you are having problems diagnosing the deficiencies, take your plants to the nearest agricultural extension. They can help.

Now that you have an idea of what deficiencies your plants (and soil) have, you will want to start a fertilization program. With these tests you can pinpoint deficiencies, but you will be unable to determine how deficient your plants are. Fortunately, organic fertilizers are much less touchy than raw chemicals, so adding the quantities recommended in Table 2 should be adequate for all but the most deficient soils and still not overdo it on soils that are only slightly deficient. I have included a couple of excellent sources for each of the nutrients and amounts to add. These sources are very reliable nutrient suppliers. Also, I have included other good sources.

If, after adding these amounts, you still notice deficiency problems, you can sidedress during the season, being careful to keep fertilizers away from plants. Phosphorus cannot be sidedressed; in order to work properly phosphorus must be mixed with the soil. But, if you're worried about not adding enough phosphorus, my instructor assured me that you cannot add too much phosphorus. Stick pretty much to the amounts recommended for nitrogen and potassium sources; they can be overdone. There is little likelihood that adding the recommended amounts will be excessive in any deficient soil.

In the future, when you wander out into your garden, pick up a handful of soil and look at it, remember: From your plants' point of view, it's what you don't see that counts, not what you do. ☐

Dennis K. Shayne gardens and writes at his home in Eureka, California.

**Valentine  
PRESENTS**

**A COMPLETE SELECTION OF  
SPECIALTY CATALOGS  
TO HELP YOUR ANIMALS BECOME  
SHOWSTODDERS!!!!**

**Valentine**

**EQUIPMENT COMPANY**

7510 S. MADISON STREET  
P.O. BOX 53  
HINSDALE, ILLINOIS 60522  
(312) 323-7070

**VALENTINE SPECIALIZES IN YOUR SPECIALTY!!**

**WE HAVE SEVERAL SPECIALTY CATALOGS AVAILABLE....**

**YOUR FIRST CATALOG IS FREE !!**

**EACH ADDITIONAL CATALOG IS \$2.00 OR A SET OF 5 FOR JUST \$5.00.**

• **KENNEL & CATTERY** • **RABBIT** • **BIRDS "PLUS"**  
• **MINK & FOX** • **CHINCHILLA** (cage to game)



**Vigilant**

**1 YEAR  
BIODEGRADABLE  
SEPTIC SYSTEM  
MAINTENANCE PROGRAM**

**WILL SAVE YOU UP  
TO \$3,000  
REPLACING SEPTIC  
SYSTEMS  
&  
DRAINFIELDS**

#### **Aqua Thin**

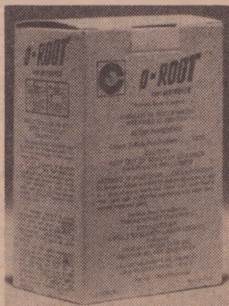
**Soil Conditioner**

Dries up smelly, soggy drainfields fast — and keeps them dry! Speeds up water penetration into septic system drainfield and expands drainfield water capacity. Eliminates offensive odors and embarrassing back-ups. For emergency treatment of drainfield problems use EARTHQUAKE first.

#### **D-Root**

**Sewer System Root Destroyer**

One treatment of D-ROOT can save you hundreds of dollars in plumbing and excavation bills. Pour D-ROOT into toilet and flush. Kills roots before they grow big enough to clog sewers. Users say they have never had clogged sewers since starting treatment.



#### **Septic Aid**

**Cleans septic tanks and systems automatically**

Gives septic tank full efficiency with no fuss or costly digging. Concentrated dry powder Septic Aid contains billions of friendly bacteria and enzymes especially cultured to digest, liquefy and deodorize waste in minutes. Leaves your tank clean and free to operate. Won't harm pipes, people or animals.

#### **Earthquake**

"Super Shock" emergency treatment can save you thousands of dollars in drainfield replacement costs.

Just pour EARTHQUAKE directly into the bathroom bowl or sink and solve emergency problems. A drainfield soil conditioner with enough power to punch through the toughest sludge buildups. Will not harm plants or shrubs. Follow EARTHQUAKE with treatments of AQUA THIN and never have problems again. Each 16 oz. container will treat a system with a 500 gallon tank capacity.

\*We guarantee that this Maintenance Program will perform as indicated in our product descriptions. You must be totally satisfied or we will refund your full purchase price. Proof of purchase is all that is required.

**1 MAINTENANCE PROGRAM W/D-ROOT - \$44<sup>95</sup>**

**2 MAINTENANCE PROGRAM W/OUT D-ROOT - \$39<sup>95</sup>**

**PHONE TOLL FREE TO ORDER OR FOR INFO. 1-800-526-9842  
IN N.J. CALL COLLECT (201) 744-8400**

**or mail your check to**

**Vigilant Products, 387 Bloomfield Ave., Montclair, NJ 07042**





# Jerusalem Artichokes



**A gourmet treat, this tasty tuber is easy to grow and easy to forage.**

**O**ver the past few years, Jerusalem artichokes have begun to show up all over, and not just in old fields. They're casually mentioned in gardening articles as though they are well-known, but many gardeners, farmers and cooks have never heard of Jerusalem artichokes.

An American sunflower, Indians grew the "sun-root" as a staple food. Because of Indian cultivation, the plant spread over large areas of the United States and can be found today in the eastern two-thirds of the country--along railroad tracks, roadsides and on abandoned land.

In recent years the tasty tuber has been rediscovered, and gourmet cooks are paying outlandish prices for the chokes because of their crunchy texture and delicious nut-like flavor. Delighted gardeners have found that the plant produces enormous quantities of edible tu-

bers, yet requires very little care.

## Cultivating and Harvesting Procedures

Plant Jerusalem artichokes in full sun, 3 to 4 inches deep, 18 inches apart and in rows that are two to three feet apart. Large, thick tubers develop if the plant is grown in soft soil, and narrow, elongated tubers result in clay or heavy soil. Plant them away from your garden, because the plants grow profusely and spread so rapidly that they can become pests if not carefully controlled. Also, since chokes usually grow 8 to 10 feet tall, it is important to plant them where they will not cast a shadow on other crops (unless, of course, shade is needed for crops such as lettuce or spinach). Chokes feed deeply and will produce more tubers if adequately fertilized.

The tubers are ready to harvest in the early fall, but I usually leave them in the ground until after the first frost to improve their flavor. Dig or pull them, using a potato fork rather than a digging spade and start digging about two feet from the stem, working your way toward the plant. If the soil is loose, just tug at the dried up stems to pull the tubers from the soil. Because the stems are prickly, wear long sleeves and gloves while harvesting the crop.

For easy harvest, plan to dig or pull some of the crop during winter thaws or very early in spring, before the tubers start to sprout. Don't harvest all of the crop at once because the tubers lose moisture through their thin skins and wrinkle after being stored. I usually dig a few hills at a time, whenever the crisper is empty. A new crop will come up from the tubers that you miss, although you might want to transplant them in order to more accurately define their growth area.

## Cooking With Chokes

The texture of the uncooked artichoke is crisp and becomes tender when cooked, but tough if overcooked. Jerusalem artichokes take longer to prepare than potatoes because the knobs interfere with peeling. Cut the knobs off first and then peel them. Or, if the recipe calls for cooked chokes, cook them with the skins on. The skin peels easily after cooking.

I recommend eating chokes raw because they have a marvelous flavor and a texture somewhat like the water chestnut. The nutty flavor of the tuber changes when it is cooked, taking on a delicate sweet taste that is unlike any other food I have experienced. Jerusalem artichokes can be boiled, sauteed, baked au gratin, mashed, cut up in soups, and pureed. Carefully add seasoning (lemon juice, nutmeg, paprika or parsley) when cooking artichokes to bring out the delicate flavor. □

Jo Frohbieter-Mueller is a research biologist. She lives in Evansville, Indiana. Photos by the author.



# NURSERY STOCK SALE (ORDER BY MAIL) SAVE UP TO 30% FROM CATALOGUE PRICES

PLANTING INSTRUCTIONS INCLUDED IN EACH ORDER, EVERY PLANT WILL BE LABELED.

Notice: Orders of \$30.00 or more - take 10% discount off price of order. Does not apply to \$2.50 postage and handling charge.



**RED MAPLE** (*Acer Rubrum* 4-5 ft.)  
This is one of the most beautiful of all shade trees. Besides having brilliant scarlet red leaves in the fall of the year, it has another excellent trait - it is an extremely fast grower. It is very easily transplanted and many experts agree it will practically grow anywhere in the U.S.A. Grows up to 60 ft.  
1 Tree ... 1.50 10 Trees ... 14.00



**WHITE DOGWOOD** (4-5 ft.)  
Large white, single blossoms are conspicuous early in spring. The foliage is attractive all summer, and the fall colors beautiful. Red berries hang on most of the winter. Use as a specimen or in groups as a background for borders. Grows up to 30 ft. high.  
1 tree ... 1.99 10 trees ... 19.00



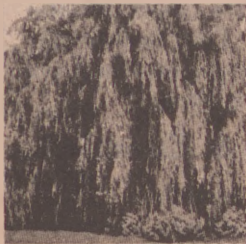
**TULIP TREE** (4-5 ft.)  
A large growing, hardy tree reaching heights of 80 feet or more. Its bright yellow leaves in the fall have tulip shaped flowers in the spring. Rapid grower.  
1 Tree ... 1.50 10 Trees ... 14.00



**WHITE BIRCH** (4-5 ft.)  
Many people know this eye catching native tree as White Birch or Canoe Birch. The white bark and clear yellow leaves in the fall provide showy colors. Height 60 feet, spread 30 feet.  
1 Tree ... 1.98 10 Trees ... 17.50



**SUGAR MAPLE** (4-5 ft.)  
The largest of all maples, its beautiful array of yellow and orange hues make it a sight to remember due to the foliage thickness. A very hardy northern and southern tree - will grow up to 60 feet.  
1 Tree ... 1.50 10 Trees ... 14.00



**GREEN WEEPING WILLOW**  
4-5 ft. ... 1.50 ea. 10 for 14.00  
This common Weeping Willow makes a large lacy tree with long branches weeping to the ground. Good for planting near water or as a planting accent alone or in groups of two or three in moist locations. Ultimate height 40 feet.



**LOMBARDY POPLAR**  
3-5 ft. ... 79 ea.  
10 for 7.50 100 for 70.00  
Suitable as a background, along driveways, screening off outbuildings and other unsightly objects.

## FLOWERING SHRUBS 1-2 Years Old

Crape Myrtle, Red, Pink, 1 ft.	1.25 ea.
Spiraea Van Houttei, 1-2 ft.	1.25 ea.
Weigela, Red, 1-2 ft.	.95 ea.
Forsythia Yellow	.65 ea.
Bush Honeysuckle, Red, 1 ft.	.75 ea.
Red Flowering Quince, 1-2 ft.	1.25 ea.
Persian Lilac, Purple, 1-2 ft.	.95 ea.
Old Fashion Lilac, 1-2 ft.	1.25 ea.
Hydrangea P.G., 1-2 ft.	.75 ea.
Mockorange, White, 1-2 ft.	.60 ea.
Pussy Willow, 1-2 ft.	.95 ea.
Red Barberry, 1-2 ft.	.95 ea.
Jap. Snowball, 1-2 ft.	1.25 ea.
Blue Hydrangea, 1-2 ft.	1.25 ea.
Azalea, White, Purple, Red or Pink 1/2-1 ft.	1.25 ea.
Russian Olive, 1-2 ft.	.75 ea.

## SHADE TREES - 1-2 Years Old

Scarlet Oak, 3-5 ft.	2.98 ea.
Ginkgo Tree, 3-4 ft.	3.98 ea.
Pin Oak, 3-5 ft.	2.95 ea.
Sweet Gum, 4-5 ft.	1.50 ea.
Crimson King Maple, 3-5 ft.	.95 ea.
Persimmon, 1-2 ft.	1.95 ea.
Dawns Redwood, 1-2 ft.	3.95 ea.
Jap. Red Leaf Maple, 1 ft.	3.95 ea.
Hybrid Poplar, 3-5 ft.	1.75 ea.
Red Oak, 3-5 ft.	2.98 ea.

## BERRY PLANTS, Etc. - 1-2 Yrs. Old

Blackberry, Thornless	1.75 ea.
Black Raspberry, 1 ft.	.85 ea.
Red Everbearing Raspberry, 1 ft.	.75 ea.
Dewberry, 1 ft.	.95 ea.
Boysenberry, 1 ft.	.95 ea.
Gooseberry, 2 yr., 1 ft.	1.75 ea.
Figs, 1-2 ft.	3.98 ea.
Concord Grape, 1 ft.	1.25 ea.
Fredonia Grape, 1 ft.	1.25 ea.
Niagara Grape, 1 ft.	1.25 ea.
10 Rhubarb, 1 yr. Roots	2.50
25 Strawberry, Blakemore or Tenn. Beauty	2.95
25 Gem Everbearing Strawberry	2.95
25 South Privet, 1-2 ft.	6.95
25 North Privet, 1-2 ft.	6.95
10 Multiflora Rose, 1-2 ft.	4.98
20 Asparagus, 1 yr. roots	2.75
10 English Ivy, 4-8 in.	3.00

## STANDARD FRUIT TREES 1-2 Years Old

Elberta Peach, 3-5 ft.	3.49 ea.
Belle of Ga. Peach, 3-5 ft.	3.49 ea.
J. H. Hale Peach, 3-5 ft.	3.49 ea.
Hale Haven Peach, 3-5 ft.	3.49 ea.
Dixie Red Peach, 3-5 ft.	3.49 ea.
Golden Jubilee Peach, 3-5 ft.	3.49 ea.
Red Haven Peach, 3-5 ft.	3.49 ea.
Champion Peach, 3-5 ft.	3.49 ea.
Loring Peach, 3-5 ft.	3.49 ea.
Stayman Winesap Apl., 3-5 ft.	3.98 ea.
Red Delicious Apple, 3-5 ft.	3.49 ea.
Red Jonathan Apple, 3-5 ft.	3.49 ea.
Early McIntosh Apple, 3-5 ft.	3.49 ea.
Red June Apple, 3-5 ft.	3.49 ea.
Arkansas Black Apple, 3-5 ft.	3.49 ea.
Early Harvest Apple, 3-5 ft.	3.49 ea.
Lodi Apple, 3-5 ft.	3.49 ea.
Grimes Golden Apple, 3-5 ft.	3.49 ea.
Mutsu Apple, 3-5 ft.	3.49 ea.
Granny Smith Apple, 3-5 ft.	3.98 ea.
Yellow Trans. Apple, 3-5 ft.	3.49 ea.
Montmorency Chy., 2 1/2-4 ft.	5.98 ea.
Black Tartarian Chy., 2 1/2-4 ft.	5.98 ea.
Early Richmond Chy., 2 1/2-4 ft.	5.98 ea.
Bing Cherry, 2 1/2-4 ft.	5.98 ea.
Governor Wood Chy., 2 1/2-4 ft.	5.98 ea.
Kieffer Pear, 3-5 ft.	4.98 ea.
Orient Pear, 3-5 ft.	4.98 ea.
Bartlett Pear, 3-5 ft.	4.98 ea.
Moonglow Pear, 3-5 ft.	4.98 ea.
Moorpark Apricot, 2 1/2-4 ft.	2.98 ea.
Early Golden Apricot, 2 1/2-4 ft.	2.98 ea.
Sure Crop Nectarine, 2 1/2-4 ft.	2.98 ea.
Garden State Nect., 2 1/2-4 ft.	2.98 ea.
Damson Plum, 3-5 ft.	3.49 ea.
Methley Plum, 3-5 ft.	3.49 ea.
Red June Plum, 3-5 ft.	3.49 ea.
Santa Rosa Plum, 3-5 ft.	3.49 ea.
Burbank Plum, 3-5 ft.	3.49 ea.
Stanley Prune Plum, 3-5 ft.	3.49 ea.

## DWARF FRUIT TREES - 1-2 Yrs. Old

Dwf. Elberta Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Belle of Ga. Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. J. H. Hale Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Hale Haven Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Dixie Red Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Golden Jub. Pch., 2 1/2-4 ft.	3.49 ea.
Dwf. Red Haven Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Champion Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Loring Peach, 2 1/2-4 ft.	3.49 ea.
Dwf. Red June Apple, 2 1/2-4 ft.	3.49 ea.

## DWARF FRUIT TREES Continued

Dwf. Red Del. Apple, 2 1/2-4 ft.	3.49 ea.
Dwf. Red Rome Apple, 2 1/2-4 ft.	3.49 ea.
Dwf. Red Jonathan, 2 1/2-4 ft.	3.49 ea.
Dwf. Early McIntosh, 2 1/2-4 ft.	3.49 ea.
Dwf. Stayman Winesap, 2 1/2-4 ft.	3.49 ea.
Dwf. Early Harvest, 2 1/2-4 ft.	3.49 ea.
Dwf. Lodi Apple, 2 1/2-4 ft.	3.49 ea.
Dwf. Grimes Golden, 2 1/2-4 ft.	3.49 ea.
Dwf. Yellow Del. Apl., 2 1/2-4 ft.	3.49 ea.
Dwf. Granny Smith, 2 1/2-4 ft.	4.49 ea.
Dwf. Yellow Trans., 2 1/2-4 ft.	3.49 ea.
Dwf. North Star Chy., 2 1/2-4 ft.	6.49 ea.
Dwf. Montmorency Chy., 2 1/2-4 ft.	6.49 ea.
Dwf. Bartlett Pear, 2 1/2-4 ft.	5.98 ea.
Dwf. Kieffer Pear, 2 1/2-4 ft.	5.98 ea.
Dwf. Burbank Plum, 2 1/2-4 ft.	3.49 ea.
Dwf. Methley Plum, 2 1/2-4 ft.	3.49 ea.
Dwf. Red June Plum, 2 1/2-4 ft.	3.49 ea.

## EVERGREENS - 1-2 Years Old

*White Pine, 1 ft.	.60 ea.
Blue Rug, 4-6 inches	1.75 ea.
Wax Leaf Ligustrum, 1/2-1 ft.	.65 ea.
Colorado Blue Spruce, 1/2-1 ft.	.75 ea.
*Canadian Hemlock, 1-2 ft.	.75 ea.
Andorra Juniper, 1/2-1 ft.	1.25 ea.
Norway Spruce, 1/2-1 ft.	.75 ea.

## NUT TREES - 1-2 Years Old

American Hazel Nut, 3-5 ft.	2.95 ea.
European Hazel Nut, 3-5 ft.	2.95 ea.
Butternut, 3-4 ft.	4.49 ea.
Chinese Chestnut, 3-5 ft.	3.95 ea.
Hardy Pecan Seedlings, 1-2 ft.	1.50 ea.
Stuart Pecan, Papershell, 2-3 ft.	8.95 ea.
Black Walnut, 3-5 ft.	3.45 ea.
English Walnut, 2-3 ft.	7.95 ea.
Hall's Hardy Almonds, 3-5 ft.	4.98 ea.

## BERRY PLANTS

BLUEBERRIES - Bluecrop, Rubel, Bluegray, Jersey, 1 ft.	2.98 ea.
---	----------

## FLOWERING TREES - 1-2 Yrs. Old

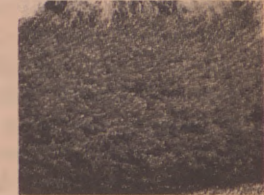
Magnolia Grandiflora, 1/2-1 ft.	1.45 ea.
Mimosa, Pink, 3-5 ft.	1.50 ea.
Pink Flower Dogwood, 2 ft.	7.95 ea.
Golden Rain Tree, 3-4 ft.	2.95 ea.
Pink Flower Cherry, 3-5 ft.	3.95 ea.
Flow. Crab, Red, 3-5 ft.	3.49 ea.
Magnolia Soulangiana, 1-2 ft.	2.95 ea.
European Mt. Ash, 3-4 ft.	3.95 ea.
Red Flow. Dogwood, 2 ft.	7.95 ea.



**AMERICAN REDBUD**  
4-5 ft. ... 1.98 ea. 10 for 19.00  
The Redbud is often used as a specimen or to provide a high point in a shrub border. Branches are covered with small, pea-like, purplish pink blossoms before the foliage comes out in spring. Ultimate height 15 feet.



**SILVER MAPLE**  
4-5 ft. ... 1.50 ea. 10 for 14.00  
A very fast growing, soft wooded tree reaching a height of 50 to 60 feet. Leaves deeply cut and very attractive, being a silvery white underneath.



**BURNING BUSH**  
1/2-1 ft. ... .65 ea. 10 for 6.00  
20 for 11.00 100 for 50.00  
In the fall leaves turn a brilliant mirror bright crimson. A 4-5 ft. showpiece with unusual corky bark. Hardy in sun or partial shade.

## SEMI DWARF APPLES

We offer you eight of the most popular varieties of Semi-Dwarf Apples. They are the most productive tree and grow 12 to 15 feet tall. They give you more fruit per limb, more fruit per tree.  
S.D. Red Delicious, 3-5 ft. ... 3.75 ea.  
S.D. Stayman Winesap, 3-5 ft. ... 3.75 ea.  
S.D. Jonathan, 3-5 ft. ... 3.75 ea.  
S.D. Red Rome Beauty, 3-5 ft. ... 3.75 ea.  
S.D. Golden Nugget, 3-5 ft. ... 3.75 ea.  
S.D. Golden Delicious, 3-5 ft. ... 3.75 ea.  
S.D. Grimes Golden, 3-5 ft. ... 3.75 ea.  
S.D. Lodi, 3-5 ft. ... 3.75 ea.

## NOTICE

We have a large amount of Apples and Peaches in 2 to 3 ft. size, the most popular varieties, that we are making you a bargain price on.

## STANDARD APPLES

Red Delicious, 2-3 ft.	1.75 ea.
Stayman Winesap, 2-3 ft.	1.75 ea.
Yellow Delicious, 2-3 ft.	1.75 ea.
10 Apple Trees for \$15.00	

## STANDARD PEACHES

Belle Ga., 2-3 ft.	1.75 ea.
Elberta, 2-3 ft.	1.75 ea.
Hale Haven, 2-3 ft.	1.75 ea.
Red Haven, 2-3 ft.	1.75 ea.
10 Peach Trees for \$15.00	

## DELIVERY DATE

Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

SPRING: January 15 - May 1

FALL: October 1 - December 1

ALL OTHER STATES

SPRING: March 1 - May 1

FALL: Sept. 25 - December 1

Our plants are nursery grown from cuttings, seeds or budded stock unless otherwise stated. These have never been transplanted. Those marked with (\*) asterisks mean they are collected from the wild state. Plants are inspected by the Tennessee Department of Agriculture. This gives you a chance to buy at lower prices. You may order as many or as few plants as you wish. Send \$2.50 extra with order for postage and packing. **RUSH YOUR ORDER TODAY! TWO-WAY GUARANTEE:** We ship live plants packed well to reach you in perfect condition. However, sometimes a package gets lost and stays in transit a long time. In this case, in the Fall and Winter when plants are dormant, you can scrape on the bark and tell whether the plants are alive or not. If the bark is green, it is alive. We believe we have the best guarantee any mail order nursery could possibly offer. Here is our two-way guarantee. First guarantee - When you receive your order, if there are any plants in bad condition, you notify us immediately and we will replace absolutely **FREE**. Second guarantee - The reason we make this strong guarantee is because there is no reason any of the plants should die. However, if any fail to live within 12 months from the date of delivery, we will replace for one-half of the original purchase price, plus \$1.00 for postage and handling. No return of dead plants necessary. We guarantee our plants to be true to name and color. Anything that proves to be wrong color or variety, we will replace free.

**LEE'S NURSERY — Route 2, Box 184-F S  
McMINNVILLE, TENNESSEE 37110**



# Getting After Aphids

Read D. Brugger

stream under plant leaves will knock most any aphid senseless. Unfortunately, this method doesn't stop the water-logged pest from climbing or flying right back up to the juicy leaf it was eating. So most gardeners beef up their sprays a bit, using anti-aphid ingredients. Here are three sprays to try:

**Onion spray**--Mince shallots or green onions in a blender. Add water and spray. This is good for roses.

**Garlic spray**--Mash one head garlic. Add three quarts water and one ounce soap flakes, stirring to dissolve. Spray.

**Rhubarb spray**--Boil three pounds of rhubarb in three quarts of water for one-half hour. Cool. Dissolve one ounce soap flakes in water and add to cooled mixture. Spray.

## Predators & Enemies

Aphids are incredibly prolific. Under normal conditions, the unfertilized females produce several generations in one season. In the fall, a joint effort of male and female begets a like number of eggs, which hatch the following spring.

Fortunately, there are insects that can consume large numbers of aphids (though not as fast as they are created). The ladybug, for instance, will eat approximately 400 aphids in its lifetime. The lacewing larvae is even more ravenous; its nicknames are "aphidlion" and "aphidwolf." Other aphid enemies include soldier, damsel, pirate, big-eyed or assassin bugs and syrphid flies.

In addition, there are several parasitic wasps that lay eggs in aphid bodies. After a germination period, the eggs hatch and the wasp larvae consume their host.

Like all of the other methods, you may not see results immediately. But by using a combination of aphid-control measures, you can keep aphids far away from your garden. □

Melanie Spencer is Editorial Assistant for FARMSTEAD and The Animal Husbandry Journal.

## Companion Planting

Aphids love nitrogen-rich soil, and for that reason grow fat and happy in the cabbage patch, between bean plants or in vineyards. A good way to curb their hedonistic lifestyle is to companion plant. Interplant garlic, chives, coriander, petunia and anise to deter them. Or plant nasturtiums around particularly vulnerable vegetables. Aphids will set up camp on the flowering plants instead of your potatoes. To be sure you're not wasting any energy, clear the surrounding area of host plants, too. Some species have a particular fondness for plantain, others for lamb's quarters and bindweed.

## Spray

If you ask around, chances are you'll find that every gardener has his or her own secret recipe for a spray to repel a particularly troublesome insect. For aphids, the "cookbook" is just as voluminous. The easiest spray of all is plain water straight from the hose. A forceful

**W**hatever you plant in or around your garden, there's probably an aphid that's ready to devour it. Pea leaves are the preferred food of pea aphids, apple buds a favorite of the rose-colored rosey apple aphid and campanula flowers a delicacy for foxglove aphids. Unfortunately for gardeners, there are virtually dozens of different aphid species. With such a large family, aphids cover a lot of territory.

Basically, the aphid is a small, soft-bodied, pear-shaped insect with two tube-like appendages from its rear end. Called "cornicles," these projections secrete a sticky dew--sugary leftovers from the aphid's last meal. This "honeydew" is made from digested plant juices and when left on foliage, attracts black mold disease. Eventually, the mold spreads, blocking sunlight, leaves wither and plant growth slows.

Fortunately, there are a number of things you can do to stop this pesky pest. Companion planting, sprays, predators and parasites are just a few ways to get rid of aphids in your garden.





**Harvest juicy,  
delicious tree-  
ripened fruit . . .  
from your own  
Stark Bro's trees.**

## **FREE Stark Bro's Catalog!**

### **FRUIT AT ITS BEST**

Nothing compares with the sweet, juicy taste of fruit picked fresh from the tree. Choose from dwarf, semi-dwarf and standard size trees. Whatever your growing needs, Stark Bro's has what you're looking for.

### **PLANT THIS FALL**

Most fruit trees can be fall planted in many parts of the country, often bearing a year earlier than those planted the following spring. Check our valuable planting zone map to see if you can plant this fall. Plus . . . **SAVE 20%** when you order this Fall!

### **EXCLUSIVE VARIETIES**

Since 1816, Stark Bro's has offered fruit growers the best fruit tree varieties available. Six generations of America's greatest nurserymen stand behind every Stark Bro's product — many of which are so unique they're protected by a U.S. Plant Patent. And Stark Bro's exclusive varieties beat all others hands down!

### **PROMISE OF SATISFACTION**

Replacement or refund within 1 year if not satisfied.



### **FREE CATALOG!**

Stark Bro's 60-page, full-color catalog offers hundreds of varieties of fruit, shade and nut trees, berries, shrubs and roses too — plus everything you need to grow bushels of flavorful fruit.

**Mail to:** Stark Bro's, Dept. A1769E, Louisiana, MO 63353



Stark Trees Bear Fruit. Since 1816

### **NEW FREE CATALOG, SEND TODAY!**

**A1769E**

**YES!** Please send me, at no obligation, your **FREE** Fall 1985 Fruit Tree & Landscaping Catalog.

Print Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone No. \_\_\_\_\_  
(area code)

**Mail to:** Stark Bro's Nurseries, Dept. A1769E, Louisiana, MO 63353



# The Story of the Concord Grape

Since 1854, Americans have gone bananas over the Concord.

**W**hen Leif Ericson returned home to the land of the fjords and the midnight sun, after his voyage across an uncharted sea to an unknown land, he described the place as one great vineland. It held grapes that the fierce, blond Norsemen had never before encountered and in such profusion as to be almost beyond belief.

What the sons of Odin saw on their voyage to the region described as being almost anywhere between Newfoundland and Nantucket, were probably fox grapes. To this day, the marble-sized fruit is found in abundance in the wild state throughout all of New England and eastern Canada. Other people reason the fruit was the tiny, blueberry-sized frost grape (*vitis cordifolia*), a

common wild grape in the eastern United States today. Still others claim the visitors saw a combination of both.

Wild grapes were no less plentiful when the first settlers came to Virginia and New England. Despite being in a land in which the tart fruit was enormously plentiful, early Americans longed for the varieties grown in homeland vineyards. For three centuries, vain attempts were made to grow the fragile European varieties, all of which ended in dismal failure. Lord Delaware brought ten vines to Virginia from France in 1619, and even hired Frenchmen to tend them, but with no success. In 1623, the colony passed a law making it compulsory for each person living in Virginia to raise ten grape vines. Prizes were offered to winners--but no one won.



Governor Winthrop of Massachusetts was given an island in Boston Harbor on which to raise wine grapes, but he failed. Queen Christina of Sweden ordered her subjects in New Sweden to raise grapes or else. In the end the Delaware Swedes accepted the latter alternative. Lord Baltimore tried to raise grapes to make sacrificial wine--and failed. William Penn gave it a whirl in 1684 and never got off first base. In later years Thomas Jefferson, one of America's early "green thumbs," met with dismal defeat when he embarked on a wine growing career. European grapes just couldn't make it in America,

although occasionally one crop was produced.

Finally, in 1854, Ephraim Wales Bull of Concord, Massachusetts, a brilliant horticulturist and sometime politician, presented his purple Concord grape to the world. Since boyhood the Bay Stater had been studying the culture of grapes, and had been attempting to come up with a hardier fruit than the Isabella, a creation of two decades earlier that had failed in several regions.

By chance, a vine from wild grape seedlings that he had picked grew a terrific crop of large purple grapes, which Bull named the Concord, after

the historic spot where American liberty had its first baptism of fire. Bull propagated the Concord from cuttings, and by the time he offered vines to the market at \$5 a piece, every wine grower in the East was aware of the tremendous discovery. In a masterpiece of double dealing, nurserymen propagated the Concord themselves, and Bull earned little from the millions of its progeny that were planted throughout the nation.

Bull died a bitter man in Concord's Home for the Aged. On his tombstone is the inscription, "He sowed, but others reaped." Bull's Grapevine Cottage is one of the

## GRAPE PESTS



**W**hatever training system you use, your vines are not apt to produce if beleaguered by pests and disease. The following list of common grape pests will help you identify them.

**Grape Aphid**--This root and leaf sucking pest is probably the worst in the west. To control the small, wingless yellow insect, graft canes onto resistant rootstocks. For additional tips, see the article on aphids on page 24.

**Grape Leafhopper**--The grape leafhopper is a small, light-green, sucking insect. The adults live over winter in dead grass, under leaves or in rubbish piles, emerging as soon as the weather is warm. When the grape leaves open, they suck the sap through the lower surface of the leaves and cause small, pale spots to appear. When the insects are numerous, the leaf has a mottled appearance and may eventually dry up and fall. Cleaning up rubbish piles and spraying will help control this pest.

**Grape berry Moth**--This worm is

usually found when grapes are wormy at harvest time. It is a dark-colored caterpillar, and passes the winter in the pupal stage on leaves underneath the vine, emerging when grapes blossom. There are two broods. The first eats stems and external portions of the young berries. The second lives entirely in the berries. They attack all varieties but are most injurious to those with compact clusters. Spraying is the best control, but it often pays to pick and destroy the berries infested by the spring brood.

**Japanese Beetle**--This is a shiny metallic-green beetle less than half an inch long with coppery-brown wing covers. It usually appears between June 1 and 15, and may be present until mid-August or later. Grape leaves are among its favorite foods, and unless protected, many of the leaves may be reduced to lace-like skeletons. The eggs are laid in the soil in grassy areas and the grubs develop there. (For more about the Japanese beetle and controlling it, see Farmstead's Harvest issue.)

**Grape Root Borer**--The grape root borer can cause extensive damage to a vine before its presence is even detected. Although inconspicuous, the larval feeding can result in yield losses and death of vines. The borers, which are white with brown heads and range in size from less than an inch to two inches, feed beneath the outer bark of the roots.

Unlike most moths, the adults fly only during the day, and often escape identification because they resemble wasps. Management programs using chemicals, biological and cultural controls are being used. **Black Rot**--A fungus that attacks the leaves, stem and tendrils of the grape. Black Rot appears in the spring. Early symptoms include small brown or black spots that cause no serious damage and are seldom noticed. Later, the fungus spreads to the fruit, where it is still not noticeable until the berries are about half grown. From then on, the severity of the disease increases rapidly, turning the fruit black. Diseased berries and tendrils should be removed and destroyed at pruning time. Careful spraying will keep this disease under control.

**Downy Mildew**--Also a fungus favoring cool, moist weather, the older leaves in vine's center are usually the first to become infected with Downy Mildew as light-yellow spots appear on the upper leaf surface. Later, white moldy growth forms on the undersurface of the leaves. The spots may be few or numerous. When they merge, they affect most of the leaf surface, killing leaf tissues. The disease may also attack shoots, tendrils and fruit early in the season and resemble water-soaked depressions, with or without a white moldy growth. Control by spraying.

--Samuel L. Skeen



shrines of the historic village. The massive grapevine beside the door of the cottage is the original Concord grapevine. It still bears enormous crops of the purple grapes now known throughout the world.

In its infancy the Concord was one of the finest table fruits ever known. Its tart sweetness, beautiful color and heady bouquet made it the most popular fruit in the East. Then too, John Landis Mason's discovery in 1858 hadn't hurt the new industry a bit. His zinc screw-cap canning jar

Courtesy of Welch Foods



Ephraim Wales Bull with his original Concord Grape vine.

with porcelain liner revolutionized home canning. Concord grapes made superb preserves, jams and jellies, and even the green fruit could be made into a delicious marmalade.

America's big cities went bananas over the Concord. So popular did the purple grape become in big towns that a new industry developed to make the baskets to pack the grapes for shipment to the markets of New York, Philadelphia and Boston. Tons of Concord grapes were eaten out of

## GROWING GRAPES : TRELLIS TRAINING SYSTEMS

**L**ike established producers, newly planted vines must be controlled and pruned. As soon as they are in the ground, your young vines should be cut back to one straight cane that is pruned to two buds. No support is necessary during the first growing season, except perhaps a stake. However, it is usually desirable to make the trellis before the second growing season starts.

Trellises commonly use two or more wires attached to wood, concrete or steel posts, similar to a sturdy wire fence or clothes line. Two posts, set 24 to 30 feet apart and equipped with wire, will accommodate three vines spaced 8 to 10 feet apart.

Because grapevines have been known to outlive their planters, it is best to use highly durable materials in the trellis or arbor. Long-lasting wood post materials include black locust, Osage-orange and red cedar. Other less durable species should be treated.

requires little tying and is adapted to moderately vigorous varieties.

After the first growing season, select the most vigorous cane for the trunk and tie it to the top wire. Cut the cane off above the wire and remove all other canes. If no cane is long enough to reach the top wire, tie the strongest one to the bottom wire, and extend it to the top wire the following season. If no cane is long enough to reach either wire, cut the vine back to a single stem, two or three buds long and start anew.

After the second (or third) growing season, select four vigorous canes for the arms. (Do this during the dormant period.) Prune the canes to approximately 10 buds in length, lay them down along the wires, and tie them. Cut four other canes back to two or three buds in length for renewal spurs. Remove all other canes. Each winter thereafter, replace the arms with canes from the renewal spurs and leave new renewal spurs.

Excellent quality fruit can be produced under the Umbrella Kniffin System as well (figure 2). The trellis is the same as for the

Four-arm Kniffin System, or may have a third wire added.

Train the vine to a single trunk extending to just below the upper wire. After the second growing season (during the dormant period), select two to four canes growing from near the top of the trunk for arms. Prune them to 10 to 20 buds, depending on the number of arms left. Cut back two other canes to two or three buds for renewal spurs. Loop the arms over the top wire, bring them down obliquely to the bottom wire and tie them. The shoots that develop during the next growing season droop off to the sides. Each winter thereafter, replace the arms with canes from the renewal spurs and leave new renewal spurs.

The Munson System (figure 3) is used in home plantings and experimental vineyards. It is particularly suitable for humid climates, because the fruit is produced high above the ground where it is less subject to injury by disease.

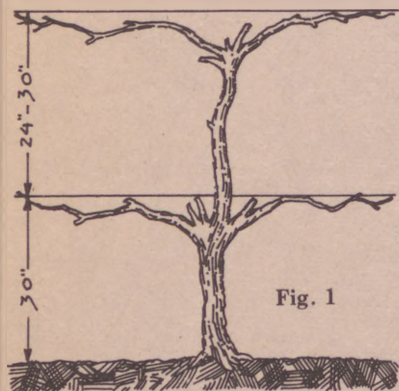


Fig. 1

The two-wire, Four-arm Kniffin System (figure 1) is very popular because it gives good production,

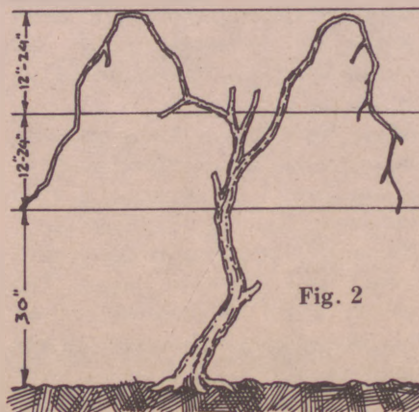


Fig. 2

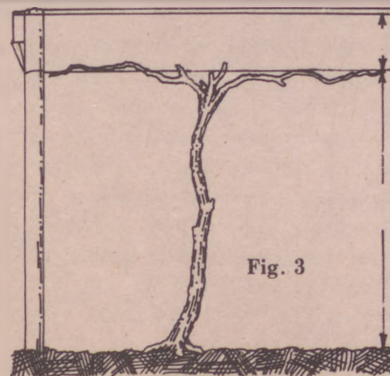


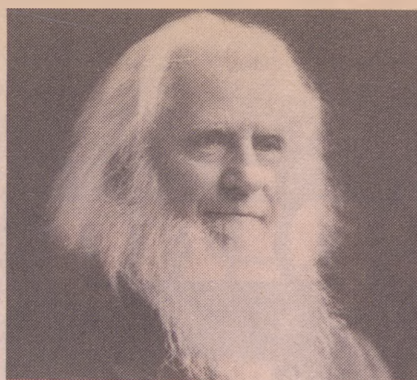
Fig. 3

The trellis consists of three wires strung in the shape of a wide "V." Two wires are attached to the outer edges of cross arms 18 to 24 inches



hand during the annual fall season. Tons more went into delicious spreads.

Meanwhile out in Vineland, New Jersey, a desert-dry community famed for its grapes and not for its wines, there moved in one Dr. Thomas B. Welch. A dentist, Welch hated wine with a passion. A Communion steward in the Methodist church, Welch read of Dr. Louis Pasteur's studies on fermentation. He had an idea: Why not produce a grape juice to use instead of the



Courtesy of Welch Foods

T. B. Welch

sacrificial wine made of steeped raisins? By 1869, Welch had achieved success and was producing a sweet grape juice, which he bottled and sold. Naming the product, "Dr. Welch's Unfermented Wine," the dentist opened a small business with his son Charles. The drink was so popular, they changed the name to "Dr. Welch's Grape Juice." (He could not bear to see the name "wine" in liaison with his own.)

In 1897, the Welch's moved to Westfield, New York, after a brief stop in Watkins Glen, and history was made. Welch's juice became the most popular drink in America. Bottled and displayed in a manner such as to shame the finest champagne, the deliciously sweet drink became standard fare in hospitals, fine hotels and restaurants. Wrapped in pink, gold or silver foil, a bottle of "Welch's" would be tucked into a Christmas basket or a gift box. In drug stores, little "pony" bottles, which barely filled a four-ounce glass, became extremely popular.

Ephraim Bull's discovery became the most popular fruit in the nation's history. Few would have believed that Dr. Welch's drink would become the nation's number one breakfast drink by the time of World War II, exceeded only by orange juice. Today, more jams and jellies are made out of Concord grapes than any other fruit.

Dr. Welch must be revolving in his grave by now. A portion of the grapes raised in the eastern belt of Lake Erie now go into wine, although the product that bears his name is still a national standby.

In 1967, the community of Silver Creek, New York started an annual Festival of Grapes which has become one of the most popular late summer events in the entire western New York region. It attracts thousands for grape stomping, pie throwing, wine judging and lots of grape eating. It's a far cry from Norseman Leif Ericson's experience so long ago, when he landed on a wild, untamed land and plucked his first grape in the New World. Little did he know what he was starting.

Frances X. Sculley writes about Concord grapes in Concord, New Hampshire.

wide and 5 feet above the ground. The third wire is attached to the posts, 6 to 8 inches lower.

Train the vines to a single trunk extending to the lower wire. After the second growing season (during the dormant period), prune to two or more canes and two renewal spurs. Tie the arms along the lower wire. As the shoots develop during the next growing season, distribute them over the upper wires, allowing them to hang down. Each winter, replace the arms with canes from the renewal spurs and leave new renewal spurs.

The Keuka High Renewal System (figure 4), also known as cane or head pruning, is well suited to varieties of hybrid direct producers that produce upright shoots and should be pruned to short canes. It is not suitable for Concord and other American varieties that have a drooping growth habit or require long cane pruning.

The trellis consists of two or three wires. Establish a single trunk extending to the bottom wire. After the second growing season (during the dormant period), select two

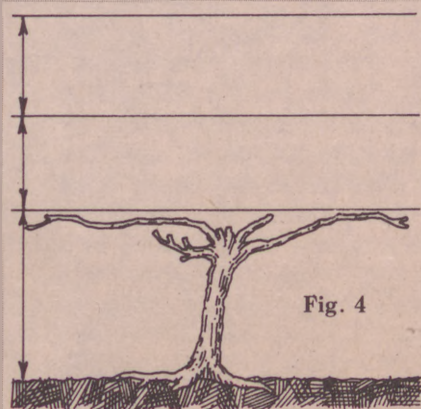


Fig. 4

canes and tie them along the bottom wire. Leave two renewal spurs at the bottom wire. As the shoots develop during the next growing season, tie them to the upper wire or wires.

The Fan System (figure 5) is a modified Kniffin used to grow grapes on walls. But instead of cutting the vines back to a single trunk, branching is encouraged by pinching of the vine tip at the point where branching is desired. Once the fan "skeleton" has been established, prune annually, leaving the desired number of one-year-old canes and renewal spurs.

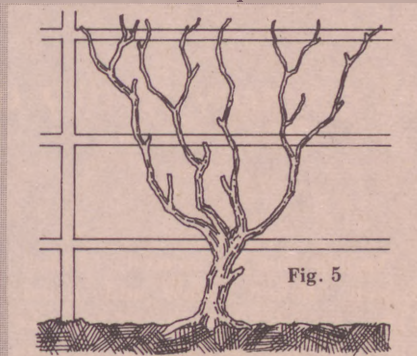


Fig. 5

The grape arbor is another modification of the Kniffin system, except that more fruiting canes are left because shade, as well as fruit, is desired. When the vines are pruned to arms well spaced over the arbor frame, yields are very good. For quicker and more uniform covering of the arbor, the vines should be pruned to short spurs two to three buds long, even though this procedure may reduce the size of the crop.

Samuel L. Skeen is a frequent FARMSTEAD contributor and lives in Ripley, West Virginia.



# Keeping the Apple Harvest



Charley Freiberg

## A primer on how to dry apples.

**L**ong ago, deep in the Caucasus Mountains of Asia, a very hungry human bit into his first apple and grimaced. It was a crab apple--a prolific variety in that area. That was 750,000 years ago and quite a historic moment, considering that apple growing and eating has grown into a multi-billion dollar industry worldwide. [There are others who date the advent of apple eating back much earlier.]

Today there are at least 300 varieties of apples grown in the United States alone. And each variety has its forte--keeping, cooking, eating fresh. Whether you prefer a sweet Delicious or a tart Winesap, you will want to prolong the pleasure of apple eating in as many ways as possible.

Apples can be sauced, canned, frozen, baked, fried--and dried. [They can also be pressed to make cider--see the story starting on page 34.]

### Drying Apples

Drying is the very ancient process of taking the moisture out of food. It is also a very practical, nutritious and delicious way to keep food for long periods of time. As with most fruits, drying apples is as easy as washing and slicing. You don't need expensive dehydrators or chemicals and preservatives. They can be dried on a sunny day on a tin roof, in the back seat of your car, strung on a line and hung above the wood stove or tied up in the attic. Golden Delicious is the best variety to dry

because it will not discolor if dried correctly. But whatever type you use, choose the best apples of the bushel. Bruised, deformed or small apples won't do. Use these to make apple pectin for jelly making [see below]. Also, don't use apples that have been in cold storage; they'll turn brown when dried.

If you have to use supermarket apples, check for a wax coating; it contains all kinds of preservatives and is almost impossible to remove. If you have to use waxed fruit, peel it first. If you use fresh, unwaxed apples by all means leave the peels on. They contain vitamins and minerals.

Here's my easy method for apple drying:

1. Wash apples and peel if waxed.



2. Cut into quarter-inch-thick slices or core and slice into rings. Rings can be strung on a broomstick, pole or string.

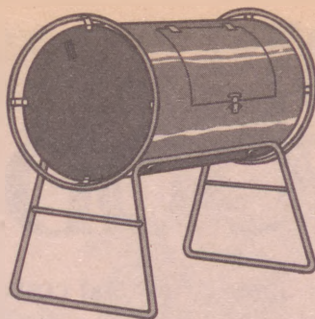
3. Dip each side of each slice into pure lemon juice to keep apples from discoloring. Avoid chemicals and sulphur, which destroy thiamine [vitamin B] and add a sour chemical taste to your apples.

4. Arrange sliced apples in a single layer on a cookie sheet [or the tin roof or car], keeping pieces separate. Or place on drying screen for oven drying.

5. If oven drying, leave the door propped open 6 inches to let air circulate. The temperature should be between 110 and 140 degrees F. To ensure even drying, rotate trays top to bottom and front to back several times during drying. Dry 8 to 12 hours, until apples snap and break when bent. The sweeter the apple, the longer it takes to dry.

6. If drying apples in the sun, remember that light breaks down and destroys vitamins A, C, E and some B-complex vitamins as well. Sun drying usually takes longer than oven drying, depending on the heat and humidity.

7. Store apples in an air-tight container. Use them in cookies, cakes, breads, cereals or stuffings [see recipes, page 32].



## CompostTumbler

Only 14 Days to Nature's FREE Fertilizer!

- No Annoying Odors, Convenient Rotating Drum
- Turn Garden and Kitchen Refuse into Compost
- Sturdy, 61 Gallon, 22 Gauge Steel, With Stand
- Lowest Price Available, Complete with Instructions
- Order Today! Visa, Mastercard or C.O.D.

**CRARY**

U.S. Wats: 1-800-362-3145 Ext. #151

Box 1779 — Fargo, ND 58107 — (701) 282-5520

Proven for Over  
14 Years

The Golden



Sunshine  
Machine

## HARVEST SAVOR

*The World's Best Dehydrator*

Sprouter and Yogurt Maker

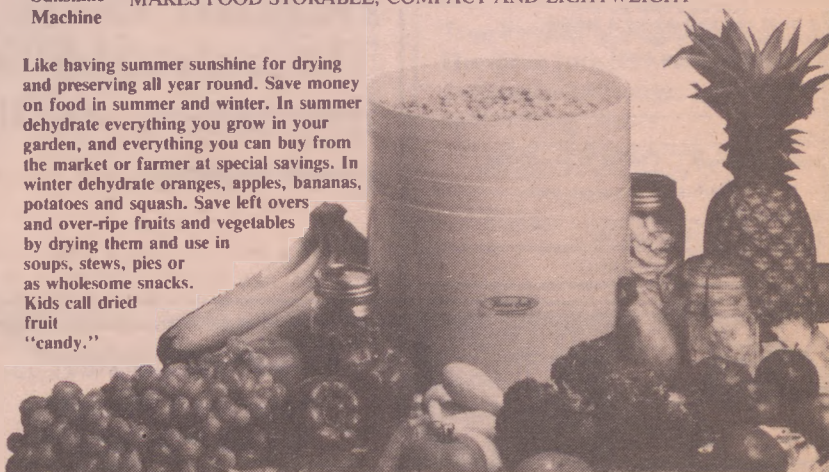
PRESERVES FOOD BY DRYING

CONCENTRATES FLAVOR AND NUTRITION

MAKES FOOD STORABLE, COMPACT AND LIGHTWEIGHT

**NEW**  
BY VITA-MIX®

Like having summer sunshine for drying and preserving all year round. Save money on food in summer and winter. In summer dehydrate everything you grow in your garden, and everything you can buy from the market or farmer at special savings. In winter dehydrate oranges, apples, bananas, potatoes and squash. Save left overs and over-ripe fruits and vegetables by drying them and use in soups, stews, pies or as wholesome snacks. Kids call dried fruit "candy."



Use Fresh Dry Air  
Not Recycled Moist Air

Used Moist Air OUT



Fresh Dry Air IN

Fresh dry air flows in and picks up moisture from the food. Patented "Directa-Flow" screens, along with motorized fan, force moist air to flow up and out. No wonder you save up to 80% in operating costs. Harvest Savor does better with 210 watts than dehydrators which use 1000 watts and recycle the moist air.

PATENTED SIMPLICITY MAKES THE  
HARVEST SAVOR ENTIRELY DIFFERENT.

- Plug it in and leave it
- No dials to set or clean
- Always correct even temperature
- Best motorized unit for the price
- Inexpensive to operate, up to 80% less electricity used —only 210 watts
- Expands—extra trays available
- Flexible non-stick trays fit easily into sink for cleaning
- Lightweight to carry. Just right size to use on kitchen counter 14½" tall
- Choice of 4 beautiful colors
- Trays are excellent sprouters
- Perfect for incubating yogurt and raising bread dough
- Dries huge quantities of food
- No expensive accessories to buy

Use the Harvest Savor for thirty days — you'll never want to be without it.

**SAVE \$84!**  
**ORDER TODAY**

Dial our name TOLL FREE

1-800-VITA-MIX

(1-800-848-2649)

Mention this code

FS0985

to get a \$174.40 value  
for **ONLY \$89.95 U.S.**  
or mail coupon with  
payment to

Vita-Mix Corporation  
8615 Usher Road  
Cleveland, Ohio 44138

☐ YES! Please send me \_\_\_\_\_ HARVEST SAVOR dehydrator(s)  
(Suggested Retail \$129.95) \$89.95 ea. U.S.  
2 extra TRAYS worth \$18.95 (you get 5 total) ..... FREE  
5 reusable FRUIT LEATHER SHEETS (\$12.00 value) ..... FREE  
INSTRUCTION & RECIPE BOOK (\$4.50 value) ..... FREE  
WE pay shipping and handling! (\$9.00 value) ..... FREE

COLOR WANTED: ☐ Gold ☐ Almond ☐ White ☐ Avocado

Ohio residents add sales tax

Total Enclosed (or use credit card) \_\_\_\_\_

PAYMENT ENCLOSED: ☐ Check ☐ Money Order ☐ Credit Card

☐ VISA ☐ AMERICAN EXPRESS ☐ MASTERCARD

Card No. \_\_\_\_\_ Expiration Date \_\_\_\_\_

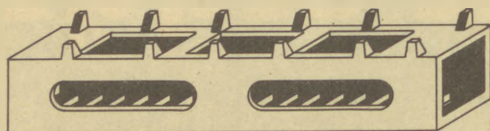
Signature \_\_\_\_\_ Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City/State/Zip \_\_\_\_\_ Dept. FS0985



# IF YOU BURN WOOD

**BLAZE BAR™** can whittle down your annual firewood costs by as much as 50%! It works with or without a grate in an open fireplace or in a wood stove. Based on the "cradle building" technique, **BLAZE BAR** improves airflow and combustion efficiency. The result? Hotter fires with less wood. 20" x 4" x 4"; 13 lbs.



I want to save firewood costs & burn more efficient fires.  
Please: ☐ Send me more information.  
☐ Send me a Blaze Bar now.  
@ \$19.95, plus \$3.00 shipping & handling.  
(GA residents add 4% sales tax.)  
Dealer & Club inquiries invited.

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Method of payment: ☐ Check or ☐ Money order

☐ M/C ☐ Visa # \_\_\_\_\_

Expiration Date: \_\_\_\_\_

MAIL TO: Blaze Bar Gangee, Inc.  
P.O. 1338, State Hwy. 225  
Calhoun, GA 30701 (404-629-9519)

## BLAZE BAR™

The smartest little investment you'll ever make.



**CLEAN UP  
with  
POWER  
WASHER**

The **POWER WASHER** will help you put an end to most difficult, dirty clean up jobs... then with the flip of the wrist the **POWER WASHER** becomes a dependable insecticide or pesticide sprayer.

**Farmers** — clean tractors, farm machinery, trucks, dairy stalls, etc.

**Homeowners** — clean cars, motorcycles, lawnmowers, garden equipment, etc.

**POWER WASHER** operates from 110 volt electricity and accepts a standard garden hose for a water source.

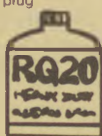
#### FEATURES INCLUDE:

- 600 PSI operating pressure
- 2 gpm - 3 plunger oil bath pump
- Multi nozzle selector head
- Trigger gun-flow shut-off
- 30' discharge hose
- Chemical and detergent injector
- 1 H.P. 110 volt pump motor
- Push handle with hose rack
- Heavy durable painted cabinet — on three wheels
- Insulated power cord with ground type plug
- Operators manual and instructions

LIST PRICE  
**\$472.50**

THE AD SPECIAL  
**\$325.00**

**RQ-20 Heavy Duty  
Cleaning Detergent**  
Specifically designed for use with the **POWER WASHER**. For washing cars, trucks, farm equipment or just general clean up. **\$9.95 per gal.**



#### PRESSURE ACCESSORIES

8708 E. 41st • Tulsa, Oklahoma 74145

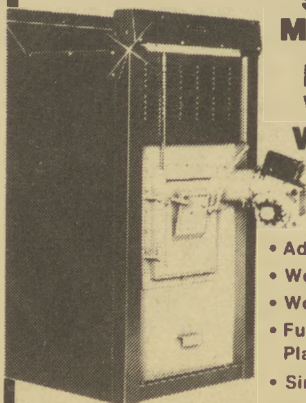
1-800-826-3580



## Charmaster®

"America's Finest"  
Wood Furnace

**SAVE  
MONEY!  
HEAT  
WITH  
WOOD!**



- Add-On Units
- Wood/Oil
- Wood/Gas
- Furnace/Fire Place Models
- Since 1965

- Twelve to Eighteen Hour Burn Time
- Charmaster air tight burning principle uses half the wood of other brands
- **HEATS YOUR ENTIRE HOME**
- **Extremely Efficient - Wood - Oil - Gas**
- **Shipped completely assembled**
- **NO WOODSPLITTING REQUIRED!**
- **FREE domestic hot water heating coils**
- **E.T.L.M. Laboratory Accepted**
- **Easy do-it-yourself Installation**

Write For Brochures/Factory Prices

**Charmaster Products, Inc.**

2307T Highway 2 West

Grand Rapids, Minnesota 55744

218/326-6786

## DRIED APPLE RECIPES

### Dried Apple Bread Mix

- 3 1/3 cups whole wheat or multi-grain flour
- 2 3/4 cups diced, dried apples
- 2 tablespoons baking powder
- 2 teaspoons baking soda
- 1 tablespoon Apple Pie Spices [see below]
- 1 1/2 cup chopped walnuts, pecans or mixture of the two

Combine the ingredients above and store in an air-tight container with the following instructions for making apple bread:

#### Apple Bread

Beat together 1 1/3 cups melted butter, 1 cup honey and 4 eggs. Add 2 1/2 cups water. Add to one recipe of dried apple bread mix, mixing well with wooden spoon. Pour into greased, floured loaf pan. Bake at 350 degrees F for one hour and 10 minutes.

### Dried Applesauce Mix

- 1 1/2 cups sliced, dried apples
- 1 1/8 teaspoon dried lemon peel
- 1/2 teaspoon Apple Pie Spices [see below]
- 1/4 cup chopped dried apples

In a blender, make a powder of the 1 1/2 cups apples and lemon peel. Add other ingredients and store in an air-tight container with the following instructions:

#### Applesauce

Mix together 1 tablespoon honey, 1 3/4 cups warm water and one recipe Dried Applesauce Mix.

### Apple Pie Spices

Use to complement dried apples in desserts, casseroles or sauces.





Once you've picked your apples, you have to decide whether you will eat them fresh, freeze, can, or dry them. Anyway you eat them, apples are delicious.

Fresh ground spices work best, but you can substitute those already ground.

1/2 cup freshly ground cinnamon  
1 tablespoon freshly grated nutmeg  
1 tablespoon freshly grated allspice  
1 teaspoon freshly ground cloves  
1/2 teaspoon freshly grated ginger

Blend spices to a powder using a blender or by hand. Store in an air-tight container with the following instructions: Use 1/4 teaspoons Apple Pie Spices to each 3 cups dried, sliced apples.

## Homemade Fruit Pectin

If you're concerned about the amount of sugar and additives in your family's diet and are still using commercially made pectin, read the label. It's loaded with chemicals, preservatives and a whole bunch of sugar. Homemade fruit pectin is made from apples, just apples and nothing but apples. Plus it is a great way to use up the small green apples left from thinnings, which are very high in acid and pectin. You can also use bruised, cut and insect-damaged apples by cutting away the bad

parts and using the rest. Mature red or yellow apples can also be used in pectin, but are not as good. Here's an easy pectin-making method:

1. Wash, trim and cut away bad parts of apples. Don't peel or core.
2. Cut apples into thin slices and place in large saucepan or kettle.
3. Add one pint water for each pound of sliced apples.
4. Cover, bring to a rapid boil for 15 minutes and remove from heat.
5. Strain the juice through one thickness of cheesecloth, being sure not to squeeze the pulp. Return it to the kettle and add water as before.
6. Simmer over low heat for 15 minutes, remove and strain as before.
7. Cool the pulp 15 to 30 minutes, or until just warm to the touch.
8. Squeeze the pulp so the remaining juice can escape.

At this point, you can use your pectin immediately or freeze or can it for later use.

**Sherri Hudson** homesteads in Sneedville, Tennessee, where she enjoys gardening, cooking, writing and illustrating.

**TRUE FRIENDS**

SUPERIOR  
QUALITY GARDEN TOOLS

## Powerful cutter

Forged aluminium body, replaceable Teflon-coated blade, adjustable bolt for perfect tension.



True Friends features Quality Hot-drop forged, heat treated and tempered Hedge, Lopping and Pruning shears.

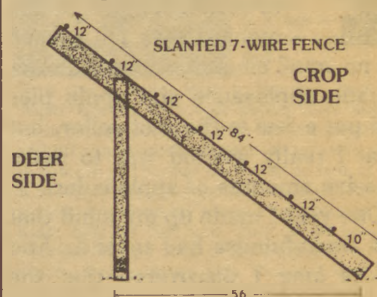
True Friends Garden Tools, Inc.  
P. O. Box 1278 • Cumming, GA 30130  
Telephone 404-887-7815

Dealer inquiries invited.

## DEER PRESSURE?

**Spring-Tight**  
POWER FENCE SYSTEMS

## Slope Deer Fence



## PROTECT YOUR TREES

Call TOLL FREE  
**1-800-832-9482**  
VT 889-3738

BROOKSIDE INDUSTRIES, INC.  
TUNBRIDGE, VERMONT 05077

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
ZIP \_\_\_\_\_



# Making and Storing Sweet Cider



Jim Billipps for Jaffrey Mfg. Co.

Cider pressing can involve the whole family and then some.

**F**or the first few years we lived on our farm, the ankle-deep ground cover of rotting apples in the orchard each fall caused me no small amount of regret. Sure, I made applesauce and apple pies and put a few in the root cellar, but what I really wanted was to make massive amounts of apple cider.

One year I made up my mind that this wastefulness had to end. And before long I discovered that the process of making and keeping sweet cider wasn't the formidable mystery I thought it to be. Even not having a press didn't turn out to be a problem. (If you mention often enough the your future happiness depends on finding a cider press, sooner or later one will turn up.)

So beg, borrow or steal a cider press of your own. Considering the fact that apple trees abound in most rural areas, you should be able to

find plenty of cider-quality apples for next to nothing. Even if you don't have your own trees, apples are often available for the asking--and the hauling. As for labor, invite friends to help on pressing day.

## Why Keep Cider?

Unfortunately, there are "cider snobs" in this world--people who will not touch the juice of the fruit of knowledge unless it was squeezed before their eyes minutes before. I used to feel that way. If you've tasted store-bought apple juice, you know there's no comparison between that and the real thing. (Technically, "sweet cider" refers strictly to the fermented product. For convenience, I will take the liberty of shortening "sweet cider" to "cider.")

Basically, there are four good

reasons to preserve your cider. The reasons are:

### 1. Nutrition

"An apple a day keeps the doctor away." The old-timers weren't far wrong with this adage. Apple juice is a good substitute for orange juice in both your diet and your budget. Orange juice is higher in vitamin C content, providing 50% of the adult daily requirement in a half-cup. But apple juice supplies a healthy 30% of the adult daily requirement in a half cup, and contains vitamin A as well. In a complete nutritional comparison, apple juice holds up pretty well against the citrus competition.

### 2. Cost

Obviously if you use "free" apples, and "free" labor; and especially if you use "free" energy in processing your cider, your cost per quart will be miniscule in comparison with a store-bought batch. It makes complete economic sense to press and preserve your own juice, rather than buy either apple or orange juice.

### 3. Increased self-reliance

Your object on a small farm is to reduce external costs by being as self-sufficient as possible, right? To achieve this goal you must use all the resources at your disposal. Your object in life is not to support large citrus operations in Florida, or pineapple plantations in Hawaii. Learning to provide for your needs from your locally available resources is one of the most important lessons to master.

### 4. Taste

Here we get back to the cider snob. He or she refuses to store cider because "nothing tastes as good as fresh-squeezed." (This could be said of all other juices as well.) However, the minimal amount of processing needed to keep sweet cider does not significantly alter the flavor. If you start with a tasty, home-blended product, you will end up with a processed juice infinitely superior to anything the grocery store has to offer. And if you've gone to all the trouble to set up for fresh cider-making, why not make enough for the rest of the year?



So much for the "whys" of keeping sweet cider. Now for the "hows."

## How To Keep Sweet Cider

The first step, before you ever make your cider, is to estimate how much your family will drink in one year. This may be difficult the first time around. Take a two-, three-, or four-week period, and note exactly how much of a primary refreshment beverage your family consumes, be it orange juice, iced tea, water, milk, or (heaven forbid) soft drinks. Reduce that figure to a weekly consumption rate, and multiply by 52 to get your yearly total. For example, one three-week period in September, we drank 2 1/4 gallons. This reduces to a weekly rate of 3/4 gallon, producing an estimated yearly consumption rate of 39 gallons. This estimate is your target figure.

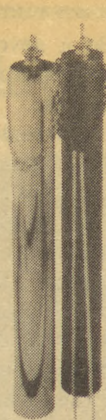
The next step is to gather, wash and generally prepare enough containers to put up your target figure of cider.

On cider-pressing day, in addition to your permanent storage containers, you will also want temporary containers if you plan to can. Five-gallon plastic jugs are ideal. If you are freezing, your freezing jugs will be sufficient. Filter your juice as you transfer it from press to jug. You don't want all that sediment taking up valuable cider space, and straining makes a less furry-tasting final product. Filtering devices range from a hand-held wire mesh strainer, to jelly bags, to elaborate arrangements with cheesecloth and funnels.

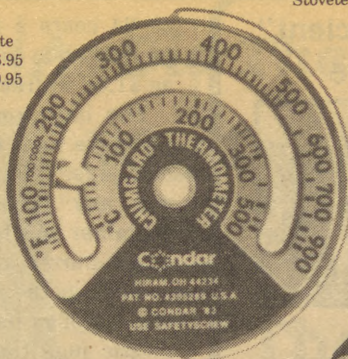
There is no need to rhapsodize on the glories of cider-making here. Suffice it to say that you can be either a master of alchemy, blending juices of different apples to produce a delicious and distinctive nectar, or you can be a hit-or-miss blender like me.

## Freezing

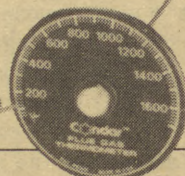
Freezing is undoubtedly the easiest way to handle cider. However, it's also the most expensive. Including electricity, packaging, and other costs, freezing cider can be as high



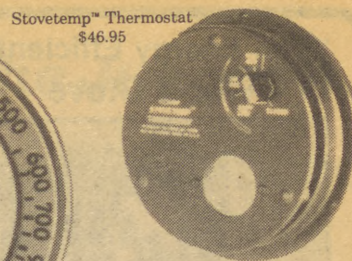
Fireplace  
Matchmate  
Black \$16.95  
Brass \$19.95



Chimgard® Thermometer  
\$11.95



Fluegas Thermometer  
\$14.95



Stovetemp™ Thermostat  
\$46.95



Carry-All Basket  
\$19.95



## Woodstove & Fireplace Accessories

These products help you burn wood safely, efficiently...intelligently. Each one is U.S. made, top quality and reliable.

Prices are Manufacturer's Suggested List

Condar™ Products are available at your local stove/fireplace dealer. See them or contact us for a color catalog.

Condar Co., 12000 Winrock Rd.  
Hiram, OH 44234, 216/569-3245 B

### DISCOUNT PRICES

On  
Quality Parts  
and Accessories

### Zip-Penn

- COMPLETE LINE OF TOP QUALITY CHAINSAW, LAWNMOWER AND SMALL ENGINE REPLACEMENT PARTS
- TOOLS AND ACCESSORIES
- DISCOUNT PRICES UP TO 35% OFF RETAIL
- 20 YEARS OF EXPERIENCE
- FULL MONEY-BACK GUARANTEE



SEND FOR OUR FREE CATALOG

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

MAIL TO: ZIP-PENN, DEPT. FAR-09,  
P.O. BOX 15129,  
SACRAMENTO, CA 95851

## FAMILY OF SEVEN CUTS HOT WATER BILLS IN HALF!



### Endless Hot Water

The Hughson family just took 7 showers in a row — the 7th was as hot as the first!

How was it done? With a Thermar Tankless Water Heater. Tank type heaters store heated water waiting for use. To do this, they cycle on and off continuously 24 hours a day every day. In contrast, a Thermar heater has no tank at all. It produces hot water on demand as you need it so it has no "stand by" loss and can cut your hot water bills by 50% and more. And, because Thermar has no tank it can't run out of hot water—ever—shower after shower. Mail the coupon today for free energy booklet and all details or call 1-800-228-6505. Nebraska residents call 1-800-642-9606.



Storage tank cycles on and off 24 hours a day, even when you're away!



Tankless design uses no energy until you need hot water.

**THERMAR**  
CORPORATION

JOHNSON POWER TECH  
THERMAR CENTER  
TRUMBULL, CT 06611-0398

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

FM0985



## "The Energy Efficient" Wood Stove



MODEL #KK-111

- Hidden 5 gallon Ash Dump
- Variable Speed Blower System
- Fully Refractory Lined Firebox
- Low Emissions—Clean Burning
- Heats 16 Hours or more Per Loading
- Variable Heat Cooking Surface
- Optional 6" RETURN AIR Duct Adapter
- 11" x 16" Neoceram Glass Window
- 10" Rear Wall Clearance
- 6" or 8" Chimney
- 3000 SF Heating Capacity

**Also See Our Revolutionary Masonry  
And Zero Clearance Fireplace Inserts  
WHY NOT OWN THE BEST?!!**

**beckwood**

889 Horan Drive  
Fenton, MO 63026  
(314) 343-4100

Industries, Inc.

Please mail your **FREE** Brochure to:

NAME \_\_\_\_\_

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

ZIP \_\_\_\_\_ PHONE ( ) \_\_\_\_\_

**SEND FOR YOUR FREE  
SUNGLO BROCHURE TODAY!**



**SUNGLO**  
SOLAR GREENHOUSES

4441 - 26th Ave. West, Dept. FM-9  
Seattle, WA 98199, (206) 284-8900

## NEW CIDER PRESSING MADE EASY!



Don't waste those apples! Making your own cider and other natural juices is so easy and enjoyable everyone at your place will want a turn at this sturdy SOLID MAPLE Cider & Wine Press. Make gallons of sparkling fresh cider with amazing ease. The taste is beyond compare! Make cider for freezing, make hard cider and wines. **SEND TODAY for FREE facts** about the Genuine

Jaffrey Press — get ready for cider season now!

**Jaffrey Mfg. Co.**

P.O. Box 421L4  
Jaffrey, NH 03452

as 24 cents a pound. So a seven-pound gallon could cost you as much as \$1.68 to freeze for one year.

The best containers for freezing cider are half- or full-gallon plastic milk jugs. Failing milk jugs, you can use any other type of freezer container you fancy, but it helps to have narrow-mouthed jugs. My friend's mother runs a soda fountain and supplies her daughter with the plastic jugs that soft drink syrups come in. If you're really desperate, you can freeze cider in bread pans and transfer it to plastic bags.

There are some advantages to freezing cider. In taste, frozen cider is closest to fresh. For convenience, you can't beat the ease of freezing cider. Simply take it from the press, pour it into containers, seal and freeze. Be sure to leave 2 inches of headroom for expansion.

Ingenuous souls have devised some interesting methods to beat the high cost of freezing cider. Their object is to reduce the juice to a concentrate, similar to the orange juice concentrate you buy in the store. One way to do this is to heat 5 gallons of cider in a wide-bottomed, shallow pan very quickly until it reaches a temperature of 216°F. This evaporation process should yield about one gallon of concentrate. You must use very fresh juice (within hours of pressing) to get a satisfactory product. Reconstitute by diluting with four or five parts cold water.

## Canning

Canning thirty or forty gallons of cider may sound like a tremendous job, but it's relatively easy. It takes me about five hours to can 10 gallons single-handedly. Most of that time is spent waiting for the proper temperature to be reached.

Canning is cheaper than freezing, but there are so many variables in canning that it is impossible to estimate a cost per pound. If you can on a wood cook stove rather than electric or gas, your fuel costs are much lower. If your canning jars are paid for (i.e. used at least three times), or you use throw-away store jars, you virtually eliminate container costs. Friends can help here. Ask them to save orange, apple, grape, cranberry juice and vinegar jars and

tops. The tops must have rubber gaskets inside to seal.

Cider does not have to be processed in a boiling-water bath in the way that you can tomatoes and other fruits. Instead, pasteurize it by holding it at 170°F for ten minutes, and seal under sterile conditions. Here are two methods of canning cider.

## Pasteurize in Can

To pasteurize in the can, you need a water-bath canner and a dairy or yeast thermometer (one that registers single degrees in the 100°-200° F range). You simply fill your bottles or canning jars with cider, cap tightly, and place on a rack in a canner filled with cold water that covers the tops of the jars. Heat the canner until the water temperature reaches 170°F, hold it there for ten minutes, then remove your jars, cool and store.

The disadvantage to this method is that it takes so long for everything to heat up. Then for the next batch, you have to start over again with cold water. You must use cold water for two reasons: First, your cider will probably be cold when it comes from the press. If you put it in a hot water bath, your thermometer will not accurately reflect the internal temperature of the jars. You must reach 165-170°F to kill all the bacteria that will otherwise start to ferment, causing your sealed jars to explode. Second, placing jars of cold cider in hot, or even fairly warm, water is rather hard on your jars. If you have jars of doubtful provenance or doubtless antiquity (most of my half-gallons are at least 60 years old), you will find that the following procedure results in far less breakage and consequent loss of cider.

## Pasteurize and Can

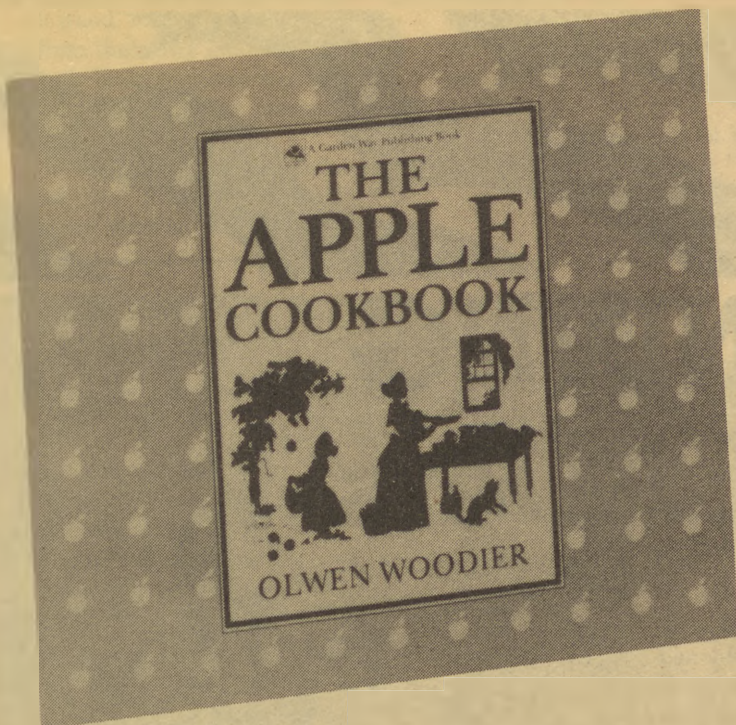
This is the best process for canning cider in quantity. It may take two days to can thirty gallons, but you'll enjoy the fruits of those two days' labor all year long. I much prefer sitting by the cookstove on a chilly October evening, inhaling the aroma of hot cider, to washing, peeling, and canning tomatoes during those hectic days in August!

*Continued on page 75.*



# We Bet You'll Discover (As Did The Judges!)

## Why This Was Named



1984  
**"The Best  
 Single Subject  
 Cookbook  
 in America".**  
**Tastemaker Award**

### What's The Tastemaker Award?

Every year, for the last 20, hundreds of cookbooks from every part of the country are submitted to a panel of professional writers, cooks, and judges... "The Tastemakers." The process is more grueling than getting an Oscar. First you must get through a 40-member selection panel just to be considered! Then you're scrutinized by 10 select judging panels to get "up the ladder." At the pinnacle, the "Tastemaker Award" awaits the very, very best.

### Why our Apple Cookbook Won a Blue Ribbon!

The judges discovered this was a most unusual book, well researched, thoroughly tested, beautifully designed and illustrated, and packed with mouth-watering recipes. Author Olwen Woodier, a native of Scotland, left no apple unpicked in coming up with 136 imaginative Apple Recipes. In fact, she ate 6 apples a day for 6 months!

### Apples for All!

We have gotten so excited about the book and the award that we want everyone to have one. After all, Olwen

has gone to a lot of trouble, doing comparisons of the 30 most popular orchard varieties from all parts of America, preparing breakfast, lunch and dinner menus, making breads, muffins and desserts, appetizers, salads, and beverages. And more.

### First we heard from reviewers. Everyone loves it.

*"...desserts are not the main focus of this book. Apples are, and the fruit's versatility is evident in the recipes...All of the recipes are clearly written, with approximate preparation and cooking times given."*

Publishers Weekly

### Then from the Customers:

*"I had more fun with the Apple Cookbook than any other cookbook I've ever owned. Don't miss the Apple Pancakes."*

Mrs. Helen Barrow  
 Duxbury, Mass.

Soon everyone was singing the praises of the book on America's favorite fruit. No wonder, as you can see from the recipes.

### 100's of Recipes

Everyone has their favorite recipe...Here's ours:

#### APPLE PIZZA

- Pastry for a single pie crust  
 (pages 125-128)  
 5 large apples (Northern spy, Winesap, Rome Beauty)  
 1/2 cup grated cheddar, mozzarella, or Swiss cheese  
 1/2 cup chopped walnuts  
 1/2 cup dark brown sugar  
 1/2 teaspoon ground cinnamon  
 1/2 teaspoon ground nutmeg  
 2 teaspoons sweet butter or margarine
1. Preheat the oven to 400° F. Grease a 12-inch pizza pan.
  2. Roll the pastry into a 13-inch circle and place on the greased pizza pan. Form a rim around the edge.
  3. Bake in the oven for 10 minutes.
  4. Peel, core, and slice the apples into 1/4-inch pieces. Arrange on the pizza crust and sprinkle with the grated cheese.
  5. Mix together the walnuts, brown sugar, and spices. Sprinkle on top of the cheese.
  6. Cut the butter into small pieces and dot over the top.
  7. Bake for 20 minutes, or until the apples are tender. Serve hot.

### Buy an Apple Cookbook Receive a FREE Bulletin

Order a copy, or 6 (they make wonderful gifts) today, and we'll send you a copy of our **Making the Best Apple Cider** a \$1.95 value, free.

☐ YES, please send me \_\_\_\_\_ copies of The Apple Cookbook at \$6.95 plus \$1.75 p&h. Vermont residents add 4% tax. VISA/MC.  
☐ check/money order ☐ VISA ☐ MC

Acct. # \_\_\_\_\_

Expiration Date \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Send order to: Garden Way Publishing,  
 Dept. 5091, Schoolhouse Road, Pownal,  
 VT 05261 or call 802-823-5881



MORE

# OUTSTANDING FARMSTEADers

**O**nce again, we've discovered several individuals and families who, through ingenuity and spirit, are examples of good, old-fashioned self-sufficiency in a modern world. Outstanding farmsteaders by most people's standards, the people on these pages come from all over the United States. And each is an inspiration to others in their own unique way.

If you know of an Outstanding FARMSTEADer, please write us. In each issue, we will print the stories of those who, in some way, have made an impression on people around them through their independent lifestyle. We'll feature one remarkable candidate and include the stories of several others as well, as we do in this issue. If you know of someone we should include, write us at: Outstanding FARMSTEADer, P.O. Box 111, Freedom, Maine 04941.

## Coming Home to the Country

### JUDY, BRIAN and GREGORY RAPP

Cassadago, New York

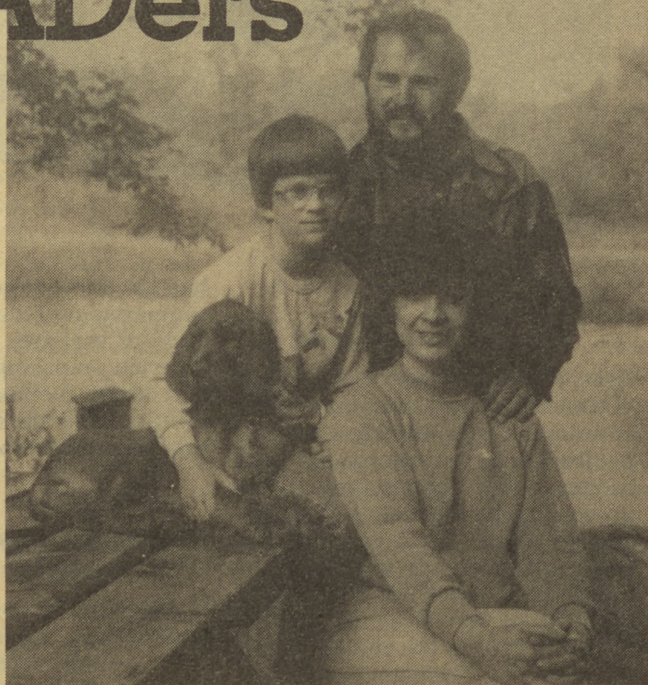
**J**udy and Brian Rapp started out in 1974 buying 100 acres--70 acres of woodland and 30 acres of overgrown pasture--in western New York state. They built a one-room camp on the rural property and after their son, Gregory, was born, moved into the cabin. While Judy worked as a lab technician at a

hospital nearby, Brian worked on creating a home. Ten years later, they've cleared the land, built a house, barn, two-car garage, wood-working shop and dug a 100-by-300-foot pond.

Built around the original cabin, the house includes a studio for Brian, who is also an artist and cabinetmaker, and a sewing room for Judy. Brian's latest project is enlarging the house, adding on a passive solar greenhouse and a solar-heated hot tub. For the most part, all of the Rapp's additions have been of their own design.

"We just kept adding on to the original camp," explained Brian, speaking over the noisy rap-rap of a helper's hammer. "Once we had the plumbing and electric in, it didn't make much sense to start all over from scratch."

Usually, the Rapp's do a lot from scratch, especially when it comes to food. Their fish pond supplies them bass and trout. Along with six Black Angus cattle, 25 chickens, flower and vegetable gardens and an apple orchard, they supply most of their own food, canning and freezing for New York's long, cold winter. And



The Rapp family do a lot from scratch--from building their home to supplying their food.

Courtesy of Rapps



even when they are buried under 10 feet of snow, the Rapps heat entirely with wood, most of which is harvested from their own land. (In fact, one of their latest projects was reforesting an old field. They planted 3,000 evergreens!)

The Rapp's accomplishments speak for themselves. Brian, a Vietnam veteran who is 90 percent

disabled, wouldn't have it any other way. Originally from Pennsylvania, he held a city job in commercial art for several years. Today, he would not switch his country lifestyle for anything.

"I'm a country boy at heart, and I'm glad I got back to it."

--Dorothy Lanning

## JACK and NEVA GOW

McGregor, Minnesota

**S**everal years ago, I became disenchanted with the hurried pace of city living. So, with the children grown and an accumulated retirement nest egg, my wife Neva and I made a permanent move to our vacation cabin in north central Minnesota. It was a little intimidating at first, but it was a decision we'll never regret. We've been living a self-sufficient life for several years now and intend to continue our lifestyle indefinitely. We believe we are as self-sufficient as is practical today. The only regular monthly purchases we make are electricity, telephone service and some insurances. Our total monthly expenses are about two hundred dollars.

Before we made the move, we



Courtesy of Gows

Jack and Neva Gow take advantage of their lakeside location.



Courtesy of Gows

This house started as vacation retreat. Now the Gows live here year-round.

cleared the land and built a home on a remote wooded lakeshore. With an extensive vegetable and herb garden, we grow all our own food except salt and pepper. Some of the produce we dry, and some is canned or stored in a root cellar for the winter. We grow strawberries, raspberries, grapes, apples, apricots and plums and forage for other wild berries, fruits and nuts in the late summer and fall. In the spring and summer, we pick wild mushrooms and other wild foods for salads. For eggs and meat, we raise chickens. Currently we have a flock of 125 Bantams, broilers and layers. We also raise rabbits for meat and goats for milk and cheese. Most of our other meat is wild game from hunting and fishing. Often, we smoke our bacon, ham, sausage and fish in a smokehouse we designed. Bees and maple trees provide us with sweeteners. And each summer, we harvest a year's supply of Minnesota wild rice.

In addition, a wood-burning cookstove is used for cooking and baking (we cut all our own wood). We render our own lard and grind our own grains for bread and pastries.

In line with our self-sufficient lifestyle, Neva knits our sweaters and winter caps, mittens, gloves and heavy socks. She also sews most of our other clothing, such as shirts and jackets. With all the homemade woolens, we are comfortable even when the temperature plummets to minus 50 degrees!

Before we moved here, we both had above average paying jobs in a metropolitan area. Now, our air, water and land is unpolluted and our food is organically grown. (We feed the animals only natural, unmedicated foods.)

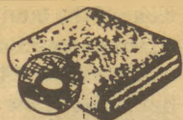
In short, we have learned to sincerely appreciate all aspects of the beautiful out-of-doors, living in harmony with nature and her wildlife. In fact, we have deer feeding in our yard daily and we frequently see bear and wolves. We think our lifestyle provides the opportunity to experience what freedom, health and happiness really are. We consider ourselves the most fortunate people in the world.

--Jack Gow



## Reinforced Polyethylene TARPAULINS

Heavy duty blue TUFF poly fabric. 10 mil thick. 100% waterproof. Rope hem, brass grommets every 3 feet. Lightweight. Won't mildew. Sun treated.



8x10	\$ 6.00	18x24	\$27.00
10x12	9.00	20x30	39.00
12x16	14.00	20x40	59.00
10x20	16.00	26x40	75.00
12x24	22.00	30x60	99.00
16x20	23.00	50x100	279.00

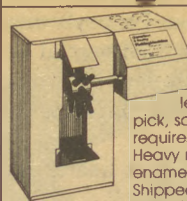
### CUSTOM SIZES AVAILABLE

**USROYAL** 1515 COMPTON AVE.  
LOS ANGELES, CA 90021  
CALL COLLECT OR DIRECT (213) 749-8320  
ADD \$3 PACKAGING EA. UPS FREIGHT COLLECT.  
SEND CHK, M.O. OR CALL FOR C.C. ORDERS.

- CANVAS • VINYL • SHADE CLOTH
- BOAT & CAR COVERS • TENTS • CANOPIES
- LOWEST U.S. PRICES • BIRD NETTING

## Gamefowl & Poultry

### Picking Machine



Gets your birds "supermarket" clean in minutes using genuine commercial picking fingers. Patented design lets you see where you pick, save your feathers, and requires no vacuum cleaner. Heavy metal construction; baked enamel finish; 1/3 hp motor. Shipped U.P.S. freight collect. Weight 50 lbs.

Picks wet or dry Only **\$259.00**

### DO IT YOURSELFERS:

We furnish head, fingers and plans to help you build your own.

**\$39.95**

Replacement fingers: set of fifteen **\$14.25**

Brochure: \$1.00 or S.A.S.E.

Send check or money order (U.S. Funds) now!  
ORION PRODUCTS, Div. DCI Department A4  
754 Chateau Avenue Cincinnati, Ohio 45204

## RUBY, and BOB, BOBBY, BECKY and ROCKY RILEY

Pitts, Kansas

**L**iving in rural Kansas, we have a small place at the edge of town--close enough to schools, but far enough to raise a few animals comfortably. As a family, we raise goats, chickens, rabbits and ducks--all for the table. Along with the garden, I raise pretty much what we eat as far as vegetables, milk, meat, cheese and cream products. My husband is the skilled fence-builder in the family, keeping up with the goat sheds, chicken coops and duck pens. Our children help as much as they can, and they enjoy living what I believe is a healthy, close-to-the-earth life as much as we do. Together we enjoy the wholesomeness and togetherness a family has when they work side-by-side, raising animals and a garden.

I keep myself busy with the animals, besides baking and cooking everything from scratch. (As I write, I have homemade cinnamon rolls raising in the pan.) Both of the nanny goats kidded this January and presently, our rabbits consist of two does and a buck, plus lots of bunnies. The animals usually keep me busy--worrying if the old hen will hatch her little ones, or if the duck will do any good on her eggs.

Like my parents and my grandparents before me, I love the country life. I remember all the old stories and tales they told of their childhoods: my mom of her Arkansas homestead and my dad of his life deep in the Missouri woods. Stories about wild bobcat and cougar trying to prey on the livestock, or about the children growing up. And it seems like the room was always filled with the aroma of my dad's hot coffee, rich and black as coal.

My mornings are filled with the smell of hot coffee, now, too, and with the sound of my old rooster crowing for the sun. That's what makes a morning. I surely enjoy the way I live and hope it will never change.

--Ruby Riley

## LONGWOOD

### Central Wood Burning Systems

LONGWOOD MANUFACTURING CORP.  
GALLATIN, MISSOURI 64640  
Ph: 816-663-2185  
Write for FREE brochure.



### MK VII Dualfuel Furnace

- ★ Uses 5" wood
- ★ Automatic wood ignition
- ★ Burns in combination with gas or oil
- ★ 12-hr. recharge
- ★ Thermostat controlled



### MK II Wood Furnace

- ★ Uses 32" wood
- ★ 6-8 hour recharge
- ★ Use for primary or supplementary heat source
- ★ Thermostat controlled

Gray Supply  
153 Plainfield St.  
Springfield, Mass.  
(413)-781-1700

Energy Conservation Serv.  
1 Jewett City Rd.  
Taftville, Conn.  
(203)-887-2852

K&L Distributors  
RR 4, Box 39  
Meadville, Pa.  
(814)-336-4329

Webber Supply Co.  
32 Thatcher St.  
Bangor, Me.  
(207)-942-7361



## The Original Natural Fibers Catalog

Good things for your bed and body.

Naturally, from Garnet Hill

Our natural fiber clothing and sleepwear take care of you and your family in your own living environment. They keep you cool or warm as you wish by letting your body breathe--they're allergy-free--and they feel so soft against your skin! Here's a sampling:

- Our famous 100% cotton flannel sheets and pillowcases, wool mattress pads and down comforters for cloud-soft warmth; wool/silk and cotton robes.
- English wool long johns for men and women; lovely wool camisoles and tights; silk snuggles and silk underwear for warmth without binding or bulk.
- Soft, warm clothing for infants and children including wool/silk underwear, the gentlest flannels and woolies. And much more--the very finest natural fibers from Europe and the Americas you're not likely to find elsewhere.

When touring the White Mountains, visit our shop in Franconia, N.H.



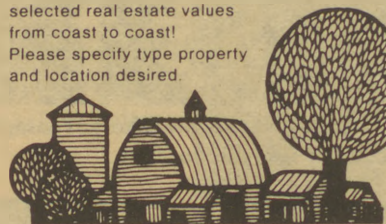
Here is \$3 (applied to first order) for my 2-year subscription to The Original Natural Fibers Catalog. Include flannel swatches with my first issue.

2759 Main Street  
Franconia, NH  
03580

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Zip: \_\_\_\_\_

## FREE CATALOG!

United Farm Agency's latest catalog is yours FREE! Pictures and describes selected real estate values from coast to coast! Please specify type property and location desired.



### UNITED FARM AGENCY

612-ZM W. 47th St., Kansas City, Missouri 64112  
National TOLL-FREE Number 1-800-821-2599

## CHAIN SAWING JIG

Unique design provides safer, more convenient way to stack & cut odd shaped slabwood, limbs, logs, etc. to uniform lengths. SAFE! Minimizes kick back from chain saw. EASY TO FOLLOW PLANS & INSTRUCTIONS. Send \$3.00 to:

SAWING JIG  
P.O. Box 37  
Rochester, WI 53167



## FRED WESTERGAARD

Waskom, Texas



Courtesy of F. Westergaard

Fred Westergaard turned an interest in gardening into an organic vineyard.

**S**wampfox Vineyard is a small organic farm nestled in the woods of Waskom, Texas. Owned and operated by Fred Westergaard, it proves how rewarding farming on a small scale can be, both to the individual and the community.

Fred's first interest in gardening developed when he helped his mother in her Victory Garden during World War II. His dedication to organic gardening started when he happened to read a magazine on the topic. It changed his thinking about gardening. But it wasn't until he retired from the Air Force as a lieutenant colonel that he was able to fulfill his dream of working the land.

From the start, Fred resolved not to go into debt. Swampfox Vineyard is a one-man operation of two to three acres cleared entirely by hand. Produce is grown in season, and pests are controlled with non-toxic, organic insecticides or by releasing predator insects. Fred only uses these methods when the balance of nature weighs too heavily in favor of pests. Usually, by companion-plant-

ing his crops, he discourages destructive insects. There is no irrigation system, leaving crops almost entirely subject to the whims of nature.

Fred has enthusiastic vegetable buyers from as far away as Oklahoma. Throughout the summer, he gets calls and letters from anxious customers in Texas, Louisiana and Arkansas wanting to know when he will be harvesting a particular crop. He has even mailed produce to a California customer who is allergic to commercial chemicals used on conventional crops. Totally dependent on word-of-mouth advertising, Fred's sales have increased each year. His only goal is that his operation pays for itself; Fred's greatest profit lies in personal satisfaction.

During off-season times, Fred is in great demand as a gardening teacher at a junior college in Bossier City, Louisiana and Louisiana State University in Shreveport. He travels to organic farming conventions to stay current in the field. An avid student and teacher of the bio-dynamic French intensive gardening method, Fred is often a featured speaker. His column, "Bugs, Weeds, and Free Advice," is carried regularly by one national magazine and several local newspapers.

Although he grows a variety of succulent vegetables, the main source of Fred's income comes from sweet corn and a muscadine vineyard. According to Fred, "Farming, in any manner, shape or style just isn't a 9 to 5 job. It's sunup to sundown, seven days a week during the season. You have to love it and believe in what you're doing or you wouldn't do it. Loving the land is wanting to protect it. It can be expensive, but I leave certain areas of my farm in fallow and allocate a year to soil improvement in any particular area. The rest is dedication to an ideal and a lot of hard work."

Whether teaching or weeding, this gentleman farmer is doing what he truly loves. Stop by anytime on Texas Highway 9 for a cup of coffee, fresh vegetables and an interesting conversation about "the good life," with Fred.

--Deborah Collier

## AGRI-SUN, INC

Renewable Energy for  
Agricultural Applications,  
and the Homesteader.

Solar Panels  
at Reasonable Cost,  
Wind Chargers and  
Water Pumping Systems.

**WE LIVE OUR TALK.**

Member of  
the PV Network.

Send \$3.00  
for complete catalog  
or call for information.

**AGRI-SUN**  
**P.O. Box 37**  
**Boonsboro, MD 21713**  
**(301) 834-7560**

## Grist Mill

with Power Plus...

Our Model No. 60 is a practical Power Grist Mill, and you can also turn it with a Hand Crank.

Either way it's the perfect mill for:

- ☐ whole wheat flour ☐ corn meal
- ☐ shells & bark ☐ bone meal
- ☐ feeding livestock & poultry
- ☐ grinding roots & spices
- ☐ dry, moist or oily grains

This rugged cast iron mill is fully adjustable. Lots of folks have used our products since 1858.



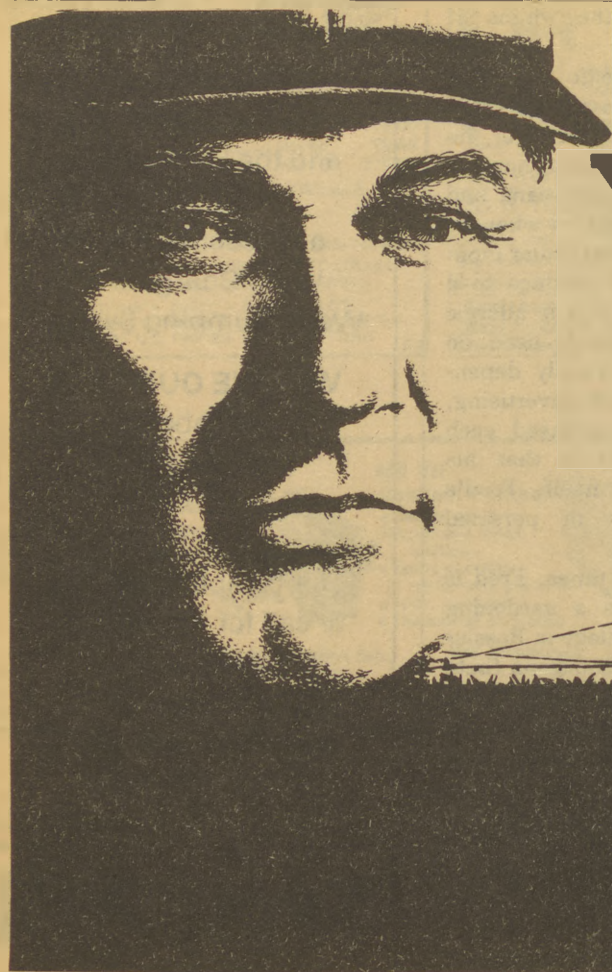
**The C. S. Bell Co.**  
Box S-91, Tiffin, Ohio 44883

SEND BROCHURE TO:

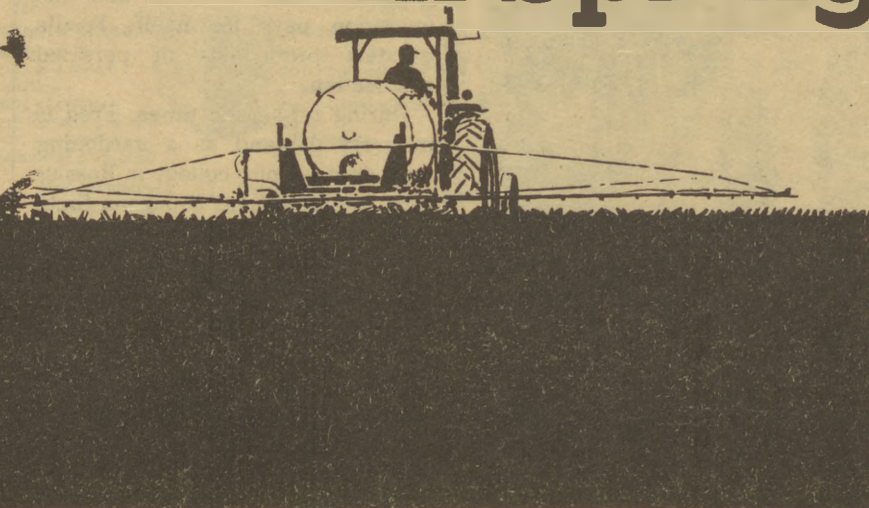
[G]  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

**The C. S. Bell Co.**  
Box S-91 • 170 W. Davis St. • Tiffin, Ohio 44883





# Put Away Your Tractor so it Starts in Spring



**F**ew things are as frustrating--and costly--as not getting the tractor started after you roll it out of the shed in spring. The result: unexpected repair bills, extra trips to town for parts and lost time in the field--time that may not be made up.

So what do you do? This fall, when you turn the tractor off for the last time, take some extra steps to prepare it for storage. If you do it right, chances are that when planting season starts next spring, your tractor will, too.

"Proper winter storage is one of the keys to good maintenance practices and long tractor life," says Vern Hofman, North Dakota State University extension agricultural engineer. "You really can't afford to forget it."

There's no secret to preparing a tractor for storage. If you can use a wrench and jack, then you can

probably handle it yourself. Knowing what to do is the most important thing.

The best source of information on storage techniques for your model is its operator's manual. If you don't have a manual (and most used tractors don't come with one) check with your local equipment dealer or repair shop for expert advice for your locale and tractor model. If all else fails, follow these general recommendations:

- Wash the tractor thoroughly, removing grease and dirt from all parts. Thorough washing uncovers rust and other signs of weathering and use. Pay close attention to gears, couplings and belts.

- Tune up the engine. Replace or clean filters, plugs and other parts as necessary for your model and seasonal maintenance schedule.

- If you have a diesel or gas engine, drain the fuel tank. (For LP-fueled tractors, ask your dealer

whether the tank should be drained.) Refill the tank with two gallons of fuel, plus a rust inhibitor (if recommended) and run the engine for a short time. Then drain the tank completely.

- Drain the crankcase oil and the hydraulic system. Refill with fresh fluids. Use a rust inhibitor here as well.

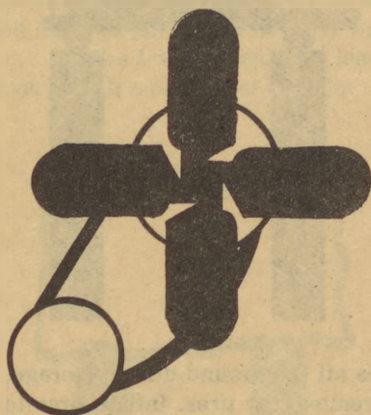


- Flush the coolant, and replace with a product that won't freeze during winter in your area.





•Loosen the tension on all drive belts and chains. Apply grease or rust inhibitor to chains to prevent corrosion. Coat all exposed metal surfaces, such as axles and hydraulic piston rods with grease or rust inhibitors.



•Lubricate all parts that require lubrication.



**Pace Products Inc. Dept. FA-985**  
**Quality Plaza, 112th & College Blvd.**  
**P.O. Box 10925 Overland Park, KS 66210**

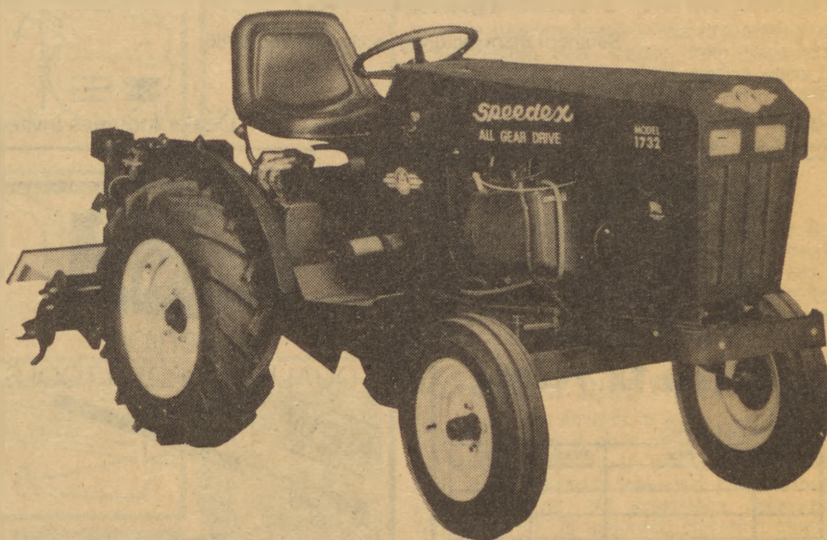
**WITHOUT OBLIGATION** send free material that tells how I can have my own Pace business. No salesman will call.

**Please Print**

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_ Zip \_\_\_\_\_

See our ad on Page 7.

## **SPEEDEX, THE PIONEER, IS INTRODUCING THE LATEST AND ONE MORE OF ITS CLASSIC BEST VALUES IN GARDEN TRACTORS**



THE NEW ALL GEAR DRIVE HEAVY DUTY MODEL 1732 POWERED BY KOHLER'S NEW 17 HP TWIN SERIES II ENGINE IS THE IDEAL CHOICE FOR ESTATE, SMALL FARM AND LAWN AND GARDEN CHORES. AVAILABLE WITH REAR P.T.O. AND HI-LO RANGE OPTIONS PLUS A FULL LINE OF TOOLS AND ATTACHMENTS MAKE THIS TRACTOR AS WELL AS SEVERAL OTHER SPEEDEX LINES A CHOICE THAT'S HARD TO BEAT. FOR MORE INFORMATION, CONTACT:

### **SPEEDEX TRACTOR CORPORATION**

367 N. Freedom Street

Ravenna, Ohio

Call 1-216-297-1484 in Ohio.

Outside Ohio, call 1-800-343-8639





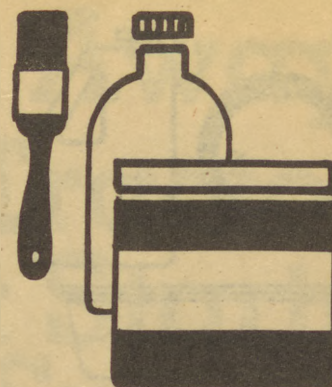
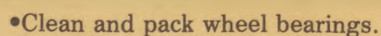
Our three log styles and free custom design service make it easy to choose the home that's right for you. And, since Northern Products Log Homes supplies a complete, pre-cut log package, building your dream home couldn't be simpler. Why look further when Northern Products has the home to fit your lifestyle and your budget?



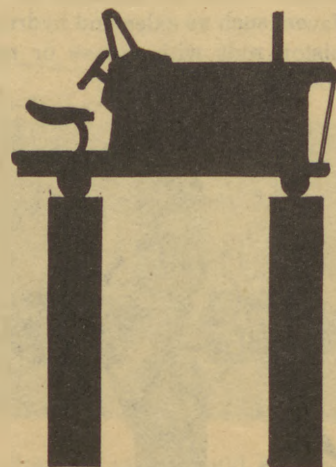
Southern manufacturing facility opening 1986

Copyright © 1985 Northern Products Log Homes, Inc.

### Dealer Inquiries Invited

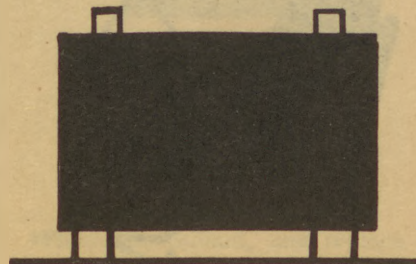


- Block up the tractor to keep the



tires off the ground during storage, or remove the tires. Inflate tires to proper level.

- Remove the battery, and make sure it's fully charged. Fill battery cells, if necessary. Store the battery in a cool place, such as a basement. The temperature should not fall below freezing. Don't set the battery



**P.O.Box 246  
Lubbock, TX 79408**

Please ship the following

<b>Quantity</b>	<b>Item</b>	<b>Price</b>	<b>Total</b>
<b>Total at List Price</b>			
If Order Total is less than \$25.00, please add \$2.50 Shipping Fee			
If Order Total is \$100 or more, deduct 20%			
<b>SUB-TOTAL</b>			
Texas Residents add 5½% Sales Tax			
<b>NET AMOUNT DUE</b>			

Check Enclosed ☐

**Send Free Submatic Catalog** ☐

Charge to My: ☐ American Express

☐ Visa      ☐ Master Card

Account No. \_\_\_\_\_ Expires \_\_\_\_\_

**Your Name**

Address

City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_

See our ad on Page 8.



SUPERIOR  
QUALITY GARDEN TOOLS

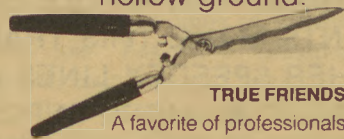
**NEW**



TRUE FRIENDS 13-27

A professional anvil type lopping shear  
PTFE-coated, high grade steel blades on  
sturdy wooden handles.  
Cuts branches up to 2".

Hot drop forged,  
heat treated and  
hollow-ground.



**TRUE FRIENDS 1954**

A favorite of professionals and homeowners. The unique, highly efficient "Wavy-edge" hedge shear. Chrome armoured. Cutting length 9"

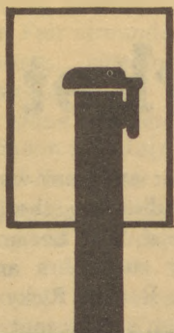
**True Friends Garden Tools, Inc.**  
P. O. Box 1278 • Cumming, GA 30130  
Telephone 404-887-7815

Dealer inquiries invited.



on cement because the battery will discharge through it. Separate the battery from the cement with wood.

• Seal ends of the air inlet pipe, exhaust, crankcase breather and



hydraulic system breather with plastic bags and tape to prevent evaporation of rust inhibitors.

• Store the tractor inside and away from livestock, if possible. Livestock may damage rubber parts on the tractor. Weather will speed rusting and damage hoses and belts. If you can't get the tractor inside, at least cover it with a rain-proof tarpulin. A



University of Missouri survey of implement dealers shows that unprotected tractors drop 16.5 percent faster in value and are down for repairs 13 percent more than protected ones.

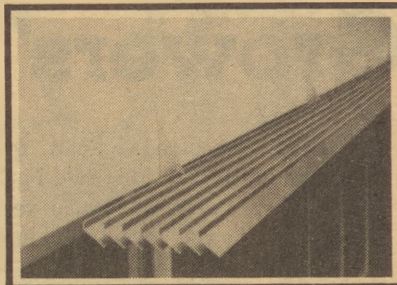
By following storage steps in your operator's manual, or the guidelines above, you'll tip the odds in favor of your tractor starting right away in spring. And that's a good way to start a promising new season. ☐

**Journalists Lon and Kathy Tonneson live on a 10-acre homestead in the Red River Valley in northern Minnesota.**

**NOW—END GUTTER PROBLEMS FOREVER WITH NEW**

## **THERMAR WEATHER-FOIL™**

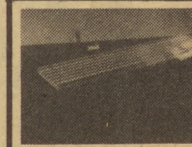
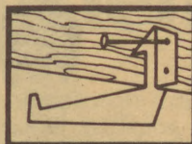
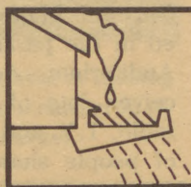
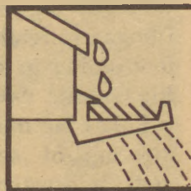
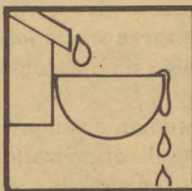
### **THE AMAZING GUTTER ALTERNATIVE**



- Can't clog
- Stays clean automatically
- Eliminates downspouts and dry wells
- Works to prevent ice damage
- Helps stop water leaks
- Installs easily in 3 hours (average home).

Ordinary Gutter

THERMAR Weather-Foil



#### **STOPS TRENCHING. EROSION.**

Air Foil designed THERMAR WEATHER-FOIL breaks up water sheet which usually runs from roof edge. Weather-Foil DISPERSES WATER—produces millions of tiny droplets which fall harmlessly to earth—pleasantly as a light spring rain. NO DOWNSPOUTS NEEDED! Eliminates TRENCHING, EROSION. Helps prevent basement water leakage too.

#### **AVOIDS SNOW & WATER DAMAGE.**

In winter snow can freeze on roof edge making gutters ineffective. Heat "leaking" from inside home and through roof causes some melting where ice and roof meet. Water trapped inside this ice blanket can then flow under shingles causing costly damage. WEATHER-FOIL'S "WEB" design helps prevent ice dams.

#### **NO CLOGGING, NO CLEANING.**

Gutter maintenance can be a constant problem. Gutters tend to fill with leaves, twigs, and debris. WEATHER-FOIL design avoids these problems. If cleaning should ever be necessary just use ordinary garden hose—right from ground level... Amazing—because it's so very simple!

#### **INSTALLS IN JUST THREE HOURS.**

First Really New Advance In Gutter Design In 100 Years. Units snap in place using simple mounting brackets. Installation for an "average" home can be made in three hours or less—with just a hammer and screwdriver. No experience necessary. WEATHER-FOIL is rustproof, corrosion proof—should last the life of your home. AND THE COST IS MODEST TOO—usually less than the cost of a traditional gutter system with its downspouts and leaders. WEATHER-FOIL IS VIRTUALLY INVISIBLE ONCE INSTALLED.

**If your gutter system is more than ten years old, you should investigate THE THERMAR WEATHER-FOIL NOW!**

Protected by US patents — Made in USA

**SEND COUPON TODAY FOR SIMPLIFIED LAYOUT AND ORDERING INFORMATION. DETAILS FREE**

**THERMAR**  
CORPORATION

JOHNSON POWER TECH  
THERMAR CENTER  
TRUMBULL, CT 06611-0398

**Call Toll Free**  
1-800-854-8679  
*Connecticut Residents Call*  
1-800-228-6505

**YES**, please rush—FREE—all details of the new THERMAR WEATHER-FOIL system, designed to end old fashioned gutter problems forever! I understand that I am under NO obligation whatever and that NO SALESMAN will call.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

FMR 985

**FREE!**



# Buy It Fresh at the Growers' Market

**T**he sky is a pale blue, and thin strips of clouds hover above the Sandia Mountains. The pre-dawn air is motionless. But while most of Albuquerque, New Mexico is still sleeping, fresh fruits and vegetables have been exchanged from hand to hand for nearly an hour -- direct from the growers to their customers. Hundreds of Albuquerque residents consistently shop at the Growers' Market twice a week. The selection and variety appear unending -- red cabbage, Swiss chard, leeks, head lettuce, snow peas, carrots, hot chilies, onions, mint dried herbs and spices are but a few of the items offered. Some vegetables at this co-operative, open-air market are unavailable fresh in grocery stores, or available only in cans. Aside from a better selection, prices are lower in the Growers' Market because the middleman has been eliminated. As one grower remarks: If we get people to try our produce once, they'll be back!"

Seven years ago while James Sais was the Bernalillo County Extension

Agent, he received a call from a woman gardener. "She said I gave good advice on how to raise vegetables, and now she wanted to know what to do with them. Before her call, other persons had phoned saying they had excess produce and would be happy just to give it away. I began to realize there was a lot of food going to waste in the Middle Rio Grande Valley."

Following the woman's call and a meeting of several organizations and interested individuals, the Growers' Market formed and opened in the parking lot of the Civic Auditorium. Adds Jim: "We received lots of publicity from the radio, T.V. and newspapers. Plenty of people showed up. The seven growers sold out in the first ten minutes!"

From 1975 until 1977, the Growers' Market members sold their produce at the Civic. Membership increased, but problems arose.

Whenever an event was scheduled at the auditorium, the growers had to relocate. This became confusing for their customers and business was lost. Recalls Ricky Parker, the association's present chairman: "One Saturday we moved to the 4-H Center on Indian School and Menaul. There was no parking on the streets and some 30 people received parking tickets. Who wants to buy zucchinis for 50 cents and pay \$5.00 for a parking ticket? We definitely lost some folks that day!" The growers then were able to make arrangements with the city to operate their open-air market downtown. And, during the next four years, Fourth Street and Tijeras became their home. In 1979 the market expanded by adding Tuesday as a selling day. Says Jim: "We had larger growers needing another day to sell. The extra produce had to move faster."

At the close of the 1981 season,





the market was forced again to move; downtown construction consumed their space. But the growers were a determined group. In 1982 the market relocated in the Caravan East parking lot, several blocks east of the State Fair Grounds. Despite all the moves, customers have remained faithful.

Rain or shine (or snow!), the market begins in mid-July and runs through mid-November. Growers have 37 selling days. Trading starts each Tuesday and Saturday morning at 6:30 a.m. "We love the early morning crowd," notes one Albuquerque grower with a big smile. "Cash in one hand and a bag in the other!"

Fifty members now comprise the Growers' Market of Albuquerque. A person may register to become a member at either the spring or autumn meeting. Annual fees are reasonable: \$15.00 per car, \$25.00 per pickup, or \$60.00 for a pickup with a trailer or large truck. The yearly membership fee entitles the grower to sell the entire season. Nonmembers are welcome to sell



This Albuquerque grower is turning her extra melons into a cash crop by selling them at the market.

their extra vegetables any market day by paying a fee at the gate: \$2.00 for a car or \$5.00 for a pickup.

"The Growers' Market is unique," comments Ricky. "It is run and owned by the farmers and growers rather than being coordinated by an outside group. Everyone votes and everyone has a say. And, our organization excludes commercial buyers who resell produce or processed food."

"In addition to that," adds Jim Sais, "the produce has to be grown in New Mexico by the individual. This rule is to protect our customers from out-of-state dumping of oranges from Arizona, for example, or watermelons from Texas, or potatoes from Colorado. We want to prevent the attitude from developing that if people need to unload something, they can get rid of it in Albuquerque."

The market intends to offer only fresh fruits and vegetables, now and in the future.

"In the beginning I was approached by people wanting to sell jewelry, Indian bread, arts and

## Send me Burpee's free 1986 garden catalog!

I want your full-color garden catalog describing more than 1,600 vegetable seeds, flower seeds, trees, shrubs, bulbs, and garden aids. (If you ordered from Burpee in 1985, your new catalog will be sent to you automatically in January.)

Since 1876, Burpee has been developing new vegetable and flower varieties that are easier to grow *and* more productive. All backed by Burpee's famous guarantee: your money back or a replacement if you are not completely satisfied.

# Burpee

2066 Burpee Building, Warminster, PA 18974

Name \_\_\_\_\_ (Please print)

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

We will start sending out Burpee's 1986 Catalog in January 1986.

© W. Atlee Burpee Co. 1985





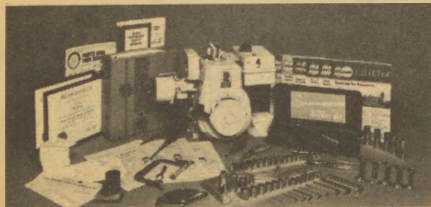
## NOW! Get in on the PROFITS in SMALL ENGINE REPAIR

Work part time, full time — right at home — we help you every step of the way.

No doubt about it... as a small engine pro, you can cash in on the huge demand for qualified men in one of America's fastest growing industries. You'll be able to command top hourly rates of from \$25.00 to \$30.00 per hour — and that's just for labor.

Plenty of business waiting for qualified men. 65,000,000 Small Engines Are in Use Today!

That's the official count from the Engine Service Assn., and one-million new engines are being built each month. With Foley-Belsaw training, you can soon have the skill and knowledge to make top money servicing these engines.



Professional Tools and Equipment PLUS 4 hp Engine.... ALL YOURS TO KEEP... All at No Extra Cost.

### NO EXPERIENCE NECESSARY!

You don't need to be a 'born mechanic' or have any prior experience. Lessons are fully illustrated... so clear you can't go wrong, and with our famous 'learn-by-doing' method you get practical 'hands-on' experience.

Foley-Belsaw Institute • 50744 Field Bldg.  
Kansas City, Mo. 64111

☐ YES, please send me the FREE booklet that gives full details about starting my own business in Small Engine Repair. I understand there is No Obligation and that No Salesman will call on me.

**FREE BOOKLET!**  
Send for your copy today!

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**FINEST FOOD DRYERS**  
Catalog ..... **FREE**  
Dehydrators and  
Kits from ..... **\$29.95**  
Exterior thermostat, wood grain  
cabinet, 2 yr. warranty, best  
air flow available

**NUTRI-FLOW** / P.O. Box 389, McMinnville, OR 97128  
Phone Toll Free **1-800-835-2246 ext. 66**

Raspberries, strawberries, currants,  
gooseberries, thornless blackberries,  
others. Free Catalog.

Makielski Berry Farm & Nursery  
7130 Platt Rd., Ypsilanti, MI 48197  
(313) 434-3673 or (313) 429-9355

## BERRY PLANTS

### ELECTRIC Chipper-Shredder

Steinmax 1800 cleanly shreds old plants, leaves, prunings and vines then pulverizes them into fine mulch. Chipper chute takes 1 1/4" branches. Powerful 1700w. motor runs on house current. Special accessory for bulk leaf shredding. Send for **FREE INFORMATION**



**The Kinsman Company**  
River Road (Dept. 110) Point Pleasant, PA 18950  
(215) 297-5613

crafts or whatever," recalls Jim. "I turned them down. We don't want our customers having to sift through everything else to find produce. In fact, one growers' market in New Mexico has turned into a flea market."

Perhaps the one hope shared by all the members is that someday the market will have a permanent location with booths and shade. Jim Sais agrees.

"We'd like to have permanent stalls for the growers, restrooms and running water. Cold storage facilities would be nice too. Then growers could store their produce rather than

lugging it back and forth."

As for the immediate future, Ricky Parker has one wish -- additional members. "The more growers we get, the more we can sell. The market can't get any larger without more growers." □

(Further information can be obtained by writing: Growers' Market of Albuquerque, P.O. Box 343, Edgewood, New Mexico 87015.)

Jonathan A. Meyers is a photographer and freelancer from Albuquerque, New Mexico. Photos are by the author.

## DON'T PASS UP THE BARGAINS!

If you are a frequent visitor at the local farmer's market, chances are you've stumbled onto some irresistible bargains: bruised bananas at half price, slightly scratched melons a quarter each, day-old zucchini at \$2 a bushel. Of course, the problem is what to do with that zucchini or those bananas when you get home, before your "wonderful buys" sit on the kitchen counter and turn white, brown or soft with age.

To inspire would-be bargain buyers, we've included several recipes for common market produce, taken from *The Farmer's Market Cookbook* by Fran Junga Garvan.

### Ginger Melon Strips



Use a couple of different kinds of melons if you can. This might be a good recipe to use as an excuse to seek out split or damaged melons at the market. I've made this recipe with honeydew, cantaloupe and watermelon. Watermelon didn't work as well as the more solid melons, but you can experiment all you like.

Meat of two melons  
Confectioners' sugar, about 1/4 cup

1 teaspoon ground ginger  
2 teaspoons grated coconut

Remove all the seeds and pulp from the melons and cut them into narrow strips. Carefully pare away the melon rind. Mix together the sugar, ginger and coconut in a flat-bottomed bowl. Add melon and toss gently with two wooden spoons until coated with the mixture. Cover the bowl and chill until serving time. Then remove excess sugar mixture and eat as is, or add to a juicy fruit salad.

### Zucchini Mikonos



Choose zucchini that is crisp, heavy and tender inside and smooth-skinned outside.

4 medium zucchini, 5-7 inches each, slice in 1/4-inch slices  
1/2 cup olive oil  
1 cup white wine  
1/2 cup dried parsley  
1 teaspoon fresh thyme  
2 tablespoons lemon juice  
1 teaspoon tarragon  
1 garlic clove, chopped  
1 bay leaf

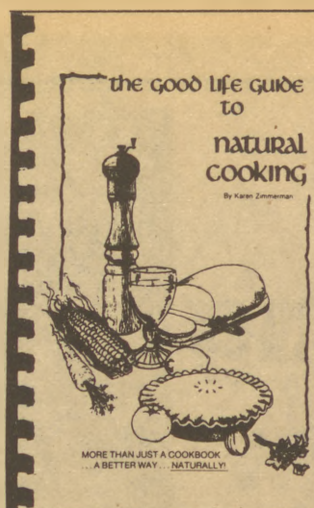


2 tablespoons butter  
1 cup red onion rings

Saute zucchini and garlic in olive oil until zucchini is coated with oil and begins to soften. Then add the rest of the ingredients and cook, stirring often, over medium heat until mixture begins to bubble. Simmer for 5 to 10 minutes or until zucchini is limp and tender. Transfer to an earthenware bowl and let cool to room temperature. Refrigerate before serving, preferably overnight. Just before serving, add red onion rings and toss until rings are coated with liquid. Discard bay leaf and drain off excess liquid. Serve as a side dish for a cold meal.



Reprinted by permission of the Harvard Common Press, Inc. © 1982. The Farmer's Market Cookbook is available for \$8.95 from the Harvard Common Press, Inc., 535 Albany St., Boston, MA 02118.



## LOOK AND FEEL BETTER

Whether you're making coleslaw, carrot cake or a main meal, cooking was never easier!

## A MUST FOR YOUR KITCHEN

276 Recipes  
Complete Nutritional Guide  
141 Pages Spiral Bound

## MONEY BACK GUARANTEE

Try our complete cooking guide for 30 days. If you don't feel better and enjoy eating more than ever we'll cheerfully refund your full purchase price. Just simply return it. We'll even pay the postage, no questions asked.

A natural gift idea. Great for showers, weddings, mother's day, anyone you love.

Send \$7.95 to Good Life, P.O. Box 8555 Erie, PA 16505

Ship \_\_\_\_\_ Copies To \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

# Buy a Homelite chain saw now and we'll help you cut a lot more wood with it.

Get yourself a dependable Homelite chain saw. Choose a powerful 240, 245, 330 or 360 in a specially marked carry case carton. Homelite will give you the carry case free.

Then we'll send you an extra guide bar and chain. And that means you'll be able to cut a lot more wood without spending a lot more money.

Ordinarily you'd pay up to \$93.00 for

**FREE**  
carry case, extra guide bar &  
Raker III™ low-kickback  
saw chain.



the case, bar and chain. But anyone smart enough to pick up a Homelite, deserves to pick up a bonus.

Visit a participating dealer and take home America's number one chain saw and a free carry case. Then rush us the coupon for your free bar and chain.

Winter isn't that far away.

Offer ends December 31, 1985.

**HOMELITE TEXTRON**

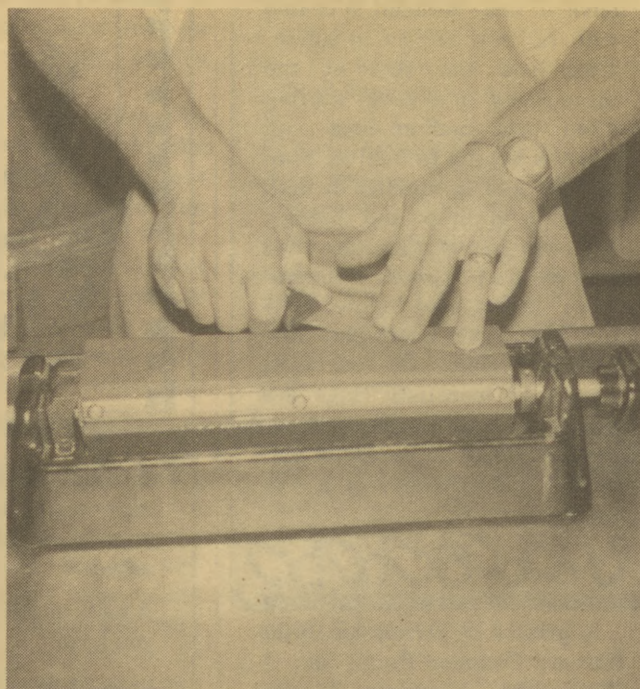
Homelite Division of Textron Inc.

**HOMELITE  
JACOBSEN**



# Knife Sharpening Know-How

**You'll need oilstones, oil, knives and practice to get the best edge possible.**



**O**ver the years, I've had more than a couple of slashed fingers that taught me the truth to that old saying, "A dull knife is a dangerous knife." It makes sense: The duller the knife, the more pressure you apply, the more pressure you apply, the greater your chances of slipping.

A good, sharp knife is a very necessary tool for the hunter, farmer, craftsperson, cook or gardener. In fact, I believe that everyone should carry one around the farmstead, including the children as soon as they're old enough to act responsibly. (I even carry a small, handy jackknife in my purse!) Sooner or later, you'll need it.

Proper knife sharpening technique is the result of practicing a few simple basics. First of all, you must start out with a good knife. A poor quality knife is hard to sharpen and won't hold a keen edge for very long. Knives vary so widely in style, size, corrosion resistance and the ability to keep an edge that the selection of a good knife is a whole other subject. In general, though, you get what you pay for.

Even high-priced cutlery won't stay sharp forever. That's where the art of knife sharpening comes in.

To learn all about sharpening the right way, I went to Jerry Beier, an expert on the subject. Jerry comes from a family of meat cutters. He started at age six, doing small boning chores for his father. When he was 11, he butchered his first beef unassisted! A supermarket meat manager for 14 years, Jerry now runs his own restaurant, but he hasn't lost his touch. I've seen him skin and bone a deer in under twenty minutes. It's really a pleasure to work with a knife that Jerry has sharpened.

To learn the craft yourself, as Jerry does it, you'll need:

**Oilstones.** These grade from coarse to fine. You'll need more than one. The simplest setup is a small stone that is coarse on one side and fine on the other. You can pick one up for under \$10. The fancier and more versatile three-way oilstone Jerry uses costs considerably more—about \$175. It features three stones, coarse, medium and fine, and a self-contained oiling mechanism.

**Stone Oil.** The purpose of the oil is to keep the stone clean by lubricating away the bits of steel and stone that interfere with the sharpening process. Regulation stone oil runs about \$11 a quart, but plain old light

grade motor oil (40 weight) works well, too.

## The Process

Choose a medium or coarse stone to start with, depending on how new and/or dull the knife happens to be. The more worn the blade, the coarser stone required at first. A good quality new knife, on the other hand, probably needs only a quick once-over with the finest stone; the rougher grained stone would grind away years of life. Apply a generous amount of oil to the stone (and keep oiling throughout the stone-sharpening procedure).

Lay the blade edge on the stone, applying moderate pressure to the flat surface with your fingertips as you sweep the knife from one end of the stone to the other. Sweep left to right and right to left, switching side of the blade on each stroke. This back-and-forth motion sharpens both edges alternately and evenly. Don't rub the blade around in a circular motion on the middle of the stone. This will cause the stone to wear unevenly, ruining it.

The angle of the knife blade to the stone is very important. An angle of 20 degrees is good. For some reason, this is easier to achieve on one side of the blade than on the





**Left:** Apply a generous amount of oil to the stone, lay the blade edge on the stone and sweep knife from one end of the stone to the other. **Above:** Check the blade to make sure you've held it at a low and uniform 20-degree angle.

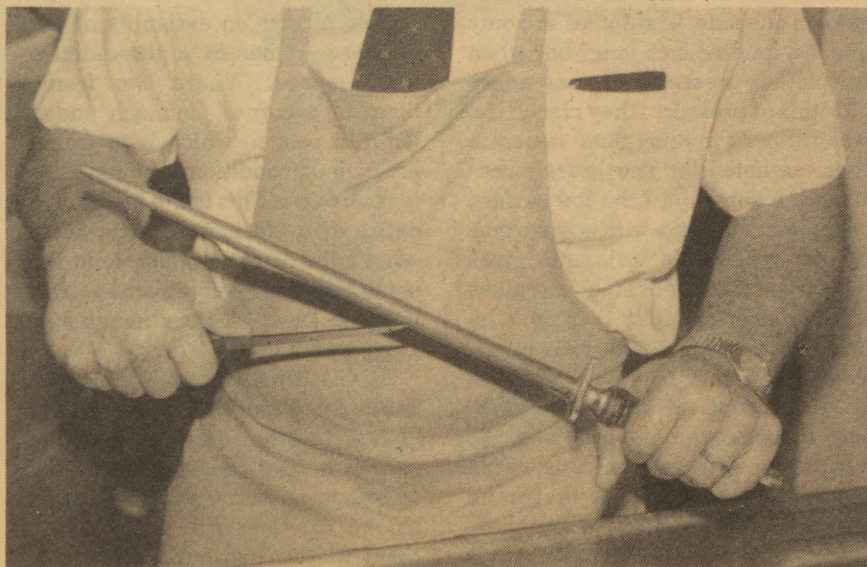
other--probably due to our favoring one hand. The natural tendency is to hold the blade at a greater angle. This causes the very thin edge of the knife to be rolled alternately from side to side as the knife is swept over the stone. No sharpening can take place if this happens. Watch your angle carefully and try to keep it low and uniform.

After working for a couple of minutes on the coarsest stone, the knife will be ready to progress to the next finer stone. Once you have

gotten into the habit of keeping your knives sharp, only use the coarse stone every second or third time to avoid unnecessary wear on the blade. Otherwise, begin with the finest stone right away. Work the knife blade the same way you did on the coarse stone.

A properly stoned knife has "micro saw marks" all along its edge. These marks are smoothed and the edge further refined by the final step--steeling. To steel a blade, stroke the knife in the same manner

**Below:** Steeling the blade gets rid of the "micro saw marks" that the stone-sharpening process leaves on the blade.



in which you would cut, drawing it toward yourself down the steel. Alternate sides, same as on the stone. Steel the entire edge, both sides, from point to hilt, stroking evenly and trying to maintain the same 20-degree angle to the steel that you used on the stone. For safety's sake, begin each stroke at the very top of the steel. A few strokes and you're done!

## Refinements

When you are sharpening one knife a lot, shift the position of your fingers as you press the blade against the stone. If you don't, eventually you'll get a "belly" on the blade because one section will always be pressed harder into the stone.

Protect your sharp knives. Don't throw them all together into a gadget drawer--that's dangerous, as well as dulling to the blades. Keep them separated and safe in some kind of sheath or holder. A very simple sheath can be made from cardboard.



Once you have a sharp blade, protect it for longer life.

Always use a soft cutting board to maintain that keen edge. Thermo-plastic cutting boards work well. Wood is excellent, even plywood without knots. Never cut on a glass or ceramic board. It will dull the knife's edge.

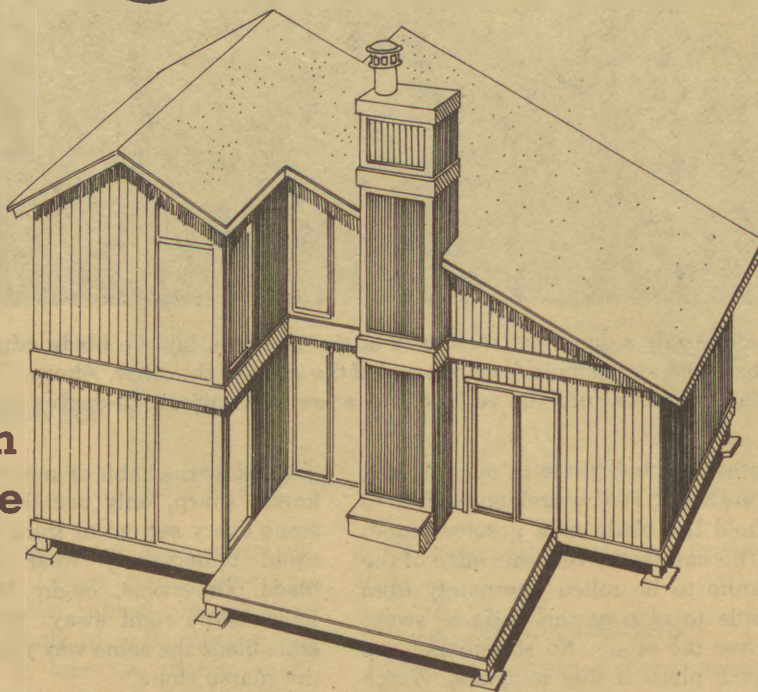
Unplug that electric knife sharpener! The old way is still the best. □

Caron Virnig lives in Rentywood, Montana.



# The Gangnail House

Using a technique that gives wood the strength of steel, this small home design features quick, easy installation and efficient energy use.



**B**ruce Johnson, a San Francisco architect with a mission, would like to do nothing less than change the way most American houses are put together, and his design illustrates the imaginative and practical methods he proposes for the change.

Bruce won first place in the City of Cotati, California's \$20,000 Home Design Contest for his gangnail design. At the heart of his system is a method of framing that equals or outperforms stick-built construction in strength, ease, time and cost. Less material is wasted in the process and there's more flexibility in design. Pressed to fit his system into existing categories, Johnson labeled it a "modified post-and-beam."

The central element here is the method of fastening adjacent boards, a technique picked up from truss manufacturers. Factories are equipped with hydraulic presses in

which boards are joined by gang-nailing, a far stronger process than conventional nailing.

Gangnails are made in numerous sizes; Johnson uses a four-by-six inch sheet-metal plate which has been punched to create a "gang" of several hundred spikes in a close grid on one side. The spikes are only about a quarter-inch long, but when the plate is pressed into wood under 100 tons of pressure, they clench the wood fibers rather than separate them as nails do. The press forces the plate down until the top surface of the plate is flush with the surface of the wood. This technique gives wood the strength of steel and gives to each joint a rigidity that can't be achieved conventionally without additional bracing.

Picture four two by sixes formed into a rectangle. At each joint the boards merely butt against each other--no special milling or trimming needed here. They're gangnailed on both sides, the metal plate

straddling the line where boards meet. The finished rectangle--Johnson calls it a frame--is the basic structural unit of an infinite number of possible designs. It is only one board wide but is all the framing needed for a section or entire length of wall.

Now picture an assembly of four of these frames in a three-dimensional space. Where two frames meet in a corner, Johnson adds a jamb, a post to which both frames are nailed in addition to being nailed to each other. This is the basis for an entire room. Structurally it's finished, a cube or rectangular solid that is fully rigid in every direction. Now, Johnson says, let your imagination go to work.

At his small two-man plant in South San Francisco, the architect/builder fashions only the flat frames; but having conceived the house as composed entirely of these frames, he can fabricate every one of them in the hydraulic press. The



entire requirement of frames, each just one board thick, can then be stacked on the back of one truck and shipped to a building site.

A simple foundation method has already been followed at the site. At the points where posts will stand, a two-foot hole is dug; sand is put in the bottom; and a preformed sixteen by eighteen inch concrete slab is set on the sand. On top of the slab stands a concrete cylinder with a specially made metal shoe on top; the wooden members that comprise the post fit snugly inside the shoe--and framing can proceed. Later the hole is backfilled with more concrete and soil.

One of several advantages of this pier-and-post type of foundation is

that it works on uneven ground and on remote sites that heavy earth-moving equipment can't reach. If necessary, each post can rise a different height from the ground in order to support a floor that comes out level.

Assembly of the flat frames takes place at the site and thus is accomplished by conventional nailing. In forming the posts, the wood members are sometimes joined also by bolts. With the first-story assemblies complete, joists are nailed to the frames to support the floor. Where the house will be two stories, the jambs run the entire height up from the foundation and are ready to receive the upper-level frames. Frame by frame, the wall structure of the whole house is rapidly assembled.

Johnson describes his framing system as "completely abnormal" for a building process. The assembly of a cube takes about twenty minutes. A typical small house is made up of about forty of these units. The labor involved here is quite simple and repetitive; a color coding system eliminates mistakes. Significantly, this work requires an

"assembler" rather than a carpenter. Johnson has successfully built houses this way with a crew of three "kids just out of high school."

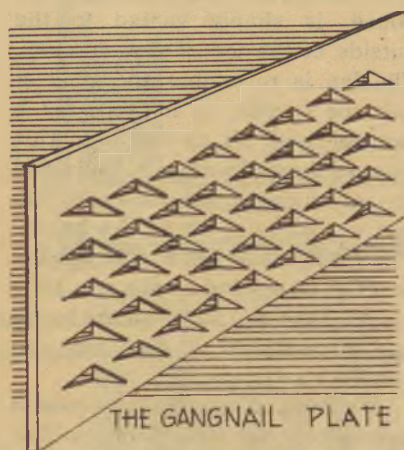
The earlier history of his framing system lay in Johnson's long experience in designing and building vacation cabins. Here the need is for a building that can be put up fairly quickly and finished in one summer so that it is secure over the winter and ready to be enjoyed the next summer.

"Solar has got to come," Johnson notes simply, and he assists the process by working some familiar as well as some unusual passive-solar ideas into his design. A brick floor in the dining room and kitchen is a thermal mass for the direct gain of solar energy. A 40-gallon breadbox-type water heater sits outside at the base of the south wall; it preheats the water in a 30-gallon electric heater located in the laundry room. The breadbox has an insulated, hinged cover which, when open, is a reflector. Window and door glass is concentrated on the south and eliminated on the north.

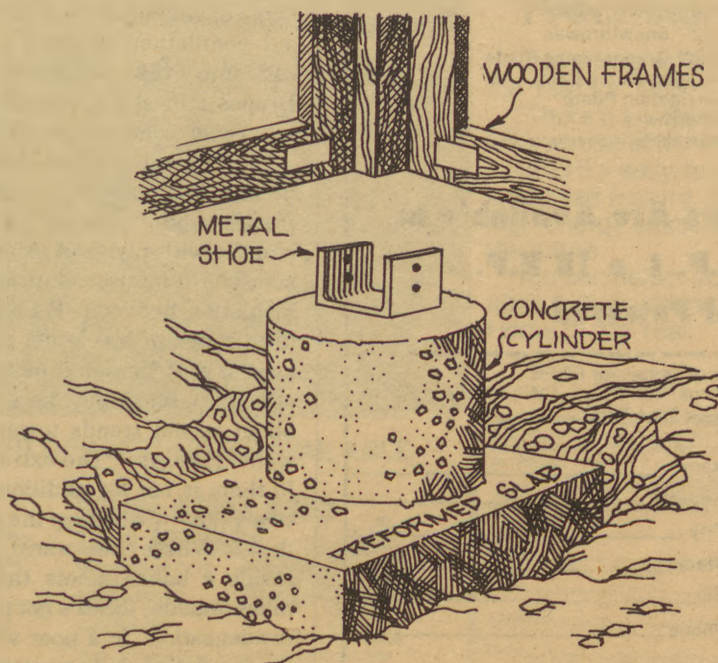
The "thermal chimney" that rises the entire height of the south wall and above it requires detailed examination. On its south face, double-pane glass is separated by a half-inch air space from a wall made of muffin tins! Very cheap stamped-aluminum TV-dinner plates, or actual muffin tins, are what Johnson in fact proposes to use for this solar collector surface. The extensive wrinkling on the metal creates additional surface area to reflect heat and stir it up.

Heat, trapped behind the glass, will rise in the air space to the top of the chimney and be directed from there, by a fan, either to bedrooms or down a four-inch space behind the muffin tins into the living areas. Rising hot air in the thermal chimney draws in cool air from the house at the chimney's base.

Beneath the thermal mass floor there is an eight-by-fourteen-foot heat storage chamber--another thermal mass. The heat that it stores moves to it not directly, from the sun, but indirectly from heat sources within the structure. This is a big shallow concrete box that occupies all the space between the floor and the soil. It's insulated on the sides



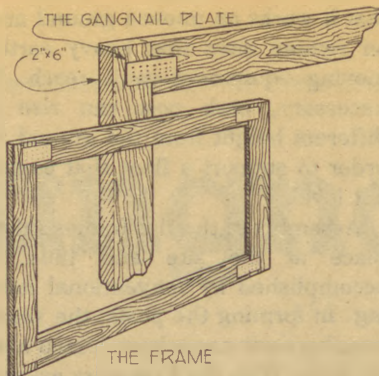
THE GANGNAIL PLATE





and bottom, rests on a layer of sand, and can be filled with rocks, concrete blocks, water-filled bottles, a waterbed mattress, or some other dense heat storage material.

Fan-forced hot air from the thermal chimney passes through this chamber. Cooler air in the house can also sink out of the living areas, through vents, into it. Because the brick floor is at the top of the chamber, some of its heat capacity will affect the warm air storage in



the chamber, too. Together these inputs will store heat in the storage material, which like the floor, will give up heat at night.

The interior layers of the thermal chimney include, besides the four-inch air space, plywood with foil-faced insulation and decorative metal heat-deflector panels. Insulation is needed to protect the plywood from the intense heat generated in the collector. The heat-deflector panels face into the living room, where they can increase the heating job done by a woodburning stove. Heat from the stove will also contribute to the amount being stored in the thermal masses.

During the cooling cycle, the hot air developed in the thermal chimney, instead of being routed into the house, is simply vented to the outside at the top of the chimney. The fan is reversible and runs at variable speeds, so if necessary it can help pull air up and out. This upward draw of warm air, fan-aided or not, induces movement in the entire volume of air in the house. The storage chamber has air intakes that can be opened in summer, thus allowing the cool air under the house and on the north to feed into the ventilation system.

All the fixed glass in the house is the double-pane type. Johnson likes to combine a tall fixed-glass window (all the way to the ceiling) with a small openable window beneath it to aid ventilation. There's a skylight set into the bathroom ceiling. Drapes and sliding insulated shutters cover windows on the inside.

Walls in the gangnail house could be installed quickly; Johnson would preassemble panels of various lengths with plywood exterior, gypsum board interior, and R-11 rolled insulation between. He appreciates the virtues of insulation and points out the contribution it makes toward soundproofing, but he's skeptical about recent trends toward thicker walls. He says, "The extra air space in them is not for additional insulation value--it's to keep the insulation dry." Where the warm air mass inside a house meets the cold air mass outside, there's got to be some condensation. In a poor wall design the insulation ends up behaving like a sponge and giving up its intended function.

## Why Buy Single Purpose Equipment? The **MAINLINE** **Ladybug** is

**The All Gear Driven  
Convertible Tiller  
No Belts - No Chains**

Featuring "Insta-dapt". No Tools  
Required For Instant, Easy Inter-  
change Of Attachments.



Ladybug With  
Rotary Mower

Ladybug With  
Snowthrower



Ladybug With  
Sickle Bar Mower

Use Your Ladybug® Year Round  
With These Optional Attachments:

- 37" & 44" Sickle Bar Mower
- 30" Rotary Mower
- 22" Snowthrower
- 36" Grader/Snow Blade
- Riding Dump Cart
- Irrigation Pump
- Furrower
- Sickle Grinder

**MAINLINE Convertible Tillers Are Available In  
30 Models from 5.7 H.P. to 18 H.P.  
Gasoline or Diesel Powered**

**WE HAVE MORE  
MAINLINE I ROTARY  
TILLERS AT  
40% DISCOUNT**

These models were produced by BCS of Milan, Italy. All machines new and in original cartons. Plenty of attachments. Parts will continue to be available.

Orders shipped within three working days.

Write Today For FREE  
Comparison Chart--"What to Look For in  
a Rear Tine Tiller"

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

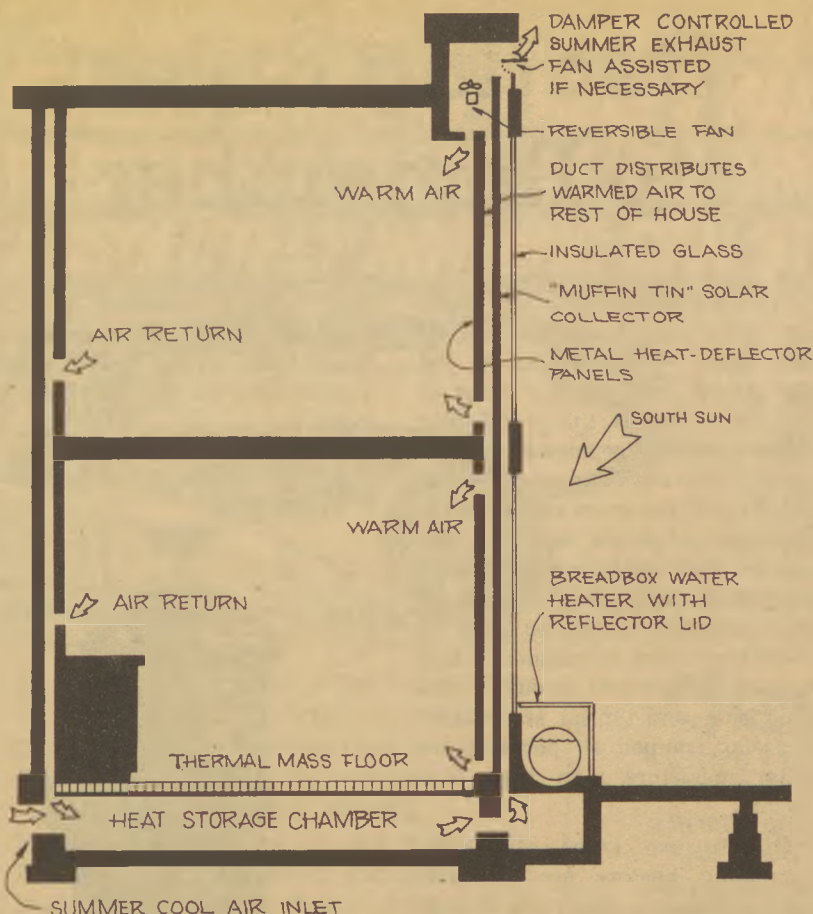
Zip \_\_\_\_\_

Phone \_\_\_\_\_

☐ Please Phone Me

**MAINLINE Box 348FM95  
London, Ohio 43140  
Phone 614-852-9733**





Another of the architect's preferences is demonstrated on the roof, where corrugated aluminum is the exterior surface. He's convinced that the metal roof "gives more for your money": it's fire retardant; when coated with a tar derivative it doesn't look shiny (asphalt shingles are a far greater drain on oil resources than this coating is); it reflects the sun (unusable or unwanted heat gain); and, with the ridges and furrows that many brands offer, it creates an air flow that dissipates heat faster than other roofing materials.

All in all, Johnson's low-cost, time saving design outdoes most traditional home plans. Much more than a "modified post-and-beam," the system is as promising as it is innovative.

Dan Hibshman lives in Willits, Mendocino County, California. This article is reprinted by permission of Sierra Club Books from *Your Affordable Solar Home*, ©1983 by Dan Hibshman. This book is available from FARMSTEAD's Market Basket.

# Home of the Year



## 'Practical, Popular, Priced Right'

That's what *BRIDE'S* Magazine says about its Home of the Year for 1985 — an affordable New England Log Home. "There's an appeal to building a log home . . . it is an old idea whose time has come — again," says *BRIDE'S*.

NELHI's easy-to-follow building system and optional do-it-yourself feature, combine with low maintenance and high energy efficiency to save you money — now, and into the future.

You can select from NELHI's more than 40 basic models, each with countless custom options to design your very own Home of the Year.

**NELHI . . . the Choice in Log Homes<sup>SM</sup>**

### DEALER OPPORTUNITIES AVAILABLE

Call TOLL FREE or write today for the name and address of your local NELHI dealer.

### NEW ENGLAND LOG HOMES

General Sales Office  
2301 State Street  
P.O. Box 5427DK  
Hamden, Connecticut 06518  
(203) 562-9981



**NELHI**  
AUTHENTIC LOG HOMES

Outside Connecticut TOLL FREE 1-800-243-3551  
Manufacturing facilities in Great Barrington, Massachusetts; Lawrenceville, Virginia; Houston, Missouri; and Marysville, California.

Founded 1969.

Dear NELHI: ☐ Please send me your Free Color Brochure ☐ Please send me ☐ Full-color Detailed Planning Kit(s) (\$6.00 each), containing floor plans, interior exterior photos, transportation, pricing and assembly information. I am enclosing a check for \$\_\_\_\_\_

Bill my credit card ☐ VISA ☐ MASTERCARD

Credit Card No. \_\_\_\_\_ Expiration Date \_\_\_\_\_  
Month/Year

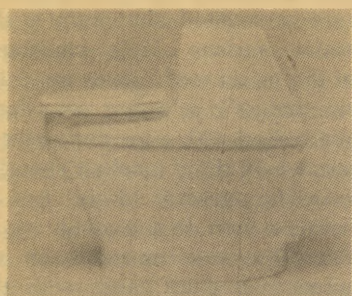
Card Member  
Signature \_\_\_\_\_  
Please Print  
NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
TELEPHONE \_\_\_\_\_

DK



## HUMUS 80 THE DRY TOILET

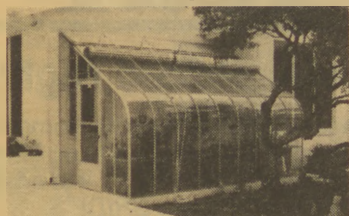


**NO WATER • NO PLUMBING • NO CHEMICALS**  
THE HUMUS 80 COMPOSTING TOILET REPLACES HIGH COST CONVENTIONAL SANITARY WASTE SYSTEMS WITH A SELF-CONTAINED BIOCONVERSION APPLIANCE THAT ELIMINATES TOILET WASTEWATER DISCHARGE  
• RUGGED STAINLESS STEEL AND ABS PLASTIC CONSTRUCTION  
• POSITIVE VENTING FOR ODORLESS OPERATION.  
• CONVENIENT MODULAR CASSETTE CONTAINS ALL ELECTRICAL COMPONENTS.  
• PROVEN SWEDISH TECHNOLOGY BACKED BY 13 YEARS OF TESTING, DEVELOPMENT AND CUSTOMER SATISFACTION.  
**HUMUS 80: THE WORLD LEADER IN BIOLOGICAL TOILET TECHNOLOGY**

Imported by:  
WATER CONSERVATION SYSTEMS, INC.  
DAMONMILL SQUARE, CONCORD, MA 01742  
DEPT. F  
(800) 343-1706 or (800) 462-3341 (Mass)  
Please send \$1.00 for color brochure.  
Dealer inquiries invited.

**HARVEST VALUE DAYS!**  
August 1 - September 30  
**SAVE \$100**  
**AT PARTICIPATING DEALERS**

## Greenhouses



*... Professionally designed,  
featuring:*

- Curved glass eaves
- Aluminum frames
- Steel substructures
- Automatic venting
- Free standing,

*lean-to and  
window  
styles*

SINCE  
1948



**TEXAS TGC  
GREENHOUSE  
COMPANY®**

2735 St. Louis Avenue  
Ft. Worth, Texas 76110  
(817) 926-5447

Send off now for free catalog.  
For 1st class mail enclose \$1.00.

# Heating Rules to Remember

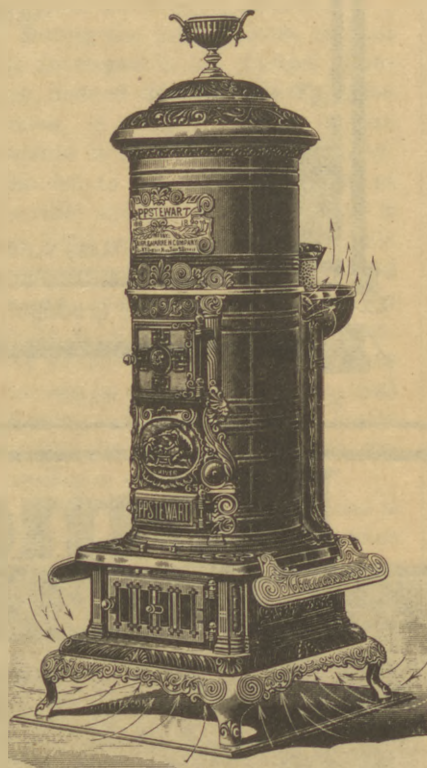
The basic rule to remember is that one large room heats more easily than three smaller rooms of the same total size. In the case of circulating heaters, this is primarily because the air flow must work itself through doorways and around corners to reach the more remote areas to be warmed. In the case of radiant heaters, walls are even more significant, since these stoves work by heating objects, not air, so the walls themselves must be warmed before they can radiate heat through to the other side--and typical stud walls, enclosing trapped air pockets, are better insulators than heat conductors.

Of the two types of stoves, circulating heaters are generally more effective at projecting warmth to distant areas; however these units do create rivers of moving air through a house which can raise dust in winter. Radiant heaters are most effective in open-design homes, where their healthful heat penetrates objects and emulates the action of the sun itself.

Of course, you can revert to a basement central heating system. This can be an attractive option, particularly if the household residents are concerned about the sawdust, wood chips and bark bits that inevitably follow wood heating into the living space. However, central heating costs more to purchase, install and repair--and consumes more wood--than a freestanding stove to heat the same living space. Then too, the basement firepot with its octopus plumbing or ductwork will never provide the cheery, homey atmosphere of the living room stove.

Since objects inside a room act as heat blocks, a room full of furniture will heat more slowly than an empty room because each of these items must be warmed by absorbing radiant heat before the temperature of the air inside the room will rise.

Once heated, however, this full room will stay warm longer than an empty room, as the heated objects project their warmth back into the room.



Generally speaking, if there are two or more parallel walls between your solid fuel heater and a part of your living space, you will not be able to heat that outlying area with a single stove. Rather than investing in a second stove installation to warm this isolated area, you may want to simply install a small electric heater, especially if the outlying room will be used only occasionally during the winter months. But this problem can also be avoided entirely by "open design" architecture.

--Michael Harris



EXCLUSIVE FORMULATION USED BY AIRLINES—NOW AVAILABLE TO CAR OWNERS

# **Glass Shield™ KEEPS ALL CAR WINDOWS PERFECTLY CLEAR AT ALL TIMES... ABSOLUTELY NOTHING CAN STICK TO THEM...**



- NOT SNOW • NOT SLEET
- NOT ICE • NOT GRIME
- NOT DIRT • NOT RAIN
- NOT BUGS • NOT TAR
- NOT SALT SPRAY

*One Application lasts for up to Six Months!*

GLASS SHIELD utilizes the formulation now used by most commercial and private planes to insure a perfectly clear windshield regardless of how foul the weather.

## **WORKS LIKE MAGIC**

You'll be amazed as you watch the elements hit your windshield and actually roll and bounce off every area of glass. It's not magic...it's GLASS SHIELD!

## **IMPROVED FOR CAR & BOAT OWNERS**

The plane formulation was enhanced by adding ingredients that not only prevent snow, sleet and ice formation on cars, but also grime, dirt, bugs, tars and salt spray from adhering to your windshield and all glass areas, including side mirrors. You can now drive in the worst of weathers with the assurance that you'll enjoy even clearer visibility at all times without even using your wipers. AND, because GLASS SHIELD protects the entire glass area of your car, you enjoy far greater visibility than merely depending on your windshield wipers. Clearer and wider visibility insures elimination of "blind spots" and provides greater protection against road accidents for you and your family.

GLASS SHIELD is made by the manufacturers of famous GLO-SHIELD, America's finest car finish. We guarantee that GLASS SHIELD will do everything we claim for it, or return the remaining contents within 30 days after receipt for refund of product cost.

© Copyright 1983 Howe Co.

## **Glass Shield™**

- STOPS ICE, SNOW AND SLEET FROM FORMING ON WINDSHIELD, ETC.
- ROAD TARs, GRIME, SALT SPRAY, DIRT AND BUGS ROLL RIGHT OFF.
- FULL WINDSHIELD, SIDE AND REAR WINDOW VISIBILITY PERFECTLY CLEAR AT ALL TIMES (not just wiper area).
- GREATER PROTECTION AGAINST ACCIDENTS FOR YOU AND YOUR FAMILY.
- ONE APPLICATION LASTS FOR UP TO 6 MONTHS.
- ONE BOTTLE PROTECTS SEVERAL CARS.
- SAFE FOR ALL CAR FINISHES.
- EXCELLENT FOR HOME WINDOWS. ELIMINATES CONSTANT WASHING
- PERFECT FOR BOATS, TOO. KEEPS SALT SPRAY OFF WINDOWS



## **30 DAY MONEY BACK GUARANTEE**

Howe Co., Dept. 7394  
10-10 44th Ave., L.I.C., NY 11101

Please rush me \_\_\_\_\_ bottles of GLASS SHIELD  
(a \$7.95 (2 for \$13.90, 4 for \$25.95) Add \$1.00 per  
order for postage & handling. N.Y. residents add sales  
tax. Enclosed is check or M.O. for \$\_\_\_\_\_, or  
charge to my ☐ VISA ☐ MASTER CARD

No \_\_\_\_\_ Expire Date \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_



**SLEEP WARM - SAVE FUEL**  
*You Sleep ON IT not under it*



New BED WARMER goes on the mattress. Enjoy soothing, relaxing radiant heat from below. More comfortable and convenient than electric blankets. Yet **COST LESS** to operate. Drives out cold and dampness.

SAVE FUEL by turning your furnace low at night, and still sleep warm. Fully automatic. Six sizes for home use and dual controls. Plus 12v. models for RV's and sleeper cabs. Also seat, back & pet warmers. Send for FREE booklet. Describes all products, advantages and savings. Great for gifts, too. Special prices direct from the factory (Our 46th Year).

**PATENTED PRODUCTS CORP.,**  
**Box A, FA-85**  
**Danville, OH 43014**

## GIANT HEAVY DUTY INFLATABLE BOATS

**2 MAN \$38**  
**3 MAN \$50**  
**4 MAN \$65**

*Before Midnight  
For The Next 30 Days*

As part of an advertising test, Dunlap Boat Mfg. will send any of above size boats to anyone who reads and responds to this test before the next 30 days. Each Boat Lot No. (Z-26 PVC) is constructed of tough high density fabric (resistant to abrasions, sunlight, salt & oil), electronically welded embossed seams, nylon safety line grommets all around, heavy duty oar locks, 3 separate air chambers for extra safety (4 air chambers in 4-man), self-locking safety valves, bow lifting & towing handle and are recommended for marine, ocean and fresh water recreation, camping, fishing or a family fun boat. Each boat will be accompanied with a **LIFETIME** guarantee that it must perform 100% or it will be replaced free. Add \$7 handling & crating for each boat requested. Dunlap Boat Mfg. pays all shipping. If your order is received within the next ten days you will receive **FREE** a combined hand/foot inflator/deflator bellows style pump for each boat requested. Should you wish to return your boat you may do so for a full refund. Any letter postmarked after 30 days will be returned. **LIMIT** three (3) boats per address, no exceptions. Send appropriate sum together with your name and address to: Boat Dept. #459-B, Dunlap Boat Mfg., 2940 W. Pico Blvd., Los Angeles, CA 90006. Or for fastest service from any part of the country call 1-800-824-9988 for Boat Dept. #459-B (Calif. residents call collect 213-735-9363), before midnight seven days a week. Have credit card ready.

## Sam Vanderhoof's Home Electric System

**S**am Vanderhoof doesn't just sell alternative energy products, he uses them extensively at home. He powers his mountain homestead with eight photovoltaic panels and four storage batteries. The panels receive an average of 5.5 hours of sunlight per day, and each panel can generate 2.2 amps of electricity per hour. This translates to close to 100 amps of electricity feeding Sam's storage batteries each day--enough power to run lights, a television, refrigerator, stereo, washing machine, fan, blender, C.B. radio, soldering iron and more. Basically the washer runs on one panel, the refrigerator runs on three to four panels, and the remaining three to four panels operate everything else. Sam does not use an inverter--which would change 12 volts to 110 volts--in this particular system but he could. In fact, eight panels is about the point at which an inverter should be considered.

"I'd call my household setup a moderate system," says Sam. "The price for such a system would run approximately \$3600.00 (based on \$400 per panel, \$100 per battery). The system meets our needs. It gives us a comfortable lifestyle without being excessive. Of course, many people get by with smaller systems."

Sam also uses an additional quartet of panels to run his 3/4-horsepower water pump. The pump lifts nine gallons of water per minute, 255 feet upward from a spring to a 1500-gallon storage tank. "I'm especially pleased with my solar pumping system," adds Sam. "The sun output matches water usage. In other words, the more the sun shines, the more water we need for the garden, and the more water we can pump due to the increase in solar power. It's just great. □

--Geeta Dardick

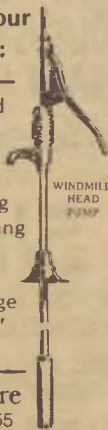
For more on Sam and his business, see *FARMSTEAD's Summer '85* issue, pages 40-42.

### Complete Outfitters For Your Back To Basics Journey:

Hand pumps, windmills, wood cooking ranges, gardening tools, apple butter kettles, cast iron ware, buggies, farm bells, beer & wine making supplies, harness, blacksmithing equipment, and more...

All new merchandise available through our 250 page "Wish & Want Book" catalogue \$3.75 ppd.

**Cumberland General Store**  
 Dept FP95 Rt. 3 Crossville, Tn 38555



### Equipment For Small Acreage Farms: Sized Right, Priced Right!



Manure  
Spreaders  
\$1,325.



Flat-Bed  
Stake Wagons  
\$1,575.



Side Dump Carts  
(Tilts to Either Side)  
\$1,475.

**This offer is valid ONLY in ALABAMA, FLORIDA, GEORGIA and MISSISSIPPI - where we are Akey Mfg.'s exclusive distributors. We want to find dealers to sell and service our equipment.**

1. Suggest to us who would make a good dealer in your area to sell our equipment.
2. We will award you a \$25. rebate certificate good towards the purchase of Akey Equipment, if we establish a dealership with them.
3. We will sell direct, but only until we can establish dealers in each area. *Dealer Inquiries from AL, FL, GA & MS invited.*

Free Information From:

**ODESSA NATURAL ENTERPRISES (O.N.E.)**

Department Number RSN- 06-2

Post Office Box 537

Odessa, Florida 33556

• Tel. (813) 920-6147

- For The Horsemen • For Small Farmers • For Organic Farmers
- For Nurseries • For Cemeteries • For Fruit Harvesting





**Today**

**animals often have  
something else  
in common—**

**Blue Seal  
Feeds!**



**... there's a Blue Seal  
ration for every animal (or bird)  
feeding requirement!**



**FEEDS**

Mark of Quality Since 1868

Look for the name of your Blue Seal Dealer in the Yellow Pages under Feed Dealers.



# Bringing Back the Antique Cookstove

**B**eatrice Bryant has enjoyed a lifelong love affair with the iron stoves that heated the homes, the schools and shops of Maine in the 19th century. Because of her, hundreds of them are still in use and will be holding fires in the next century. A long-time collector Bea finally turned her hobby into her livelihood when she opened The Stove Works in Thorndike, Maine.

"My children were getting old enough for college and we needed money to send them," says Bea, thinking back to the store's beginnings. "So the kids helped me fix up a few to sell, and we have been going strong ever since."

"We" is Bea and her husband, Joe, who now have a cooperative business in the small village 40 miles from Augusta, the state's capital. While Bea buys, refurbishes and sells old cookstoves at The Stove Works, Joe invents, builds, and manufactures steel parts and road equipment at Bryant's Steel Works, often complementing Bea's projects with missing parts.

"My husband calls me a stove-aholic," says Bea unabashedly. "I look at them and see how beautiful they will look when the work is done. He's not actually involved in The Stove Works, but if we have a breakdown or a sandblaster he designed needs attention, he comes in and helps out."

Bea's business has fared well from the start. The biggest boost, however, came in 1982, when she held a cookstove auction to raise funds for expansion. Bea sold over 150 of her antique models, keeping her favorites for a showroom in The Stove Works. According to Bea, the

old stove auction was the first of its type in the country. Thanks to the publicity it generated, Bea became acquainted with dealers and collectors all over the country.

Today, Bea has over 200 antique stoves "on hand" in her showroom, and more stored in an old barn or being repaired. A good number of these stoves will be sold to other stove dealers, and some to homeowners looking for a practical showpiece for their kitchen.

"People in old farmhouses like to have a stove going," says Bea. "Other people want a stove for a camp or cabin. A lot of people are putting cookstoves in their kitchens, both for heat and nostalgia. It is the thing to do nowadays."

Along with being a haven for old cookstoves, The Stove Works is a nationally known supply store for missing parts, complete with a "junkyard in the woods" where Bea keeps an ample supply of stove legs, lids and other hard-to-match and hard-to-find items. Even if she doesn't have a part, she can usually find it or have it custom casted by one of the four foundries she works with. But at times, Bea's stove magic just doesn't work.

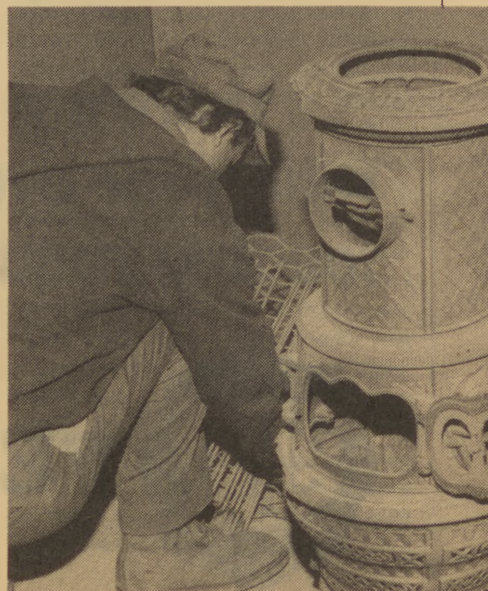
"If we don't have the new parts on hand, we use old parts," she explains. "Otherwise, you have to junk the stove. I hate to, but sometimes I have to say no. It's like when a car breaks down. There is a time you can't fix it. Then it goes to the junkyard and becomes parts. Because there are hundreds of stove makes, you can't always match everything."

Even so, Bea tries to keep the old models burning for as long as she can. Her most recent revival project

is the Home Clarion, a cookstove that was built in the 1800s, whose pattern she bought from the Portland Stove Company in Portland, Maine. For Bea, who remembers growing up with a Home Clarion in the kitchen, the revival is a dream come true.

"I'm reviving the Home Clarion because it is such a good stove. It has a 24-inch firebox and lots of nickel. It is cast iron, ornate, beautiful and rugged. It has every feature that everybody wants in a stove."

Like most cookstove lovers, Bea thinks things are looking up for the necessities of times-gone-past. There was, of course, a big surge in the popularity of wood stoves after the oil crunch allowed oil companies to increase fuel prices tenfold. Since then, the ease and convenience of oil



This self-feeding coal stove has been sandblasted by Pearly Sanborn of Bryant Stove Works.





Beatrice Bryant shows some of her antique stove treasures.



Once the stove has been sandblasted and its parts repaired or replaced, the stove is painted. Here Roy Bryant paints a newly machined drying-rack rod.

furnaces and the lowering of oil prices has caused a drift away from wood, and stove sales have slipped drastically. But not at The Stove Works.

"For me this was the best year I ever had," says Bea thoughtfully. "Most dealers say business has slacked off, and a lot of new dealers have gone out of business. There aren't that many kitchen stoves on the market, though, and that is one

reason why my old stoves do so well. They are so unique in design that people want them."

In line with her love of stoves, Bea helped organize the Antique Stove Association of America (ASAA). The main purpose of the group is to publish one book each year on antique stoves. Until now, there has been very little written about stoves. As president, Bea is very excited about the 200-member group and

can quickly rattle off their future plans.

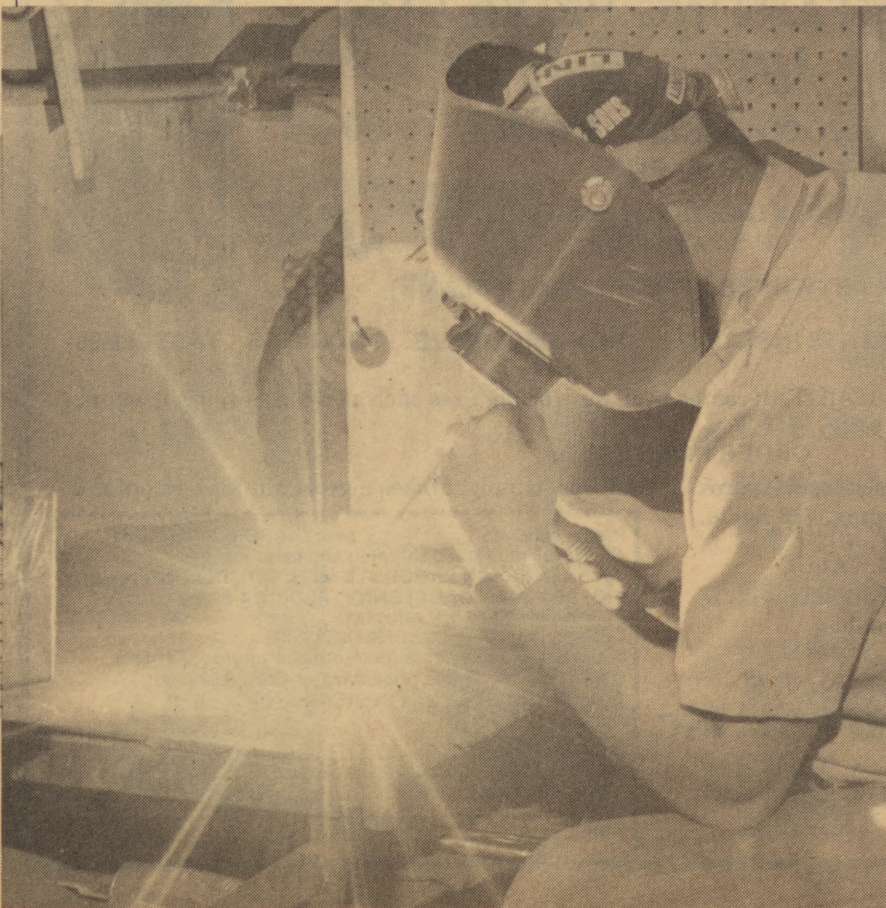
"This year, we will come out with a book of salesmen's samples, the miniature iron stoves that salesmen carried from house to house to show what they were offering. Next, we will publish a book on toy stoves, then one on baseburners and then one on fireplace inserts." In addition to the publishing venture, the ASAA will aid museums in tracking down period stoves.

Bea has a small museum of her own beside The Stove Works. The collection ranges from one of the earliest stove types, an 18th century firebox built like a heavy iron safe and standing on four stiff little legs, to the exuberant grandeur of Victorian masterpieces, resembling marble monuments in a very elegant Italian cemetery. There is no end of Greek pediments, Gothic arches, elaborate columns, fretwork and flowery friezes. Standing on tiers in the crowded room, they look like models in a design competition for Hadrian's arch.

"They are so beautiful!" says their proud owner. "They are too beautiful to sell. I like to think they will all be saved in museums somewhere when I am gone, so that other people can see and admire them."

John R. Wiggins is editor and publisher of *The Ellsworth American*, Ellsworth, Maine. This article is reprinted, in part, with permission from the author and *The Ellsworth American*. Photos by Read D. Brugger.

Tony Sanborn of Bryant Stove Works welds a part. Stove parts are replaced, repaired or recreated, depending on part inventory and the condition of the stove.





# They Kept the Home Fires Burning

*For better or for worse, wood stoves have heated American homes for almost three centuries.*

by Aileen Mallory

**I** remember seconds of shivering in my grandparents' bone-chilling parlor, the folding doors closed to all but company during the winter. Then the glorious warmth of the heating stove when I dashed back into the dining room, stereoscope and pictures in hand.

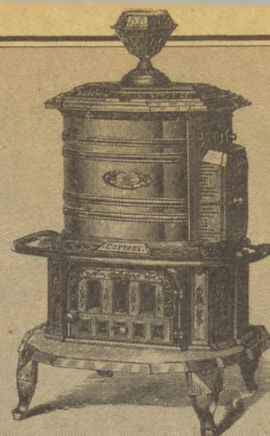
And who can forget the penetrating warmth when dressing behind the stove after crawling out from beneath the covers in an unheated bedroom?

Now, after years of central heating, stoves are making a comeback.

It was almost two and a half centuries ago when Benjamin Franklin invented his stove. He saw many disadvantages to previous models and the open fireplace. Franklin wrote, "If you sit near the Fire, you have not that cold Draught of uncomfortable Air nipping at your Back and Heels, as when before common Fires, by which many catch Cold, being

scorcht before and as it were froze behind."

It was probably Franklin's love of the open fire that led him to design the kind of stove he did, according to John Schneider, wood heat expert. "He sought to combine the charm of an open fire with the increased heat transfer efficiency of a free-standing stove," Schneider explains in his 1979 Complete Guide to



Woodburning Stoves.

As for later models of the so-called Franklin Stove, Schneider thinks, "Franklin would be undoubtedly aghast at the vast numbers of simple free-standing cast iron stoves with bifold doors sold as Franklin stoves."

It was in 1652 when the Massachusetts Bay Colony granted a patent for what was actually the first American Stove. It was designed by John Clarke and was considered of real



## TAKE THE HASSLE OUT OF YOUR FIRE STARTING PROBLEMS!

**NEW! IMPROVED!**

**WOOD-COAL LIGHTERS  
SOLID FUEL**

**64 CUBE LIGHTS PER PACKAGE  
U.S. PATENTED**

**STORE ANYWHERE [EXCEPT NEAR A FLAME]**



**NON-MESSY WATER PROOF LIGHTS INSTANTLY NON-EXPLOSIVE ODORLESS TASTELESS**

RAULERSON'S QUICK SAFE FIRE STARTERS can be used for starting fires such as wood burning, heaters, fireplaces, campfires, outdoor grilling etc.

**ORDER NOW! SAVE!**

Direct from manufacturer. Giant 12 pack case! Approx. one full year supply! Makes a great gift for hunters and campers. One giant size case has approx. 768 lights.

**SAVE NOW! \$36.00 RETAIL VALUE  
NO MIDDLE MAN ONLY \$19.95  
Plus \$3.00 shipping & handling**

**RAULERSON PRODUCTS  
MANUFACTURING COMPANY, INC.**

P.O. BOX 299  
MACCLENLY, FLORIDA 32063  
(904) 259-2806

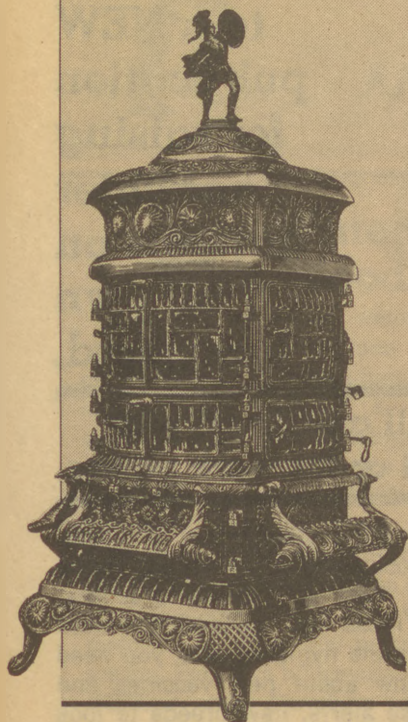
Please send me \_\_\_\_\_ cases of FIRE STARTER  
AT \$19.95 plus \$3.00 shipping and handling.  
To: RAULERSON PRODUCTS MFG. CO., INC. 340 Ivy St.  
P.O. BOX 299, MACCLENLY, FLORIDA 32063  
FL Residents add 5% sales tax.  
Dealer inquiries invited! (904) 259-2806  
Satisfactory money back guarantee for unused portions.  
Check, Money Order, Visa/Master Card accepted.  
Include Account no. and Expiration date.

Account No. \_\_\_\_\_ Exp. Date \_\_\_\_\_  
Name \_\_\_\_\_  
Home Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_



benefit because of its "saueing (saving) of firewood, and warming rooms with little costs and charges."

Clarke's invention was followed by many others,

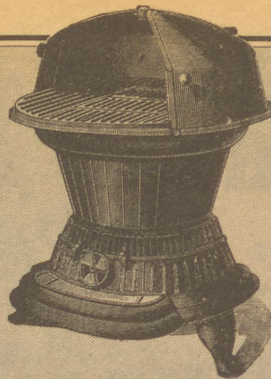


but it wasn't until Franklin tackled the problem of heating that the stove business really warmed up.

During the 19th century, many technical advances in heating were developed. Isaac Orr of Washington D.C. patented an "aor-tight stove" in 1836, though Franklin had already advocated the advantages of a well-sealed stove.

in the years that followed, everyone seemed to have a new idea for heating. In 1845, the Patent Office reported that it had issued 800 patents for stoves.

But by 1880, a succession of inventors had developed practical oil burners, and by 1900 the first oil-fired space heaters were seen everywhere. People dubious about change were skeptical. They were even a little fearful about the new fuel oil and gas.



With the arrival of the central automatic furnace, the 20th century finally caught up with ancient Rome. (Remember their centrally-heated bathrooms?) The new furnace was accused of brasking up families, however. "It is well enough to have your dwelling warmed top and bottom and have no coals to carry beyond a furnace," admitted an advertisement for an indoor fireplace. "But the furnace has done mischief to the family powers! It scatters

members all over the house and furnishes not one attractive spot in which inmates will gather as they do by instinct to enjoy the cheery comfort of a fireside." Sinfull or not, the furnace was considered real progress.

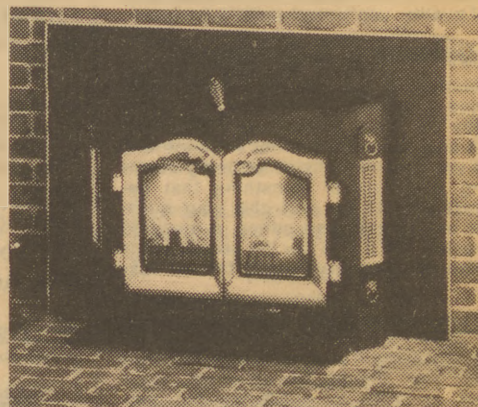
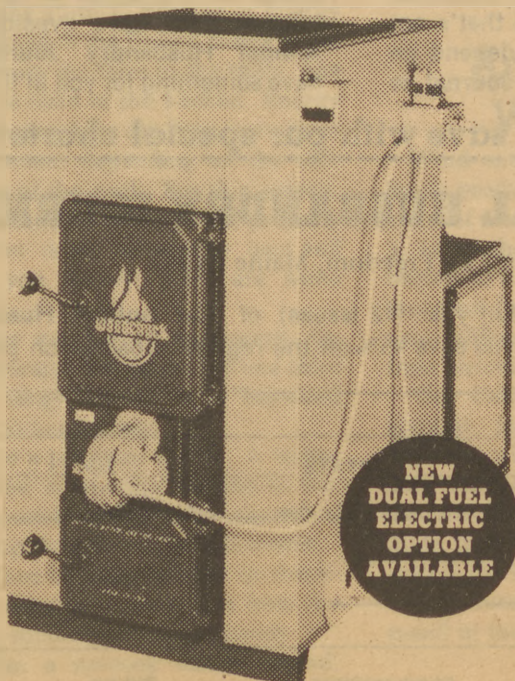
Now the stove is making a comeback as fuel prices go higher. there are even woodburning heaters to hook on to the furnace. Besides saving money, there may be a satisfaction in "going back to the basics." A man sawing his own wood is in attune with nature and his ancestors. He gazes proudly at a neatly stacked woodpile, the work of his own hands. Modern society doesn't offer too many of those pleasures anymore.

This article excerpted from the March 1983 issue of *Kanhistique*.

MFG. BY DANART, INC.



**119 S. Dewey Street  
EAU CLAIRE, WI 54701  
Phone: (715)832-3336**



- ★ **FURNACES**
- ★ **BOILERS**
- ★ **CATALYTIC COMBUSTORS**
- ★ **ELECTRIC ADAPT-A-HEAT**
- ★ **FIREPLACE INSERTS**
- ★ **FREESTANDING UNITS**
- ★ **FREE CATALOGS AND LITERATURE AVAILABLE!!**



# The ANIMAL HUSBANDRY JOURNAL



Subscribe  
to a **NEW**  
publication  
for raising  
healthier  
animals on  
your own  
farmstead.

The new **ANIMAL HUSBANDRY JOURNAL** helps small and backyard farmers grow and manage livestock for the family's food or for work power.

The **Animal Husbandry Journal** is the newsletter that answers your needs. Each issue will be packed with information for those who are raising animals--

## News Briefs.

A capsule look at what's breaking as it applies to the basic barnyard. When an experiment station discovers a stronger cross for lambing success that won't create a drop in wool quality, you'll read about it here.

## Veterinary Advice.

This column will give you the opportunity to ask those questions that have been puzzling you--why do some horses shy away from grooms and passersby? What's mange and how do you treat it? Is my goose being silly or showing symptoms of something that deserves treatment? We will give your questions to our contributing editor, a qualified veterinarian. He'll give you the benefit of his education and experience--just for the asking.

## Management Calendar.

On one page we will pack seasonal reminders of what you should be doing for your livestock in order to guarantee top performance--whether you have poultry, horses, cows, sheep, rabbits, goats or pigs, this section will supply timely tips so you can provide better care for your critters.

## Feedback.

Every issue will let you find out how other small-scale livestock operations deal with various types of problems. Feedback will pose a question for you to answer. In the next issue, we will print a selection of answers that reveal the ingenious solutions small and backyard farmers have for the many problems that all livestock owners encounter from time to time.

Animals are an investment--both in time and money. And good care is the sure route to getting the most out of your investment. **The Animal Husbandry Journal** will help you raise the healthiest, happiest, most productive animals you've ever raised. How? By giving you a regular source of authoritative information geared especially to you, the small-scale livestock owner.

Our newsletter will also provide coverage of livestock shows and sales, the cream of ideas put out by the extension services and the breed associations, new trends in fencing and shelter. And that's not all. You will be able to depend on **The Animal Husbandry Journal** to

serve up a steady diet of useful livestock news--what studies reveal about feed and forage practices, new ideas for general livestock health and hygiene, what you need to know about new vaccines and disease alerts, new breeds to look for and the latest advances with standbys, training tips and grooming aids, and much more.

Whether you are putting eggs and meat on the table, filling the milk jug, making cheese wheels, pulling the plow, twitching out wood, or any other of the many reasons folks have livestock, **The Animal Husbandry Journal** will have something for you in its pages.

Subscribe now & save with our special charter rate!

## The ANIMAL HUSBANDRY JOURNAL

Box 111 Freedom, Maine 04941

☐ YES! Send me one full year (12 issues) of **The Animal Husbandry Journal** for only \$10.00. You save 45% off the regular subscription price.

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_

ZIP \_\_\_\_\_

Charge my credit card \_\_\_\_\_

Visa \_\_\_\_\_

MasterCard \_\_\_\_\_

Exp. Date \_\_\_\_\_

Card No. \_\_\_\_\_

Signature \_\_\_\_\_

FA85

Check enclosed \_\_\_\_\_

Bill me \_\_\_\_\_

From the Editors of  
**FARMSTEAD MAGAZINE**





# THE KINDLING BOX

Alternative Energy News

## Heat Water With Wood

Now you can heat water with wood heat and without rusty kettles or reservoirs. The Paradigm Corporation has designed a simple stainless steel heat exchanger that fits into most wood stoves. Water circulates through the HOTline system from tanks by either natural convection or a pump. The heating system is more efficient than electric or oil systems, saving the average-sized family up to 200 percent per season. For more information on the HOTline, write Paradigm Corporation, RFD #3, Box 777, Putney, Vermont 05346-9998.

## The Energy-Efficient Kitchen

Of the 12 to 17 percent of energy consumed in the United States to get food from the farm to the table, one third is used in the kitchen. Energy for meal making can vary as much as 50 percent, depending on the efficiency of the cook. For this reason, preparing and storing food properly can cut down on energy use and save you money. Here are some tips:

- Use small-sized appliances. On the average, a toaster uses one third the energy needed by a full-sized oven to toast bread.

- Use a pressure cooker. A stove-top stew simmering for one to two hours needs only 15 to 20 minutes of cooking time in a pressure cooker.

- When basting, stirring or checking baking food, remove it from the oven, shutting the door quickly.

- Plan a no-cook dinner (salad,

fruit, nuts, etc.) at least once a week. Or cook energy saving meals such as eggs, fish or stir-fried foods more frequently.

- Use portable ovens or broilers, rather than range ovens. They can save you up to 50 percent.

- Ignore recipe directions to pre-heat ovens, unless you need quick high heat.

- Consider a noiseless, non-electric absorption refrigerator. Efficient and long-lived, these refrigerators use a tiny kerosene or gas flame to evaporate a mixture of ammonia and hydrogen fluids inside a series of sealed tubes. Evaporation, a cooling process, keeps food cool, even when outside temperatures rise to 122 degrees F. For more information, write Lehman Hardware and Appliances, Inc., Box 41, Kidron, Ohio 44636.

--University of New Hampshire-Durham Cooperative Extension Service and Lehman Hardware and Appliances, Inc.

## An Energy Windfall

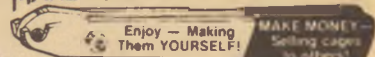
Wind energy companies in California produced 188 million kilowatt hours of electricity for major utilities in 1984, the equivalent of 310,000 barrels of oil. Experts estimate that the wind farms kept approximately two million pounds of pollutants from entering the atmosphere.

The California-based companies account for 95 percent of the nation's wind turbine installations and business activity. However, General Electric spokespeople estimate that, if harnessed, wind energy in the United States could meet 13.6 percent of the projected demand in the year 2000.

--Countryside, May 1985

56 PAGE COLOR PET HOBBY AVIARY SUPPLY CATALOG \$1.00

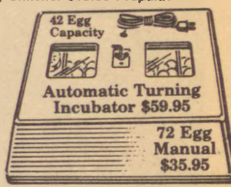
MAKE YOUR OWN TRAPS-CAGES



2500 Cage Clamps, Clincher \$18.95 Prepaid.

"Everything - You Name It"

Cast Aluminum Pop Bottle Founts with attached springs, 12/\$14.95 prepaid. Chicks, Hatching Eggs, Bantams, Ducklings, Goslings, Poultry Pickers, Medications, Bands, Nests, Peacock Book \$8.95, Hatching Guide \$4.95.



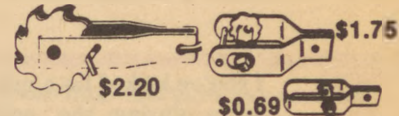
STROMBERG CHICKS & PETS UNLIMITED, Pine River, 60, Minn. 56474

## KENCOVE "NEW ZEALAND STYLE" HIGH-TENSILE FENCE

NON-ELECTRIC OR ELECTRIC STRONG • LASTING • ECONOMICAL



USA 200 WIRE 12' x ga Type 3 galv 4000	Low as \$80.00
170 USA WIRE 12' x gauge	1.3¢/ft.
NZ WIRE 12' x ga Type 3 galv 2160 55 lb	37.50
A1 WIRE 12' x ga Type 3 galv 1/8 mile 227,000 PSI min	44.00
ALUM CLAD 14 ga wire ultraflex 1100 lb break	1.4¢/ft.



PERMANENT IN-LINE WIRE STRETCHERS:

DONALD S STYLE No 1 MINUTITE	.69
No 2	1.75
HAYES STYLE (with aluminum cog spool)	2.20
HANDLE required to use above	3.00
SPRINGS galv 225 lb - 1 1/2" compression	4.00
CRIMPING SLEEVES FW 2 3 12' x ga (100)	11.00



CRIMPING TOOL Nico 64-2345	95.00
SPINNING JENNY unwinds high ten wire	38.00
CHAIN-GRAB WIRE STRETCHER smooth grip	24.95

LD FIBERGLASS POSTS notched 2" OC 2nds	.20¢/ft.
HD FIBERGLASS POSTS self insulated 5 ft	.60

### INSULATORS

WRAPAROUND INSULATORS easy Ends - (10)	7.50
DOUBLE U INSULATOR for big posts (20)	7.50
DOUBLE NAIL PIN ON INSULATOR (25)	7.00
CUT-OUT SWITCH stainless steel	
VOLTMETER DIGITAL READOUT Speedrite	49.00
ELECTRIC FENCE WARNING SIGNS plastic	.70
SLINKY GATE electric 2 to 16 ft gate	7.50

KENCOVE NZ POWER CHARGERS Powers miles of heavily-weeded fence for less money. Call for prices

### PORTABLE FENCE

HOT TWINE w/ Stainless wires	
660 ft - 3 wire	5.95
1650 ft - 6 wire	24.95
HOT TAPE 1/2" 5 wire Visible 660 ft	19.95
REEL use w/ HOT TWINE portable w/ latch	23.00
FIBERGLASS 1/2" ROD POSTS Portable	.25¢/ft.

FREE DELIVERY POSSIBLE! Up to 10% of prepaid orders allowed to shipping VISA, MASTERCARD and UPS-COD—only 5% allowed for shipping. Shipping immediately normally UPS FAST DELIVERY.



R D. 1, Box 111  
Blairsville, Pa. 15717  
Phones: 412-459-8991  
Pa. 800-442-6823  
Other States 800-245-6902  
Your Direct Route To High-Tensile Fence Supplies



# Cookstoves: Today

**Cooking ranges are doing more and doing it better than before.**

**I**f you've looked for a new stove during the past year or so, you know it's quite a different adventure than the first time around. The black box has undergone a major overhaul. Inside, fireboxes have been twisted to squeeze more heat out of less wood. Technology has been borrowed from other industries to boost efficiency and reduce emissions. Outside, stove skins have been adorned with brass trim, glass viewing windows and even porcelain enamel.

Unfortunately, most of this tinkering has been done for purely aesthetic reasons.

The exception to this is that stalwart wood-burning appliance, the cookstove. Today's solid fuel cooking ranges ain't what they used to be. Although they remain in the spirit of their forerunners as providers of warmth, cooking and good cheer, modern cookstoves are taking on other roles as well.

Some models, particularly those imported from Europe, can easily be hooked into a home's hydronic central heating system to provide hot water for radiators. Others double as the sole source of domestic water heating. Both slice energy bills significantly, and take over



Thayer Smith

where the traditional living room wood stove leaves off.

Cookstoves also are making a comeback because of recent trends in housing design. As the kitchen returns as the focal point of most floorplans (particularly in open, passive solar homes), the wood-burning range regains its prominence as the gathering place of the dwelling. You don't need a mammoth kitchen for a wood-burning range--modern cookstoves packed with insulation have clearances as little as four and one-half inches from combustible cabinets and tables.

The primary function of a cookstove, however, remains cooking. Here is where the most advances have been made. Fireboxes have been made larger and airtight,

allowing you to concentrate on feeding the family instead of the firebox. Temperatures are easier to regulate. And you no longer have to abandon knob turning and button pushing; many models offer the convenience of traditional appliances.

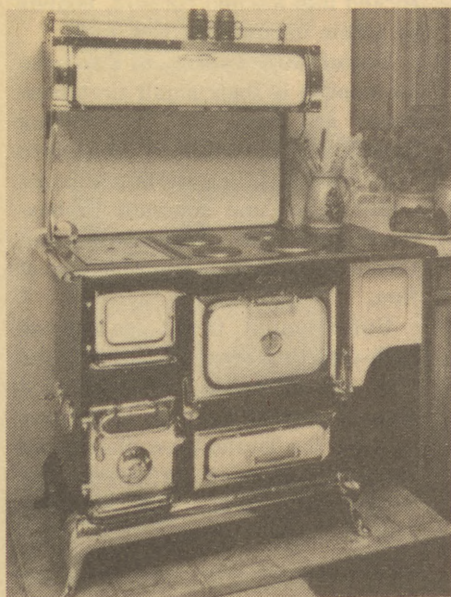
## Updated Antiques

The old-time stove lives on, thanks to several manufacturers. Traditional cookstoves, complete with nickel trim, warming ovens and water reservoirs remain the cookstove of choice in North America. Approximately 10,000 were sold last year alone.

Most popular are Elmira Stove Works's units. A decade ago, the company manufactured several hun-



elmira



piazzetta



kroupa two

dred units for the sizable Amish community in its native Ontario, Canada. Today, the cookstoves are the best selling products in their line.

Elmira has made several key improvements in the stove. Doors are tight-fitting. Spin-style draft controls give the cook the option of a lazy cooking fire or a hot oven. A gasketed firebox makes the stove a wood miser.

Operation is controlled by two bell dampers. They regulate the air flow (and thus, the temperature) of the cooking ovens. A thermometer sits in the "belly-button" of the large cooking oven.

There are three sizes of Elmira cookstoves: the large "Oval," medium-sized "Julia" and smaller and adorable "Sweetheart." All have ample ovens; promotional literature features huge brown turkeys fitting in all three.

Elmira's antique look-alikes also have sizable cooking surfaces. There's an art to cooking on these, since each part of the top is a different temperature (the section nearest the firebox being the hottest). The larger models have six fondels, the smaller ones just three.

Standard on most Elmira models is a small water reservoir. They

provide enough hot water for a few cups of coffee, but not much beyond that. For more hot water, optional waterjackets are available at a low price.

Another popular model, this one imported from Ireland, is the Waterford "Stanley." It is a little more low-key in appearance and gives the Elmira a run for its money in quality. Also in the same league is the Amish-designed Hitzer Stove of Berne, Indiana. Washington Stove Works, Atlanta Stove and Canada's Margin Gem Cookstoves also manufacture traditional cookstoves in the same vein.

## Multi-Fuel Heaters

This year, Elmira unveiled a combination wood/electric model with the same traditional appearance as its others. It's the best of both worlds if you're not ready to sever your ties with fossil fuel.

Multi-fuel ranges also take on other looks, including the classics from Monarch, one of the country's oldest manufacturers of solid fuel heaters. Monarch's wood/gas and wood/electric models appear on the outside as your basic, All-American appliance: white, square, with rectangular cabinets and dial controls.

These dual-fuel units have several things going for them. First, the ability to switch fuels. Let's face it. There are times when you do not want to haul firewood, no matter how immoral you think using fossil fuel is. A multi-fuel cookstove gives you that choice. When using electricity, a damper closes the flue, saving heat that otherwise would be lost.

Another major benefit involves summertime cooking. Even the sleekest, most technically advanced wood cookstoves give off more heat than you can handle when it's sweltering outside. Although an electric or gas-fired stove also will warm the kitchen no matter what the season, the heat will not be as intense or long-lasting as that from a wood-only cookstove.

A less obvious benefit of a multi-fuel cookstove is the capability of adding heat to the oven. If for some reason wood heat is not providing the required oven temperature, an electric module can be kicked on to supply the extra warmth. It's not often that this will happen, but the option is there.

Monarch manufactures several other options to add wood heating to your kitchen. Add-on (or, as the company calls them, "built-in")



units have separate solid fuel units attached to the side of a conventional one. A small 10½-inch firebox sends wood or coal heat to the iron stovetop. Unfortunately, the additions may only be hooked up with Monarch appliances.

Perhaps the grandest of all multi-fuel cookstoves is the British-made "Aga," distributed in North America by the Stowe, Vermont-based Coalbrookdale company. Its enamel finish (red, blue and brown, to name a few colors) makes it by far the most attractive stove in this category. Its extra-large oven, cooking surfaces and thermal mass are part of the reason that many European chefs live and die by it. Lady Diana insisted on buying a (what else) royal blue "Aga" last fall.

## Cookstoves for Central Heat

Europeans always seem to be a step ahead when it comes to wood stove technology and the cookstove is no exception. Stove designers from abroad have taken the next

logical step in stove development, improving its functions as a water heater and an aid to a central heating system as well.

From the outside, these European central heating cookstoves look ordinary enough. Their skin most often is enamel, available in a rainbow of colors and easily adapted to a country or high-tech kitchen. They are compact, only slightly larger than the traditional American oven. Most have a window and even oven lights.

It is inside where the European cookstoves differ from their American cousins. In their never-ending quest for efficiency, the Europeans surround fireboxes with steel water-jackets on two sides (or more). The heated water then is pushed up and around the firebox. This results in a continuing supply of hot water, and at higher temperatures.

In the simplest European heaters, the hot water is stored for domestic use. With the more sophisticated models, the hot water is channeled directly to the home's conventional central heating system, reducing the

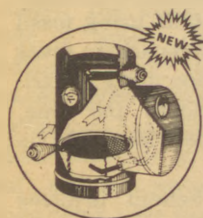
strain on the oil or gas boiler. It's a simple idea--and it works.

Despite being such workhorses, most European heaters have extremely low clearances. They can be tucked into kitchen corners, islands or within inches of a back wall.

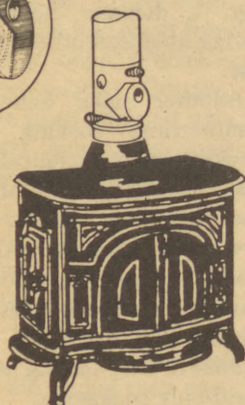
One of the drawbacks of European cookstoves is their small fireboxes. Many are made for coal-burning (fine if you live in the Northeastern U.S. where anthracite is available; added labor and constant firebox-tending if you live elsewhere). Operation also is a little trickier at first.

Unfortunately, the choice of these high-quality stoves is limited in the U.S. Among those available, good bets in central heating cookstoves include: the Tirolia (now distributed in North America by Jotul), the British-made Aga, and France's Franco-Belge. ☐

Steven Maviglio is Associate Editor for Energy Publications and lives in Laconia, New Hampshire.



PATENT  
PENDING



**TURN  
SMOKE INTO HEAT**

# ULTRA-BURN™

## Convert Your Stove To A Clean Burner

**ULTRA-BURN™** catalytic retrofit has the most advanced design in retrofits on the market today. It is easy to install, easy to operate. Ultra-Burn will reduce your wood consumption up to 50% or more, reduce creosote formation, air pollution, add two to four hours of burn time to your present stove. It fits top or rear exhaust and will adapt to 5", 6", 7", or 8" round or oval flue. Ultra-Burn owners tell us they save more than a cord of wood in one heating season - pays for itself. Call or send for free brochure.

### SEND COUPON TODAY

C & D Distributors, Inc., P.O. Box 766, Dept. 71095 Old Saybrook, CT 06475 (203) 388-3408.

We will RUSH TO YOU A BROCHURE giving the complete, exclusive details plus WHERE TO BUY information ... and SPECIAL PRICE.

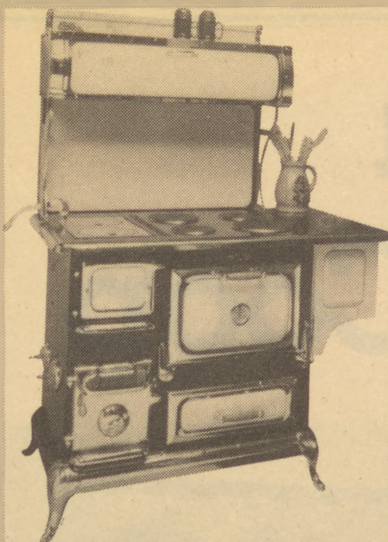
Name \_\_\_\_\_ Phone ( ) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



# COOKSTOVE MANUFACTURER BUYERS' GUIDE



**Atlanta Stove Works**, P.O. Box 5254, Atlanta, GA 30307 (Cooking Range 1536, a traditional, upright model)

**Berlin Wood Stove Co.**, P.O. Box 1633, Gravenhurst, ON P03 1G0 (Margin Gem, a quality, cast-iron antique reproduction)  
**Capitol Export Corp.**, 8825 Page

Bldv., St. Louis, MO 63114 (Importers of the Waterford "Stanley," a top-rated traditional cookstove)

**The Coalbrookdale Company**, RFD 1, Box 477, Stowe, VT 05672 (Imports the acclaimed "Aga," the classiest cookstove on the market)

**Elmira Stove Works**, 22 Church St. W., Elmira, ON N3B 1M3 (Several models of the quintessential cookstove available, including a wood/electric, electric-only and three sizes of wood-only stoves)

**Franco Belge/Coal Heat Inc.**, 120 N. Main, Alburtis, PA 18011 (Importers of the model 82-706, a central heating European cookstove)

**Hitzer, Inc.**, 269 E. Main St., Berne, IN 46711 (A simple and hard-working traditional cookstove designed by area Amish)

**Jotul USA**, P.O. Box 1157, Portland, ME 04104 (Importers of the Austrian-made "Tirolia,"

a top-quality European central heating cookstove)

**Kroupa Stove Works**, RR #1, Bridesville, BC V0H 1T0 (A unique step design with baking oven, glass door and enameled finish)

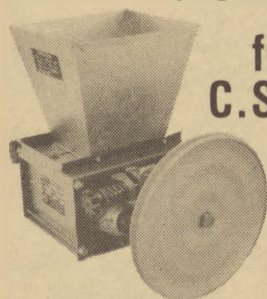
**Monarch Range**, 715 N. Spring St., Beaver Dam, WI 53916 (Modern multi-fuel cookstoves and new wood/electric traditional model)

**Piazzetta Stoves**, c/o Maple Distributing, 334 Maple St., Summit, NJ 07901 (Attractive Italian-made tile cookstoves with central heat and domestic water heating capability)

**Stoves International**, 1048 N. Third St., Milwaukee, WI 53203 ("Lindau" cookstoves, classic European central heating models)

**Washington Stove Works**, 8402 Smith Ave., Everett, WA 98206. (Model B-18-1 is a cast-iron, traditional cookstove)

## Save 30% on Feed Costs NEW OATS CRIMPER



from  
**C.S. Bell**

Crimp or crack grains and roughage yourself. Get a better all-round feed; less cost and convenience, too. 10 bushel per hour capacity makes our new Crimper ideal for horsemen, small farmers and stock breeders.

Machine fully adjustable with settings to process general livestock and poultry feed needs. Unit includes hopper and v-pulley. 1 year warranty. Accessories available. Buy factory-direct and save.

For crimper brochure or to order, contact us for prompt handling via UPS.



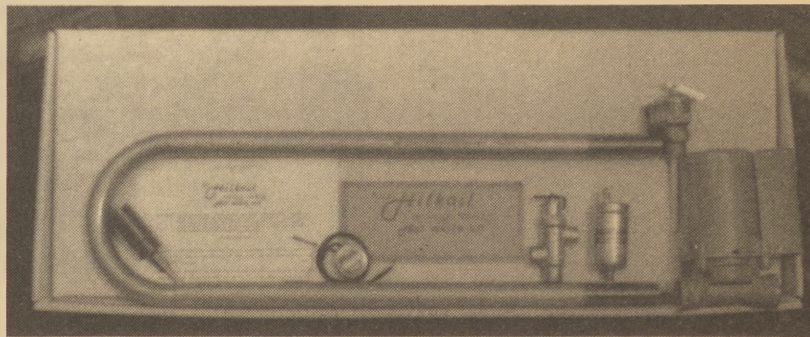
**The C. S. Bell Co.**

P.O. Box S-91  
Tiffin, OH 44883 (419) 448-0791

America's Original Farm Bell Manufacturer

## YOUR POWER COMPANY IS IN HOT WATER

when you install a  
Hilkoil Super D Coil Kit in your woodstove or furnace



Model 24SD \$225.00 Retail

*First Year Payback on Investment*

**Super D Kit includes:**

- ★ 24" Stainless Steel Heat Exchanger with 3" Thread
- ★ Locking Hardware and Gasket
- ★ Circulating Pump, UL Listed
- ★ Aquastat Control
- ★ Hot Water Tempering Valve
- ★ Automatic Float Type Air Vent
- ★ 1-1/8" Hole Saw
- ★ Detailed Installation Instructions

The Hilkoil heat exchanger meets EPA requirements for "potable water" and ASME, ASTM, and U.S. boiler code requirements. Ten Year Warranty on Hilkoil. Pre-paid orders receive free shipping.

**Write:**

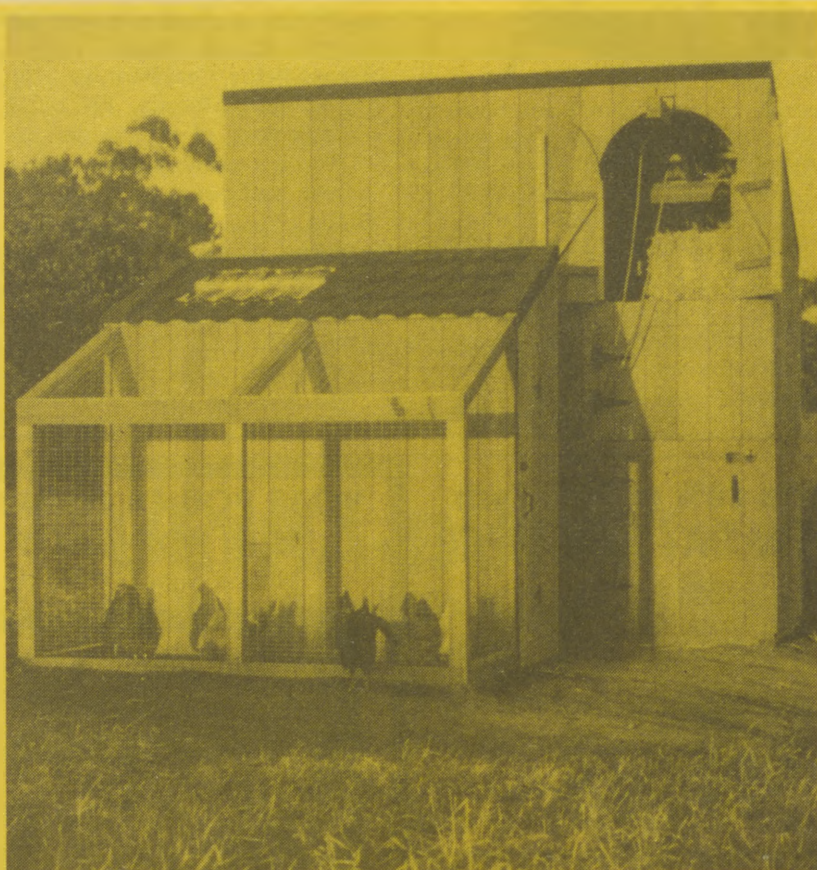
Stove Coils for Woodburners  
Thermo-Bilt, Inc., P.O. Box 3207  
375 Altamont Ave.  
Schenectady, N.Y. 12303  
(518) 377-4004

Send \$1.00 for:  
Stove Coils for Woodburners Catalog.



# The Malibu Barn Coop

The chicken coop is a modular design. It can be attached to the barn or the garage.



Max Navarro

*In our Summer issue, we printed the plans for the Malibu Barn, a small-scale, multi-use shelter for goats, garden equipment or a host of other storeables. What follows is a description of the barn's chicken coop, an ideal addition for the enterprising small farmer. It's designed to be built onto the existing barn, but with some changes could make a fine shelter all by itself. (For back issues of Farmstead Summer 1985, see the Market Basket on page 76.)*

**T**he chicken coop, designed as a separate 8-by-8 foot building, can house six laying hens in splendid comfort. In fact, it works so well that the chickens practically take care of themselves.

This number of hens will supply a family with at least four eggs a day and possibly some poultry for the table. Goats add milk and cheese to the menu. Combined with a vegetable garden and a few fruit trees, the backyard barnyard can make





The steep roof on the nest boxes prevents chickens from roosting there. Keeping nest boxes filled with chips or shavings makes for a comfortable nest and cleaner eggs at collection time.

quite a dent in the food bill and bring a certain sense of self-sufficiency.

The staff at the Los Angeles Times Home Magazine built both the barn and the coop. Since none of them are professional builders, both structures should be very easy to erect.

Like the barn, the coop is modular

in form, accepting standard sheets of plywood with little cutting, and they can be arranged in a variety of ways. In the shelter pictured here, the coop was placed in front of the barn, but it can be positioned at the side or in the rear, depending on the available space.

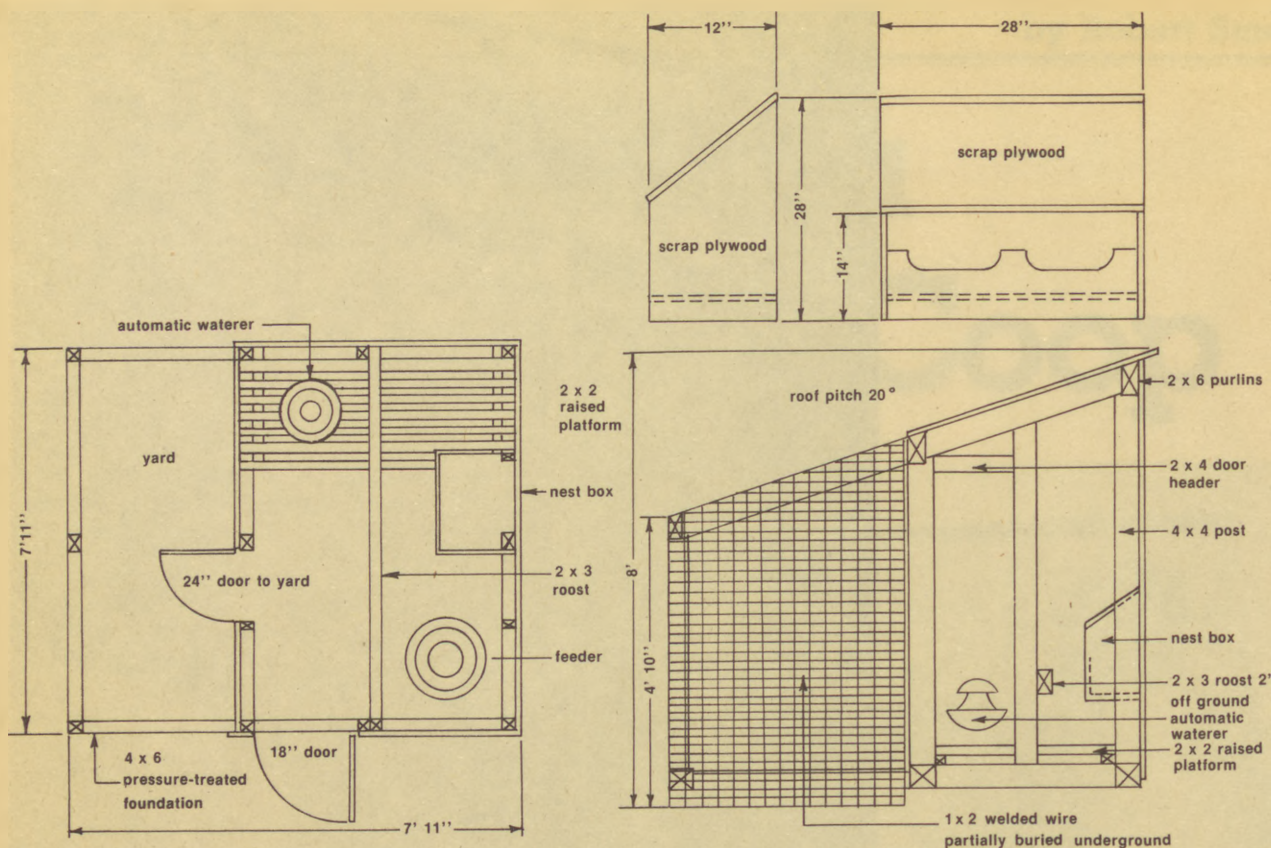
While the barn can be put to a variety of uses, the coop is just for

chickens. It's an efficient poultry-raising machine, easy to keep clean and so simple to construct it can be built in one weekend.

Each chicken requires about four square feet of floor space and 10 inches of roost. Every four chickens

[Plans appear on page 72. Text continues on page 74.]





## SOTZ AIRTIGHT WOODSTOVES

AS LOW AS **\$27.47**

**Most Efficient Kits—Patented Internal Draft Channel**  
Mounted to inside of door on heavy steel kits only.

Original 15-30 and 55 Gal. only. Air entering top draft control is pre-heated as it is drawn down inside of door, air is sucked into bottom of heater with a turbulent action, mixing with the wood gases, making these 2 heavy steel models sparkproof and tops in efficiency, life-time heavy steel, tapered formed, self-adjusting door and frame seal.

Over 300,000 in use



**GUARANTEE.** Try the Sotz Heater Kit at our risk. If (within one year) you don't agree it outperforms any wood heater money can buy, or if kit ever cracks, warps, or burns up, your money will be refunded. Including shipping charges.

Kits convert 15 to 55 gal. drums (not supplied) into high capacity stoves.



### ALL STEEL & CAST IRON STOVES FEATURE:

- Airtight design and draft control engineered to limit the amount of oxygen entering stove for controlled, safe, efficient heat. Prevents over-firing so drums can't burn up.
- Use of draft control allows you to heat large or small areas. Basement installation heats your entire home. Great for your garage, workshop or cabin. Top drum squeezes 60% more BTU's from heat normally lost up the chimney. Bolts together quick and easy.

• Sotz Top Kit includes heavy duty connector pipe - Other brands don't.

Size Kit	Factory Pick-up	Del.
15-30 Gal. Bottom	\$27.47	\$31.47
55-Gal. Bottom	\$34.98	\$38.99
Cast Iron Bottom	\$29.96	\$34.96
Top Kit Fits All	\$17.97	\$20.93
Budget Heater	\$16.95	\$19.95
Safety Label	.50	.50

### Automatic Draft Control

For Sotz Stoves	\$18.95	\$21.95
Spin Draft Stoves	\$21.95	\$24.95

"NOW" ALSO MADE IN CANADA

Prices: Call 1-807-222-2323 or write  
"SOTZ" P.O. Box 1000 Dept. 07-86  
Ear Falls, Ontario POVITO

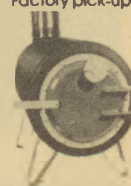
### BUDGET HEATER

**NEW**

Fits  
15 thru  
55-gal.  
Drums

**\$16.95**  
Factory pick-up

- Spark Proof
- Air Tight
- Priced Below Leaky Imports
- Lifetime Guarantee

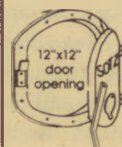


(Drums not supplied)

Designed for the budget shopper. For occasional heating jobs such as workshop, cabin or other, where very efficient stove design is not wanted. Stove parts similar to Sotz 30-gal. stove kit, except without patented internal draft channel, has spark arrestor shield instead. Draft control on bottom of door.

### ECONOMY CAST IRON

**\$29.96**  
Factory pick-up



Kit fits drums from 30-55 gallon

Airtight Gasketed Door

VISA or MASTERCARD RUSH ORDERS  
CALL TOLL FREE 1-800-321-9892  
Inside Ohio 1-216-236-5021  
or SEND CHECK OR MONEY ORDER  
Sorry, No C.O.D.'s

Sotz Inc., 13626-S85 Station Rd., Columbia Station, OH 44028



# Farmstead's Cookin'!

Sign up now  
for a year of  
the **BEST**  
in  
home  
gardening  
and  
country  
living.

FARMSTEAD's six great issues a year deliver the full range of topics you need to get the most out of country living--expert advice on how to grow a productive garden, ways to meet your energy needs economically, how to build and maintain your home, and ways to shelter and care for your livestock. In addition to a variety of articles, you'll enjoy Ask Farmstead, Feedbag, Your Green Garden, Kindling Box, Reviewer, the Market Basket (including the bookstore), the original illustrations and our touch of humor. Get more of what you live in the country for--get FARMSTEAD.



Bob DeLong/Bangor Daily News

## Subscribe Now & Save:

For just \$11.97 a year you get six BIG issues (you'd pay \$15.00 on the newsstand). Or SUBSCRIBE for two years for only \$19.97...that means even BIGGER SAVINGS off the single copy price!

Mail Card or Coupon Today!

FA85

Please enroll me as a subscriber to Farmstead.

NAME \_\_\_\_\_

☐ Check here if this is a renewal.

ADDRESS \_\_\_\_\_

☐ \$11.97 (One Year) ☐ \$19.97 (Two Years)  
☐ \$27.97 (Three Years)  
☐ Canadian Subscription \$20.00 per year.

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_



[Continued from page 72.]

need one nest. Based on these figures, this coop will easily hold eight hens, but half-a-dozen will provide all the eggs a typical family can consume.

The coop is divided into two parts: One half is enclosed in plywood to keep the flock dry and warm and to help muffle some of the squawking that accompanies egg laying; the other half is covered with 4-foot wide rolls of 1 by 2-inch welded wire mesh. Regular chicken wire is not strong enough to keep out dogs and raccoons, a chicken's worst enemies. Nail a strip of welded wire around the base of the coop, and bury it a foot in the soil to keep animals from tunneling beneath.

The floor is dirt, the easiest surface to keep clean and odorfree. Chickens scratch around constantly, mixing dirt and droppings, and the natural bacteria in the soil keeps it fresh. It is, however, a good idea to keep the floor covered with pine chips (available at feed stores).

The nest box should be filled to the brim with chips to keep the eggs



Dawn Navarro of Malibu feeds her chickens pelletized feed.

clean. The nest shown in the drawings accommodates two hens at once. The roof is steep to keep them from roosting there.

The weight-activated waterer guarantees that there is always water available. It is mounted to the wall above a raised platform of 2 by 2s spaced two inches apart. This keeps chickens from kicking dirt into their water.

Pelletized feed is the easiest to handle. Bulk feeders can be purchased that will hold as much as 50 pounds, which lasts six chickens about one month. The feeder should be suspended from the ceiling so you can clean underneath.

As with the Malibu Barn, the roofing on the coop is a kind of metal tile, coated with mineral granules. Manufactured by A.H.I. Roofing of Orange, California, it's called Typhoon Tile and it installs on top of 2 by 2-inch battens. Clear panels function as skylights.

Robert Smaus is a staff writer for the Los Angeles Times. Copyright, 1980, Los Angeles Times. Reprinted by permission.

## Do You Sell By Mail Or Want To?

© by Phillip E. Brancato, Sr. 1985

Selling by mail is the fastest way I know of to obtain wealth and is for the strong and determined - not for the meek and doubters. There are only a few winners and many losers.

The most expensive part of selling by mail is finding your customers - not selling him, just finding him. And the two fastest ways I know of is advertising in national magazines or by direct mail.

### National Magazine Advertising

is very expensive because you are doing shot gun advertising. By this I mean you are paying for millions of people to see your advertising who are not and never will be interested in what you are selling.

1. You must write an ad that you think will pull.
2. You must select the magazine that you think has the readers who would be interested in your offer.
3. You send your ad and money to the magazine.
4. Now you wait two (2) months with your guts tied up in knots to find out if you picked the right magazine, picked the right month, wrote the right ad, and have the right position.

### Direct Mail Advertising

is much less expensive than magazine advertising and you don't have to wait two (2) months to find out if you goofed and

the best part is you mail directly to the type of customer you are looking for

### HOW DO YOU DO THIS

By buying a qualified mailing list. Don't laugh. I know what you are thinking. You have bought the so-called Qualified, Guaranteed, and Sanctified mailing lists and wasted your money. Do you want to know why and what the most important things you need to know about a list is

1. How old is it?
2. How were the names obtained?
3. Are they names of buyers and what did they buy and how much did they spend?

You must know the answer to these vital questions or you will keep wasting your money. And the big problem is no mailing list company will give you the answer to these questions.

### How Do I Know

Because I have tried mailing lists and found out I was just wasting my money and because I have spent over 1 million dollars in the last 3 years advertising full page and one-half page ads in national magazines such as "Popular Mechanics," "Mechanics Illustrated," "Field & Stream," "Mother Earth," "Handyman," "Outdoor Life," and 100's of others.

Over 400,000 fine people have

responded to my national magazine advertisement, and have spent \$12.00 to purchase a "How to Beginners Workshop Manual" on how to make PVC pipe furniture, and many have started their own business.

95% are homeowners, 100% are do-it-yourselfers, 75% are entrepreneurs.

### Your Opportunity

is here and now if you want the same success I have had without the costly expense of advertising I had to pay to find these people. I will, for a limited time, share with you a minimum of 1000 names of my customers for just 6¢ a name. All on gum labels from any state you want.

### Free Bonus

to help you. Send me your sale literature or ad and I will give you my opinion of it, for what it's worth, and tell you what media I think you should advertise in. I will return it to you with my comments.

If you are looking for success in selling by mail, you will never have a better opportunity. My customers have made me wealthy and they can do the same for you. Send your name and address along with whatever you want me to look at, and your check for my customers names to Phillip E. Brancato, Sr., P.O. Box 237 F, Riverview, Florida 33569 (813) 677-6948. Please allow about two weeks for delivery.



## SWEET CIDER (continued from page 36)



Pressing cider is hard work but the fruit of your labor is sweet.

The idea behind this method is to sterilize your jars and pasteurize your juice separately; then you put the two together and seal. You'll need your water-bath canner again, this time to boil your jars. Ten minutes' boil ensures complete sterilization. Jar lifters and tongs come in handy for removing bottles and lids from boiling water, and rubber gloves are invaluable for protecting fingers from hot jars.

You'll also need a stainless steel or enameled pot (preferably two, and the bigger the better) in which to pasteurize your juice. Again you'll use a dairy or yeast thermometer to monitor the temperature, bringing the juice to 170°F for ten minutes. Don't let it get hotter, or the flavor will suffer. When pasteurization is complete, ladle the hot juice into sterilized jars, leaving about ¼ inch headspace and cap with sterilized lids. After the jars cool, be sure to check the seals. If you use throw-away juice jars, you have to take your chances. I've never had any trouble with them, but I use them first, just in case. Store canned cider at 50°F or below to prevent vitamin C loss.

### Unprocessed Storage

A short-term alternative to the above methods is unprocessed storage. Place your jugs of fresh cider in a cool place—root cellar, babbling brook, refrigerator, or what have you. It should keep from two to four weeks. After this, it will begin to ferment, and can no longer be considered "sweet cider."

Whatever your method, this year, don't let all those apples go to waste. Strike another blow for self-sufficient living, escape the hazards of chemical additives and put up quantities of delicious apple cider. You'll savor that fall freshness all year long.

### Hot Mulled Cider

If you don't drink it cold, hot is the next best thing!

½ cup brown sugar  
2 quarts cider  
1 teaspoon whole allspice  
1½ teaspoon whole cloves  
2 pieces stick cinnamon

Tie spices in cheesecloth or in a tea

ball (or you may put them directly into the cider, straining them out as you serve it). Mix cider and brown sugar, add spices. Heat slowly to a temperature of 170°F or less. Do not boil, the flavor will suffer.

### Cider-Sage Jelly

You may replace the sage in this recipe with any other herb.

½ cup boiling water  
3 tablespoons dried sage, or  
6 tablespoons fresh sage  
1½ cups cider  
3-¾ cups sugar  
yellow food coloring  
½ cup liquid pectin

Pour boiling water over sage. Cover and let stand 15 minutes. Strain. Add more water if needed to make ½ cup. Add cider and sugar. Heat to boiling. Add few drops of food coloring. Add pectin, stirring constantly. Boil hard for one minute. Skim, and pour into hot, sterilized jars. Seal. Makes about four ½ pint jars.

### Apple-Cider-Raisin Pie

1½ cups water  
1½ cups apple cider  
¾ cup sugar  
2 cups seedless raisins  
1 cup diced tart apples  
¾ teaspoon salt  
1 teaspoon ground cinnamon  
grated rind and juice of ½ lemon  
2 tablespoon butter  
3 tablespoon cornstarch  
unbaked shell for a 2-crust, 10" pie

Mix 1 cup of water with all ingredients, except cornstarch and pie shell. Boil. Blend cornstarch with remaining ½ cup water. Stir into first mixture and cook, stirring until thick. Pour into pie shell, cover with pricked top crust and seal edges. Bake at 450°F for ten minutes, then reduce heat to 350°F and bake for 35 minutes.

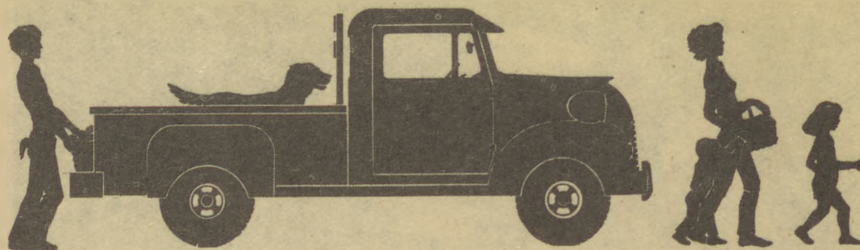
Amy Worthington Hauslohner, a former PhD candidate at the University of Cincinnati, now lives on a farm in the Blue Ridge Mountains of Virginia, makes cider, keeps sheep, gardens and raises a daughter.



# FARMSTEAD Market Basket

Including the  
FARMSTEAD  
Bookstore

FALL 1985



## Gardening

**IH-27 THE GARDENER'S ADVISOR.** A wide-ranging selection of advice from a score of experienced gardening authorities. Tested tips on how to grow the best fruits, vegetables, flowers and house plants. Also bulbs, pruning, companion planting, disease-resistant fruit trees and old-time roses. Softcover.....\$8.95

**G-10 GROW YOUR OWN CHINESE VEGETABLES** by Geri Harrington. This book answers your questions on Chinese vegetables--American, Chinese and botanical names; plant descriptions; how to use each plant; where to find seeds; how to grow and harvest. It covers 40 different vegetables. Chinese vegetables are healthful and easy to grow and fit into American and Oriental cuisine. Softcover.....\$7.95



**R-13 BACKYARD FRUITS AND BERRIES** by Diane E. Bilderback and Dorothy Hinshaw Patent. Everything you need to know to take care of 13 of the most popular fruits and berries--apples, apricots, blackberries, blueberries, cherries, grapes, nectarines, peaches, pears, plums, prunes, raspberries and strawberries. Includes how to choose the best variety for your climate, how to fit fruits and berries into small spaces, how to reduce maintenance demands and all the secrets of success that will help you bring in a bushel of satisfaction. Hardcover.....\$17.95

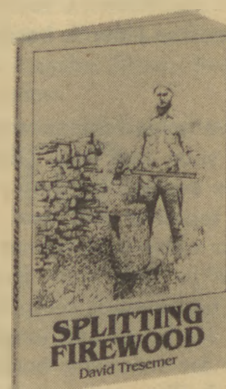
**G-41 DOWN-TO-EARTH VEGETABLE GARDENING KNOW-HOW** by Dick Raymond. "I want to make gardening as fun, easy and successful as I can for the backyard gardener. I want to help people enjoy life, to help them grow as I have...both as gardeners and as human beings." Dick Raymond's best-selling gardening favorite is now available in a new revised edition. Triple your yield, cut weeding time, stretch your season, improve soil, brew home bug remedies that work: it is never too late to start gardening for independence. Softcover.....\$7.95



**R70 THE ENCYCLOPEDIA OF NATURAL INSECT & DISEASE CONTROL.** Edited by Roger B. Yepsen Jr. This is the most comprehensive guide to protecting plants--vegetables, fruit, flowers, trees and lawns--without toxic chemicals. A revised and reordered version of *Organic Plant Protection*, this book can serve as your guide to creating and maintaining the balance of nature on your piece of land. And for most pests and diseases, this encyclopedia gives several measures, not just one. It also includes ways to attract beneficial insects and how to encourage them to do their best work as a means of preventing problems before they start. Hardcover.....\$24.95

**G-12 BUILDING STONE WALLS** by John Vivian. Use this book and build your own sturdy walls. Carefully detailed drawings show the techniques to use and how to avoid problems. Dry walls, drainage, mortar and maintenance--it's all here. By the author of *A Manual of Practical Homesteading*. Softcover.....\$5.95

**IH-28 BACKYARD SUGARIN'** by Rink Mann. Clear, concise text explains how anyone with a taste for maple syrup can make family-sized quantities of the sweetener in his own backyard. Filled with good, sharp photographs of the various homemade rigs covered in the book. Softcover.....\$4.95



## Crafts

**WP-7 HOME TANNING AND LEATHERCRAFT SIMPLIFIED** by Kathy Kellogg. Convert your domestic livestock pelts and skins into mocassins, mittens and other useful items. This book presents a fast, easy and inexpensive home tanning technique as well as a more traditional and labor-intensive method. Other features: leatherwork projects, care, fur craft, basic taxidermy and a resource appendix of buyers, sellers and suppliers. Softcover.....\$8.95

**IH-7 SPLITTING FIREWOOD** by David Tresemer. Another timeless work by the author of *The Scythe Book*, here "Tresemer bridges the practical and metaphysical aspects of wood splitting, creating a satisfying and pleasing whole." Covering tools, economics, what and where to split, technique and more; the pages transform an every day chore into vital action of being. Softcover.....\$6.95

**ME-2 WHIRLIGIGS: DESIGN AND CONSTRUCTION** by Anders S. Lunde. Everything you need to know to make these classic wooden toys with waving arms, wings or propellers that spin in the wind. Fifteen different models designed by the author, a prize-winning woodsculptor, are presented in illustrations, drawings, patterns and lists of necessary materials and tools. Create your own collector's item or just enjoy being involved in American folk art. Softcover.....\$6.95

## Where to look for...

Gardening books.....	76
Craft books.....	76
Livestock and veterinary books..	77
Shelter and tool books.....	78
Energy books.....	77
Cooking and preserving books...	78
FARMSTEAD binders.....	79
FARMSTEAD back issues....	79-80
Order form.....	81



## Energy

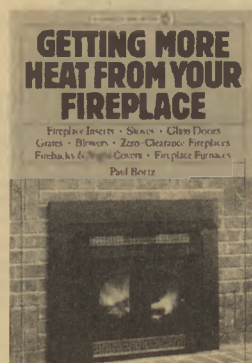
**G5 THE HOME WATER SUPPLY** by Stu Campbell. How to find, filter, store and conserve water. Covers the basic problems of wells, pumps, ponds, frozen pipes, proper ventilation and water output. A plethora of information on a precious resource.

Softcover.....\$10.95



**G-27 HEATING THE HOME WATER SUPPLY** by Larry Gay. Hot water systems using wood, coal or solar alternatives. Heating hot water is a major energy expense. Using the book, you can find at least one way that will give you hot water at a far lower price. The how-to information tells you what you can do yourself and when to seek professional assistance.

Softcover.....\$7.95



**G-31 GETTING MORE HEAT FROM YOUR FIREPLACE** by Paul Bortz. There are ways to capture more heat from your fireplace and this book has them. It includes low-cost ways to improve fireplace efficiency, inserts and stoves, firebacks and night covers, glass doors and tube grates, zero-clearance and "Russian" fireplaces, chimney and fireplace maintenance and how to build better fires.

Softcover.....\$7.95

**IH-29 ALTERNATIVE LIGHT STYLES** by Tim Matson. The author of *Earth Ponds* brings us the gamut of non-electric light sources: traditional kerosene lamps, pressurized lamps (the popular Coleman), mantled liquid propane gas fixtures and the versatile Alladin. The book describes selecting, assembling, using and caring for each light source.

Softcover.....\$7.95

## Livestock

**R-16 THE DRAFT HORSE PRIMER** by Maurice Telleen. For people who want to learn the fundamentals of using work horses on the farm. This book clearly illustrates the economy of using draft horses and explains the basics: how to buy a draft horse; how to feed and care for the animals; how to find and repair horsedrawn machinery; how to harness and hitch a team; and how to breed them. 272 pp. with illustrations and photos.

Hardcover.....\$14.95

**WP-2 THE SHEEP RAISER'S MANUAL** by William K. Kruesi. A book of fresh information about raising sheep which serves as a management guide to turn your cash-drain hobby into a money-maker. Includes the latest on grazing method options. This book can show you how to extend your grazing season, cut your feed bills and improve your flock while you improve your land.

Softcover.....\$13.95

**WP-3 RAISING RABBITS SUCCESSFULLY** by Bob Bennet. An excellent beginner's resource by one of the leading experts in the field. Clearly presented information will enable the novice to put meat on the table for pennies a day, sell breeding stock for extra cash and enjoy a new hobby. This text covers selecting rabbits, hutches, housing and equipment and care and breeding as well as diseases and how to control them.

Softcover.....\$8.95

**WP-4 RAISING PIGS SUCCESSFULLY** by Kathy and Bob Kellogg. Home pork production is an easy way to put meat on the table and it's a short-term commitment. The Kelloggs use their own experience to explain how to choose the best breed, care for young, house and feed pigs, manage manure, breed your own pigs, troubleshoot, slaughter, freeze and package your pork.

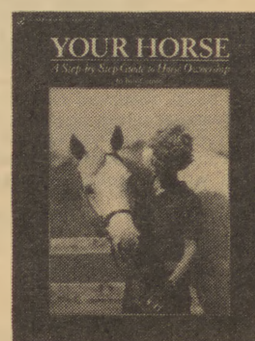
Softcover.....\$8.95

**G-24 RAISING A CALF FOR BEEF** by Phyllis Hobson. Enjoy superior beef for less than half the supermarket cost. In 15-18 months you can have 600-700 lbs. of beef with just ½ hour of care per day. Includes complete information for care, feeding and housing. Also complete photos of home butchering. 128 pp., 100 illustrations.

Softcover.....\$5.95

**IH-18 THE SHEEP BOOK: A HANDBOOK FOR THE MODERN SHEPHERD** by Ron Parker. This is probably the best and most complete single book on the market for both experienced shepherds and newcomers to sheep. Written to follow the life cycle of sheep and shepherd, it includes information on flushing, breeding, lactation and weaning of the next lamb crop. The "Appendixes" cover marketing, drugs, sheep economics, nutritional requirements and sources for everything from books to custom tanning.

Softcover.....\$4.95



**G-20 YOUR HORSE** by Judy Chapple. A step-by-step guide to horse ownership in easy-to-understand language. Covers information on housing and fencing, feeding and watering, necessary equipment, training and learning to ride as well as valuable information on how to handle common medical problems.

Softcover.....\$9.95

**WP-1 RAISING POULTRY SUCCESSFULLY** by Will Graves. A good beginner's text for those starting a home poultry flock of chickens, ducks, or geese. The emphasis is on cost-effective and time-efficient quality meat or eggs. The book covers purchasing your first chicks, incubation and rearing young, feeds--both commercially prepared and home mixed, disease control, housing and watering needs, production goals and butchering and dressing.

Softcover.....\$8.95

## Veterinary Guides

**G-25 KEEPING LIVESTOCK HEALTHY: A VETERINARY GUIDE** by N. Bruce Haynes, D.V.M. Dr. Haynes' emphasis is on prevention and early detection of farm animal disease problems. For horses, cows, pigs, sheep and goats he provides information on how and what to feed, shelter, reproduction, diseases and much more. 160 pp., 70 illustrations.

Softcover.....\$12.95

**R-26 A VETERINARY GUIDE FOR ANIMAL OWNERS** by C.E. Spaulding, D.V.M. Here's a book that's long been needed on the farmstead--a handbook for specific preventive measures and cures for all common pet and livestock ailments. It's organized by animal, and each chapter gives health-care information for that particular animal. A book that animal owners will use time and time again. 432 pp. 60 illustration.

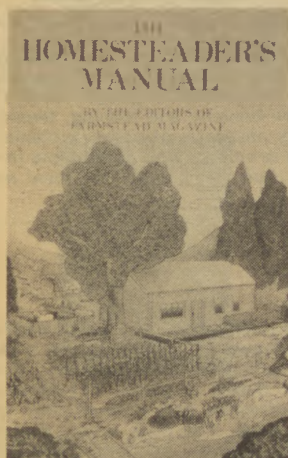
Hardcover.....\$17.95



## Shelter & Tools

**G-17 BUILDING SMALL BARN, SHEDS AND SHELTERS** by Monte Burch. A confidence-building book, this text gives a thorough background in basic building skills and follows up with an attractive selection of plans for various types of outbuildings. Softcover .....\$10.95

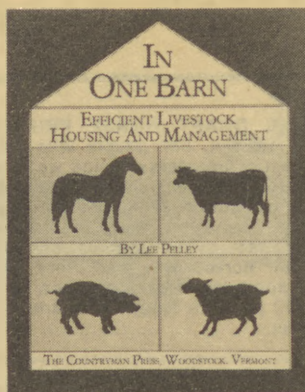
**SAE-1 FARM TRACTORS: 1950-1975** by Lester Larsen. Organized by year of introduction, this book reviews innovations in domestic and import tractors. It covers turbocharging, transmissions, safety, operator comfort and other important developments. Larsen, retired chief of the Nebraska Tractor Test Lab, has compiled photos and specifications for 415 tractors. Tractors are listed by manufacturer, model number, fuel, year or years built, observed maximum belt or PTO and drawbar horse power, bore and stroke, size, type of engine, engine manufacturer, gearing and speeds, fuel economy data, weights without ballast and operator sound level at 75% load. Softcover .....\$14.95



**IH25 THE HOMESTEADER'S MANUAL** by the Editors of FARMSTEAD Magazine. From the pages of FARMSTEAD, here is a practical course in the art of self-sufficient living—complete with all the advice and how-to tips you need to save time, energy and money. The manual is filled with projects and ideas to make your country life bountiful as well as independent—building your own log cabin, dowsing for water, alternative plumbing, recycling, organic gardening techniques, and wildlife appreciation.

If you don't live in the country, **The Homesteader's Manual** will show you how you can garden inside your house or apartment, ways to insulate your home for top efficiency, and much more.

**The Homesteader's Manual** marries the best of old and new self-sufficient ways—whether you are homesteading from scratch or just looking for time and money saving ideas. Softcover .....\$13.95



**IH-22 IN ONE BARN** by Lee Pelley. Homestead animals deserve good care, and proper shelter is a major component of quality care. This book discusses how to orient, design, and construct or remodel a multi-purpose barn that will shelter several types of livestock under one roof. Softcover .....\$11.95

**IH-10 YOUR AFFORDABLE SOLAR HOME** by Dan Hibshman. Features floor plans and drawings of six award-winning solar home designs that can be built for under \$20,000. Begins with the basics of solar theory and principle, then moves on toward more detailed areas of planning and construction. Softcover .....\$7.95

## Cooking & Preserving

**G-23 WOODSTOVE COOKERY** by J. Cooper. Written and illustrated with homespun charm, this comprehensive book reveals traditional secrets of cooking on a woodstove. With dozens of imaginative, mouth-watering recipes you'll like even if you don't have a woodstove. Softcover .....\$6.95



**G-18 THE APPLE COOKBOOK** by O. Woodier. More than 100 recipes, from appetizers and salads to desserts. Best apple varieties, buying and storing, canning and freezing sauces and pie fillings; chutneys and relishes; plus desserts galore. Softcover .....\$6.95

**R28 THE PANTRY GOURMET** by Jane Doerfer. More than 250 recipes for mustards, vinegars, relishes, pates, cheeses, breads, preserves and meats to stock your pantry, freezer and refrigerator. Combines profiles of regional chefs and bakers and their inside advice and tips with a wealth of information to help you create gourmet foods at the lowest possible cost. Softcover .....\$9.95

**R-52 STOCKING UP: HOW TO PRESERVE THE FOODS YOU GROW, NATURALLY** edited by Carol H. Stone. One-third larger than the original edition with many more illustrations and almost 100 new recipes. Includes expanded directions for jams and jellies with honey; for drying fruits, vegetables and meats; for making a variety of cheeses. Softcover .....\$10.95

**G-47 THE CANNING, FREEZING, CURING AND SMOKING OF MEAT, FISH AND GAME** by Wilbur F. Eastman Jr.—Step-by-step instructions, methods, materials, costs, including plans for a smokehouse. Covers small and large game, fish, beef, poultry, loaded with old time recipes for smoked venison, mincemeat and more. Illustrations, photos, charts, 220 pages. Softcover .....\$5.95



**WP-5 GOLDE'S HOMEMADE COOKIES** by Golde Hoffman Soloway. One hundred treasured recipes that defy description—basically the best collection of cookies you could ever want. The book covers basic cookie how-tos, favorite bar cookies, best drop cookies, specialty cookies and fun and festive cookies. Beyond just the recipes, Golde includes tips on flexibility, freezing, baking with children, presentation pointers, cookies as gifts, packaging your treats. Too tempting to pass up. Softcover .....\$7.95

**WP-6 SUMMER IN A JAR: MAKING PICKLES, JAMS & MORE** by Andrea Chesman. This book includes a whole array of condiments to please the most sophisticated of palates. More than 120 recipes—all of which can be done quickly (freezer method) and easily (single-quart recipes). Small-scale pickling proportions allow you to put up goodies with as little as a pound of produce. Softcover .....\$7.95

**R25 RODALE'S COMPLETE BOOK OF HOME FREEZING** by Marilyn Hodges. Take advantage of seasonal fresh food surpluses by using the information in this book. You'll preserve more of each food's nutritional value and its fresh taste. Includes advice on how to buy, maintain, and organize a freezer for maximum convenience and energy savings. Features more than 200 recipes to cook for and from your freezer. Softcover .....\$12.95





## T-shirts are tops!

**FMTS FARMSTEAD MAGAZINE T-SHIRT.** The official T-shirt of FARMSTEAD features a handsome design--our well-known logo in dark brown against a bright orange sunburst. It is silk-screened on a natural ivory, 100% cotton, quality T-shirt. Available in adult sizes small, medium, large and extra large. Be sure to specify size when you order.

T-shirt.....\$6.95



## FARMSTEAD MAGAZINE BINDERS

A great way to preserve all the valuable gardening and how-to information from FARMSTEAD!

These top-quality, vinyl covered binders are gold embossed with our name and logo. Each binder holds a year's worth of FARMSTEAD--with room for eight issues. Opens flat for quick, easy reference and then slides back into your bookcase for handy storage.

Buy for yourself or for a friend. Use them for your back issue library. Fill one with a series of issues on a certain topic as a gift for a special someone. Or give a binder with a gift subscription.

Binders.....\$5.95

**Here's an opportunity to start... add to...  
or complete your FARMSTEAD library.**

## BACK ISSUES

Jam-packed with vital information, each issue provides gardeners and farmsteaders everywhere with knowledge essential to self-sufficiency. Buy one, two, a dozen, or the entire set. Each back issue costs \$2.00. Buy 12 or more and get an extra issue FREE.

### 1974/1975

**BI-4** Slugs & Suds•Pestilence in Your Woodlot•Butter & Butter-milk•The Great Purple Vegetable Patch•Successful Farmstead•Growing Red Tomatoes•Canning•Highland Cattle•Goat's Milk Cheese•Stalking the Low-Cost Chicken.

**BI-5** Farm & Garden Guide•Rabbits for Profit•Tanning•Jam & Jellies•Storing Fruits & Vegetables•Fall & Winter Gardens•Breeding Pigs•Planting Trees.

### 1976

**BI-6** Ice Harvest•Clearing Land•How to Grow Christmas Trees•Heating with Wood•Starting Seeds•Workhorses•Peter Zacharias: Holstein Breeder•Fruit Leather.

**BI-7** Bees in Maine•Heirloom Beans•Planting Signs•Recycling Lumber•Rhubarb Recipes•Pig Power•Work & Play with Squash•Build a Fence•Tapping a Sugar Bush•Wild Plantigo.

**BI-8** How to Buy a Horse•Organic Orchard•Plants That Poi-

son Livestock•Oriental Vegetables•Bountiful Comfrey•Making Hay Despite the Weather•Bugs•Farm Pond.

**BI-9** Old-Time Apples•Raising Ducks•Forest Management•Chimneys•More About Muscovy Ducks•Feather Pillows•Winged Pest Catchers•Augers, Froes & Crozes.

### 1977

**BI-10** Wood Stove Cookery•Saving Energy•Tobacco-Grow Your Own•Lambing•Harvesting Salt Hay•The Commonsense Gardener•Farming with a Draft Horse in Quebec.

**BI-11** Know Your Soil•Choosing Your Goose•A Bee for the North•Smelting•Digging Dandelions•Modular Coldframe•Earth Oysters•Pony Power•Early Care for Better Apples.

**BI-13** Wild Harvest: Wild Fruits of the Northeast, Part I•Mixtures•Low Sugar Jams & Jellies•To Husband a Goat: A Moral Tale•Blackberries•Coffee, Tea or Chicory•Tea Thyme.

**BI-15** Talking Turkey•Creations

with Weeds•Quilting•Wood-burning Basics, Part II•Hopi Blue Corn•Cornerstones: A School for Builders•Finding Water•Brew Beer.

### 1978

**BI-18** Sunflowers•Log-End Home•Truth About Cucumbers, Melons, Squash•The Reliance Peach•Pest Management in the Orchard•Greens•Plowing with a Draft Horse, Part II- Harrowing & Seeding.

**BI-19** Plowing with a Draft Horse, Part III- Haymaking•Raising Rabbits•MOFGA•Getting Your Goat•Insect Pests & Their Enemies•Ginseng.

**BI-20** Preserving Your Garden's Bounty•Chickens•Small Stock•Butcher the Homestead Hog•Home-Can Meat•Dry Beans•Small Farm Management-Harvesting the Corn•No-Flush Toilets•Community Canning•Urban Farming.

**BI-21** Cauliflower•Make a Rug•Raising Bees•First Aid for Fruit Trees•Mittens•Eva McCann - Lady from Lubec•Sugar Substitutes•Honey Cookery•Burning

Junkwood•Scarlet Runner Beans  
**1979**

**BI-22** Tomato Competitions•Chili Peppers•Own a Cow•If Your Cow Kicks•Cow-Buyers Guide•Stop Carpenter Ants•Guide to Insulation•Retrofitted Home.

**BI-23** Peppers & Eggplant•Fish Farming: Salt Water Trout, Cold Water Oysters•Buy a Pig•Pigs in the Pasture•Pigs for Profit•Gardening Tips•All Brooding, Hatching, Incubating & Caring for Fowl•Go-Power: Energy Crisis Foods•Parsleys•Weeds Can Tell You About Your Soil.

**BI-25** Time to Buy Your Wood Stove•Beans•Raising Guinea Birds•Land- Knowing What You Own•A Pair of Oxen•Eating Flowers•Run a Craft Business•Stocking Your Toolshop•Hand Hewn Beams.

**BI-26** Root Crops•Thoughts on Killing My Calf•Get Your Livestock to Market•Wood Stove Safety•NFPA Wood Stove Clearances•Cooking With Wood•Chimney Fires•Sheep Dops•Skin a Pig•Pumpkin Recipes.



# Farmstead Magazine offers year-round attention to timeless methods and current developments in your home, field, garden and barn.

## BACK ISSUES...

**BI-27** Eastern Coyote•Turkeys•Seed Catalog Review•Stuffing Recipes•Venison•The Sauna•Barnloft Rabbits•Hot Water From Your Wood Stove•Brown 'n Serve Bread•Crazy Quilt.

### 1980

**BI-28** Health & the Gardener•Perfect Peas•Araucanas•Home-Made Butter•Manage a Coppice Woodlot•Make Your Own Snowshoes•Let Your Chickens Range•Eating Betty, Tom & Susan•The Farm Dump•Beets.

**BI-29** Year-Round Planting Guide•Mulch•Borage•Toads•Edible Dandelions•Goodbuy Beetles•Harvest Your Orchard, Part I•Harvest Your Orchard, Part II•Eggs•Hot Tips for a Cold Climate.

**BI-30** Start a Backyard Orchard•Guide to Chain Saws•Wild Bee Hunter•Great Garden Soil•The Right Shovel.

**BI-31** Bees•Blue Ribbon Black Sheep•Herbalist Notebook•Orphan Lambs•Cash in on Capons•Make a Rabbit Hutch.

**BI-32** How to Install Windows•Make a Solar Window Box & Solar Food Dryer•Feed Your Goat•Grow More in a Small Garden•Sweet Corn.

**BI-33** Woodstove Harvest: A Guide to Woodburning Cookstoves, Part I•Cider Press•Dry Your Harvest•Drying Vegetables•Taking Stock: Farmstead Harvest Accounting•Gathering the Harvest.

**BI-34** Living Underground•Hand Riving Shakes & Rails•Raising Pigs•Masonry Firestoves•Firestove Building Tips•Guide to Woodburning Cookstoves, Part II•Art of Cooking on a Woodstove•Make Sausage•Onions in the Fall•Brew Herb Tea.

**BI-35** Blacksmithing•Build a Brick Forge•Fruitful Living•Plan a Permanent Garden•Wind Electric System•Birds of Prey•Make Holiday Gifts•Rabbits•New Life for an Old House, Part I•Donuts.

### 1981

**BI-36** Twitch Horses•Greenhouse•Garden Seeds•Winter Squash•Fence a Goat•Gourd Crafting•Let the Wind Blow•Planting a Windbreaker•Winter Herbs.

**BI-37** Salad Garden•Build a Food Dryer•Alaskan Garden•Cooling Frames•Ground Cherries•Codling Moths•Eat Acorns•Braiding Onions•Window Box Greenhouse•Living Xmas Trees.

**BI-38** Mallards•Ducks•Seedlings•Garden Use-Again•Sprouted Seeds•Blossoming Time•Spring Orchard•Beehive Inspection•New Life for an Old House, Part II•Can Your Melons in the Garden.

**BI-39** Water Appreciation•Earth Ponds•Water-Loving Perennials•Drip Irrigation•Bathtub Ecology•Trout•The Blackfly Gardener•Homegrown Pesticides•Pigeons•Wild Water.

**BI-40** Selecting a Rural Home-site•Cutting the Cost of Shelter•Wood to Last•Taming the Toolshed•Wood Heat Safety Check•Attic Fan•USDA Report on Organic Farming•Milk Your Goat•Trim Goat Hooves.

**BI-41** Cast Iron Cookware•The Capable Cookstove•Cookstove Buyers Guide•Meat Canning•Roadside Stand•Blueberries•Half a Cow•Home Root Cellar•Sour Cream Recipes.

**BI-42** Working the Woods•Caring for Your Chainsaw•Successful Wood Co-Op•Where Rot Spelled Revival•Soil Ecology•Home-Built Wood Furnace•Hog Economics•Hogs on the Small Farm•Chicken Tracks & Soap•Forcing Spring Bulbs.

**BI-43** Rumford Fireplace•More Heat from the Hearth•Holiday Table•Raising Chickens•The Silver Spangled Hamburg•Whitetail: A Year in the Life of a Deer•Tanning Buckskin•Make Buckskin Mittens•Green Manure.

### 1982

**BI-44** Total Tomato•Wood Ashes•South of the Border Vegetables•Dried Flowers•Winter Care of Livestock•Garden Directory•Puttin' by the Ice•Planning New Poultry•Make Cant Hook•Whole Grain Flour.

**BI-45** Year 'Round Garden Guide & Record Book•Think Greenhouse•Simple Backyard Greenhouse•Long Season Gardening•Alpine Strawberries•A Time to Reap, Techniques for Harvesting Small Grain•A Time to Sow.

**BI-46** Orchards in the Spring•Backyard Permaculture•The Amazing Luffa•Home Sheep Shearing•How to Buy a Baby Calf•Bucket Calves•The Purple Martin•Water-Pumping Windmills•Joys of Spring Salads.

**BI-47** Improve Your Pasture•Is a Tiller for You?•1982 Rototiller Directory•Garden for Your Livestock•Mangels•A Lifetime with Horses•So You Want to Work Horses?•Why Knot?•Farming on a Small Planet•7th Annual NOFA Conference•Watercress.

**BI-48** Tunnels & Rowcovers•Mid-Summer Planting•Cool Season Crops•Tractor Power•Foliar Feeding•Farming Tough•What is Eating my Garden•Choosing

Family Goat•Dowsing•Snapping Turtles.

**BI-49** Herbs in Preserving•Corn Cob Jelly•Sour Pickles•Wood Stove Kitchen•Safe Chimney•Tomato Harvest•Greenhouse for Three Seasons•Working Oxen•Blue Ribbon Livestock•Harvest Breads.

**BI-50** Fruit of the Vine•Grapes of Distinction•Get the Most from Your Shredder•Kale•Trial of a Woodsplitter•Heat Efficiently with Wood•Windows That Keep You Warm...and Cool!•Sorghum Making•Irish Dexters.

**BI-51** Great Gold Rush•Okra in the North•Hearthside Cookery•Build a Cordwood Hot Tub•Raising Our Own Firewood•When the Kids Want a Pony•Natural Dyes•Art of Home-Smoked Fish.

### 1983

**BI-52** Strawberries•Sneak Previews-New Vegetables & Fruits for 1983•Raspberries•Gooseberries•Seeds for the Winter Greenhouse•Grow European Cucumbers•Build a Low-Cost Greenhouse•Plans for Farmstead's Solar Greenhouse I•Broccoli Raab•Farmstead's 1983 Gardener's Directory.

**BI-53** Sow It Goes•Sweet Potatoes•Dollar Saving Food Garden•Dwarf Apples•Swiss Chard•Farmstead 1983 Planting Guide and Record Book•Greenhouse Tomatoes•Pig is Mightier Than the Plow•Let Chickens Till the Garden.

**BI-54** Hefty Head Lettuce•The Total Tiller•1983 Rototiller Directory•Planting an Orchard•Making a Cleft Graft•Austrian Winter Peas•Sweet Peas•Raising a Small Flock of Sheep•Saving Lost Lambs•Ozark Orchard.

**BI-55** Wildlife Control Devices•Make a Mint Barrel•Giving Your Greenhouse Fresh Air•Safe Garden Sprayers•Raised Bed Gardening•Energy Efficient House Cut from the Maine Woods•Build a Garden Cart•Rabbit Cookery•Cultivation with the Small Tractor.

**BI-56** Fall Herb Garden•Mooregold Squash•How to Buy a Wood Stove•Dried Meals & Mixes•Keeping Your Chimney Clean•Build a Food Drying Shed•Backyard Goat Dairy.

**BI-57** 1984 Wood Heat Directory•Safer Chain Saws•Fall Lily Planting•Chimney Fires•Wood Stove Recipes•Solar/Wood-Heated Greenhouses•Facts on Wood Furnaces•Great Greenhouse Soil•Oriental Pears•Feeding the Family Cow.

**BI-58** Windowsill Gardens•Wood Stoves & Plants•Bush Cherries•Ice Harvest•Solar Home•Wood Stove Acces•Egg Eating Chickens•Canada Geese•

Fireless Cooking•Shakers.

### 1984

**BI-60** Troubleshooting the Tiller•Trench Grown 'Taters•Kohlrabi•New Varieties for 1984•Siberia Tomato•Solar Home•Build a Bee Hive•Spring Pigs•Salad Bar for Chickens•Honey Cookery•Oxen•Self-Sufficient Family.

**BI-61** Incredible Edible Half Acre•Rabbits & Earthworms Make Great Garden Soil•Getting into Hot Water•Build a Wood Shed•Top Dollar Hay•Home Butcher•Coriander•Filberts•Home Biogardeners.

**BI-62** German Greens•Black Currants•Envelope House•Managing Sheep•Tools for Brush Cutting•Helen Nearing•Wild Mushrooms.

**BI-63** Antique Apples•Marketing Chinese Vegetables•Goose Myths•Hafflinger Horses•Catalytic Wood Stoves•Farmhouse Solar Retrofit.

**BI-64** Solviva Winter Garden•Old-Time Seeds•Packbasket Maker•Italian Vine Hoe•Fireplace Inserts•Greenhouse Chicken Coop•Llamas•1985 Home Gardener's Directory.

### 1985

**BI-65** New Varieties for '85•Greenspaces•Computerized Garden•Building Stone Walls•Shovel Tips•Handicapped Gardening•Donkeys•Herb Farming.

**BI-66** Year-Round Gardening Guide•Market Garden Tools•Pruning Methods•Chain-Saw Built Log Home•Pies•Barn Owls & Boxes•Raising Freezer Beef.

**BI-67** Build the Malibu Barn•Horses & Barbed Wire Fences•Soil Solarization•Pattypan Squash•Photovoltaics•Cut Flower Cash•Buying Your First Tractor•Tomato Hornworm•Waterfowl•Water-Saving Wisdom•The Monarch Range•Wood-Burner's I.Q. Test.

**BI-68** Kelp for Better Soil•Beat the Japanese Beetle•Tools for Big Weeds•Fill the Freezer•Pickling Spices•Berry Vinegars•Woodburning Safety Tips•Pedal-Powered Water System•Catfish Farming•Competing at the Fair•Outstanding FASRM-STEADers.





## FARMSTEAD 81



# The Colored Sheep of Smallway Farm

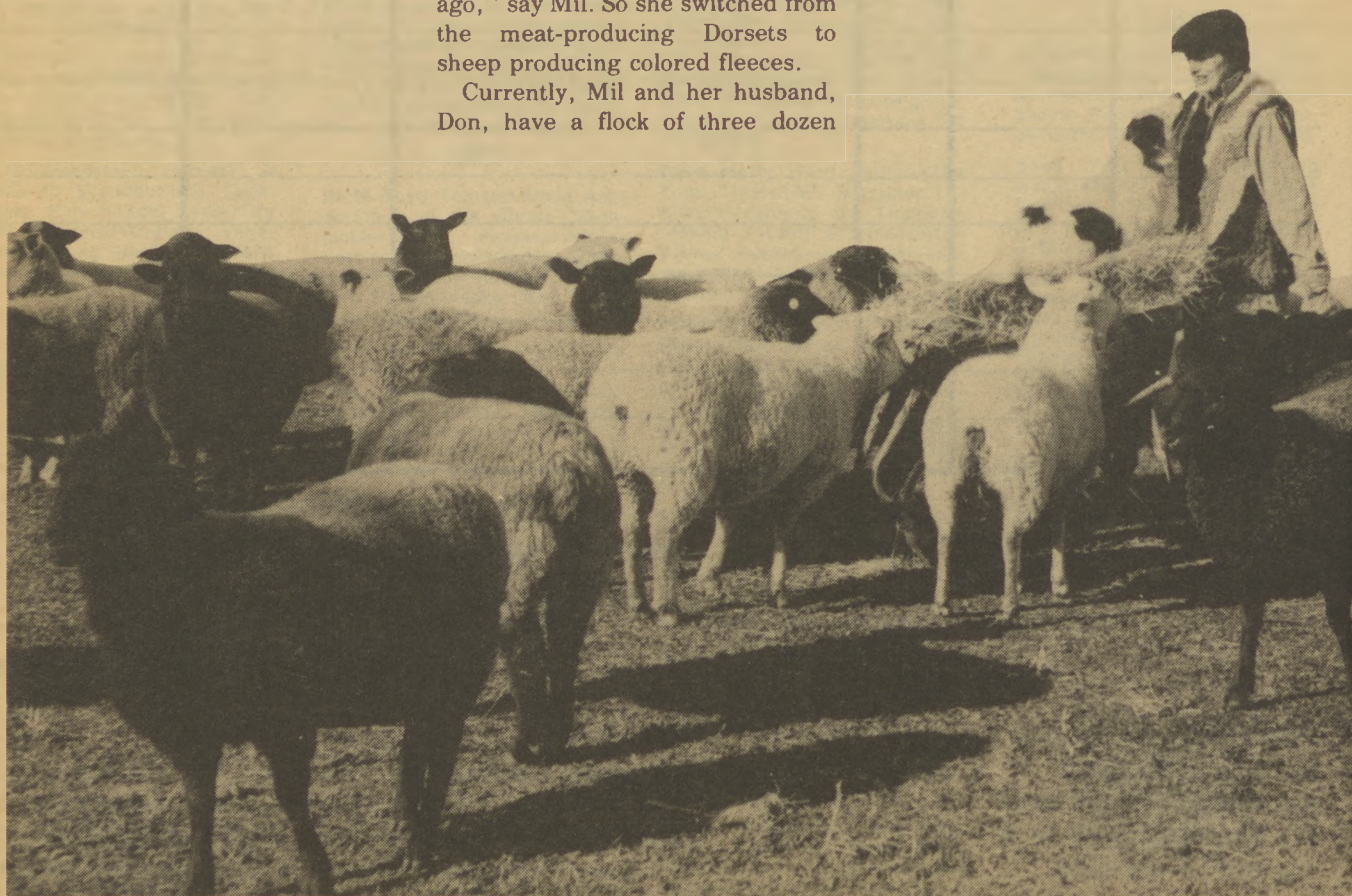
**W**hen Mary had a little lamb, its fleece was white as snow. But if Mary had lived on a certain farm in eastern Oregon, her lamb might have been red, silver, brown or cinnamon! On the slopes of Smallway Farm, sheep of many colors are the norm. And owner Mil Shawe wouldn't have it any other way.

"I began raising colored sheep simply because I liked the many colors I saw in a flock several years ago," says Mil. So she switched from the meat-producing Dorsets to sheep producing colored fleeces.

Currently, Mil and her husband, Don, have a flock of three dozen

breeding ewes of various shades grazing the hills of their 160-acre farm. They also grow alfalfa and oats organically.

"Although the sheep are raised primarily for their fleeces," says Mil, "we do sell some for meat to customers who want organically grown lamb. Our family prefers hogget, lamb of about eighteen months. We eat four or five a year. We also sell tanned hides, breeding stock and starter flocks. A starter flock is a group of two or three older,





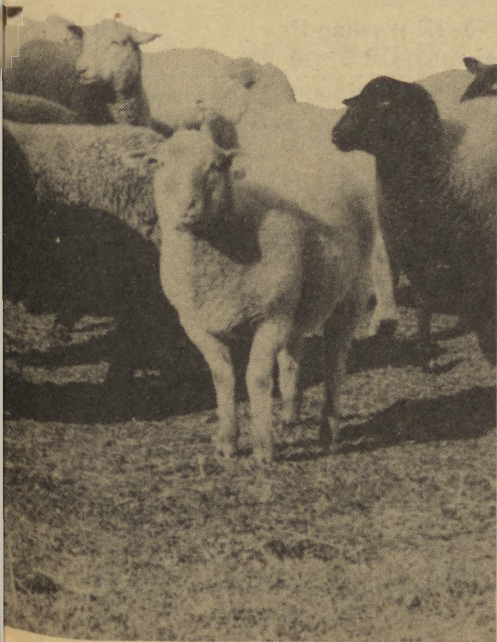
by Alice Coelho

good quality ewes and a young ram."

Mil sells the ewes to make room for the new ewe lambs she keeps each season. When her flock reaches fifty, Mil hopes to retire from teaching school and live on the income of her sheep.

The market for colored wool consists mostly of hand spinners, who spin the wool into yarn for clothing, rugs and weavings. "We also use wool as quilt batting," says Mil, who hopes to sell wool for this

Mil Shawe takes a load of hay to feed her flock of colored sheep.



"THE YEAR-ROUND KITCHEN HELPER"

Our satisfied customers are the best promoters of MEHU-MAIJA:

I have owned one for the past two years and only wish I had discovered it long before - In my opinion it is the greatest canning tool ever devised.

Mrs. M.K.R., Elmira, NY

I have really enjoyed using it for juice and jelly making and am looking forward to new ways to use it.

C.J., Sacramento, CA

"... THE GREATEST CANNING TOOL EVER DEvised!"

## JUICE-EXTRACTOR STEAMER-COOKER

**Save Money**

**\* Save Effort \* Save Time**

**EXTRACT** juice from fruits & berries; excellent for making wine, canning & freezing.

**STEAM** your way to delicious home-cooked meals, including vegetables, fish, poultry & meat.

**PRESERVE** full natural flavors, vitamins & minerals.

Write or call today for full details:

**MEHU-MAIJA PRODUCTS**

**Dept. FMH**

**Podunk Road**

**Trumansburg, NY 14886**

**(607) 387-6716**

**DEALER INQUIRIES INVITED**

# MORE CHOICES

with APPALACHIAN LOG STRUCTURES



### MORE LOG STYLES:

Three log styles in 6 or 8 inch thickness with a 25 year warranty against insects and decay.

### MORE HOME DESIGNS:

Ranch, Two-story, Gambrel, Loft, Vacation and Commercial. 35 standard models, or we can custom design your home.



Mountaineer  
Dovetail™



Shadolog™



Appalachian  
Round™



### MORE FOR YOUR MONEY:

Compare our standard package and features with other manufacturers and you'll see your best choice is Appalachian Log Structures. Call or write for our free brochure or send \$6.00 for our 40 page color portfolio that shows all our homes. You may call and charge your portfolio to your MasterCard or Visa.

## APPALACHIAN LOG STRUCTURES

P.O. BOX 86-FM • GOSHEN, VA 24439 • (703) 997-9251



purpose also. "Three pounds of wool makes a very warm cover. We tried using five pounds, but found it made a quilt that was too warm for most people."

Woolen mills buy some colored fleeces, but the price is much lower than that paid for white fleeces because the latter may be dyed any color imaginable, and thus can be made to match any lot previously dyed.

"Some fleeces are entered at wool

shows where they are judged, often by a panel of hand spinners," Mil informs me. Fleeces are rated on such qualities as length, color, luster, crimp (waviness) and texture (fine, medium or coarse). They are sold after the judging and priced by the pound. As in all areas of agriculture, prices vary, but colored fleeces usually sell for about four dollars a pound, almost four times as much as white fleece of a similar quality.

Mil's fleeces have scored quite well in competitions. In 1982, at the Shepherd's Extravaganza in Seattle, Washington, one was chosen from over 230 others to be sold at an auction. And at the National California Wool Show in Orland, California, one of Mil's fleeces won reserve grand champion. Another, a silver fleece, was chosen to be displayed as an example of quality fleece from Oregon.

## FROM SHADY PAST TO BRIGHTER DAYS

**C**ontrary to popular belief, black sheep aren't misfits. They have much too noble a heritage for that. Years ago, when genes were genes, scientists were scientists and sheep were wild, fleece was black, or gray, or off-white, in short, "colored." In those days, there weren't many of the fluffy, perfectly white sheep we read of in nursery rhymes. There were *colored* sheep.

Like white bread, "white" sheep are a recent invention, one which fused the interests of scientists and capitalists. Manufacturers wanted white wool for color flexibility and breeders wanted to make it. This was how black sheep became sub-par on American pastures in comparison to their white kin. Genetic throwbacks, their reputation as quality wool producers darkened. If one scrap of colored wool found its way into a fleece bag bound for the mill, the whole batch was rejectable.

But black sheep did have their purpose. In large free-ranging flocks, they were frequently used as counting devices or "markers." Breeders kept one colored sheep for every 50 or 100 white ones to save time tallying the flock.

Despite their shady past, colored sheep are making a comeback in this country. According to Lorry Dunn-ing, former secretary for the Natural Colored Wool Growers Association (NCWGA), there are approximately 600 members in the association, each with an average of 40 colored sheep in his or her flock.

"More people are getting into colored sheep because the fleeces pay so well," said Lorry. "Of course, the price varies with market

and fleece quality. But some people are selling colored fleeces for four to five dollars a pound. White fleece, again depending on the quality, runs 42 to 75 cents a pound."

Many attribute the colored fleece trend to a higher demand for natural, undyed wools. Although just about any non-white fleece can be considered "colored," several breeds are recognized for their predictably fine colored wool.

"The Karakul sheep is probably the only true colored sheep, even though it is a hair sheep," said Kent Erskin, editor of *Black Sheep Newsletter* and NCWGA member. "It has a dominant black gene. But just about all sheep breeds can have colored fleeces. The Lincoln, Romney and Finn breeds are most commonly recognized as being 'colored sheep' by their respective organizations."

Ron Chancey, also a member of NCWGA, has a flock of 175 pure-bred Lincolns on his Ohio farm. When he started sheep breeding 10 years ago, colored sheep weren't very popular, but that didn't stop him.

"I wanted something different, something unique," he said. "Just like everybody else, I thought *white* sheep when I thought sheep. But not any more."

As Ron discovered, keeping colored sheep isn't for everyone. The market for colored wool is much more elusive. Generally, buyers are small mills, hand weavers and spinners, making it more difficult to market the fleece than if selling to large manufacturers, dealers or warehouses. But for most breeders, the extra effort pays off in the long

run. This year, Oregon sheep breeder Kent Erskin sold his colored fleece for six dollars a pound--more than 10 times the rate for white fleece in his area. Of course, Kent has been in the business for a long time. After 35 years, he knows what people want. □

### SOURCE LIST

For more information on colored sheep, write:

Natural Colored Wool Growers Association

18150 Wildflower Dr.

Penn Valley, CA 95946

National Lincoln Sheep Breeders' Association

Teresa M. Kruse, Secretary

RR 6, Box 24

Decatur, IL 62521

American Romney Breeders' Association

Dr. John Lander, Secretary

4375 NE Weslinn Dr.

Corvallis, OR 97330

Finnsheep Breeders' Association

Mrs. Claire Carter, Secretary-Treasurer

P.O. Box 34303

Indianapolis, IN 46234

Empire Karakul Registry

RFD 1

Fabius, NY 13063

American Karakul Fur Sheep

Karen Koch, Secretary

Box 22

Powell, OH 43065

The Black Sheep Newsletter

272 Orange Ave.

Ashland, OR 97520

Melanie Spencer is Assistant Editor of *FARMSTEAD* magazine.





***LET THEM KNOW!***



***Blue Seal  
has two new  
sheep feeds!***

Blue Seal Lamb Starter-Grower Pellets have already won wide acceptance among growers. Now Blue Seal has introduced *Lamb Finisher Pellets*, with just what you need to finish lambs from 75 lbs. to market weight, and *Sheep 36 Concentrate Fortified Pellets*, to mix right in with your corn/oats to formulate your own sheep feeds. Your Blue Seal Dealer has complete information on these new rations . . . see him next time you need feed.



**FEEDS**

Lawrence, MA 01842

Mark of Quality since 1868

Look for your Blue Seal Dealer in the Yellow Pages under Feed Dealers.





Techfence offers two fence concepts that combine to make Intensified Rotational Grazing methods economically practical. For information on how you can get more forage from your present acreage, write: Advanced Farm Systems, P.O. Box 153, Dept. CO, Blaine, Maine 04734.



Electrified suspension fence.  
Expert installation.

### MAKE SAUSAGE AT HOME

Free 88-pg. catalog of sausage-making supplies with cures, seasonings, spices, equipment. You can cure and smoke meat, game, fowl, fish. Includes info on a new, illustrated 500-pg. book with 200 recipes. Join 100,000 satisfied customers.

### THE SAUSAGE MAKER

177-190A Military Rd. Buffalo, N.Y. 14207

### BUILD THIS MINI-BARN

Measuring a spacious 12 x 18 ft., this shed lets you house your tractor, yard tools and lawn furniture. Send \$17.50 ppd. (Can. res. remit postal m.o. in US funds) to: HAMMERMARK ASSOCIATES, Box 201-F Floral Park, NY 11002. Catalog \$1 (refunded), free with all plans orders. Prices effective until 12/31/85.



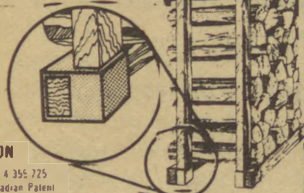
### E-Z STACKER

FOR: WOOD, PIPE, FENCE POSTS, LUMBER, ETC.

ANY WIDTH  
ANY LENGTH  
JUST USE  
2x4's

WELDED  
STEEL  
CONSTRUCTION

U.S. Patent No. 4,355,725  
Corresponding Canadian Patent



**ORDER NOW!**

SET OF 4 \$1595 + \$300 SHIP. & HANDL. TOTAL \$1895

Wisconsin Residents Add 5% Sales Tax — Prices Subject to Change

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

☐ Phone (414) 763-7544

MAIL TO: E-Z STACKER Rt. 5 Box 798 F  
Lake Geneva, WI. 53147



In order to better understand fleece quality, Mil Shawe learned to spin by hand and to fashion cannauk cloth clothes and woven blankets.

To better appreciate fleece qualities, Mil learned the art of hand spinning. Sometimes, she fashions clothing out of cannauk cloth, a handsome, knobby material made by using a crochet hook to pull loosely rolled wool up through a coarse mesh, such as burlap. It is alleged to be one of the earliest methods of making wool clothing. This easily mastered technique requires no spinning knowledge or special equipment. In fact a whittled branch could be used instead of a crochet hook.

Mil's weaving experience has helped her in caring for her sheep as well. "I found it easier to cull my flock," she explains, "as I knew what characteristics were most desirable for quality spinning wool."

For rating fleece color, Mil offers these tips to sheep owners: "Don't judge a sheep's color by the weathered tips of its fleece. Its true color is considered that closest to its skin. The fleece color of an individual sheep will vary from year to year, always becoming lighter. A lamb's color at birth will not be the same as its color at maturity."

Mil's flock reflects her efforts to raise top-quality fleeces. She presently has three rams. One, a white

Border Leicester, is used for his exceptional wool quality. Her California Red ram is from a breed developed in California about ten years ago, a cross of the red Barbados and the white Tunis breeds. Mil's third ram is black, and is a cross of three breeds noted for their long wool: Border Leicester, Romney and Lincoln. Except for a few purebreds, all of her ewes are long wool crosses, and the lambs they produce have had excellent spinning fleeces.

In addition to color, these sheep exhibit outstanding characteristics for breeding stock. They are heavy milkers and have no trouble raising three young at a time. In fact, the California Reds can lamb twice a year.

But whether they are red, brown, silver or rust, these sheep are hardy, prolific and beautiful. Even though they don't fit the nursery rhyme image, I'm sure even Mother Goose would praise the many-colored sheep of Smallway Farm.

Alice Coelho farms a commercial cow-calf ranch with her family of three in eastern Oregon. Photos by the author.



# German Angora Rabbits



**Highly praised in Europe, this hearty rabbit is three times woolier than most long-haired breeds.**

**A**s a hobby, a supplement to income or as pets, German Angora rabbits are outstandingly beautiful creatures. Although you may run into the occasional crab apple, most Germans are by nature docile, inquisitive and all-around charming. There are a fair number of people who enjoy Angoras as pets. These personable rabbits will have the run of a room or the house and will use a litter box like a cat. My presence in the rabbitry is met with Angoras rushing to the front of their cages anticipating a friendly caress.

Optimum breeding age depends on whom you talk to, but it's safe to say that young does are bred between 7 and 10 months of age; bucks from 5 months. German Angoras do have a tendency to put on weight, and for this reason it is wise to breed the does before they are a year old.

Thirty-one days is the average

gestation period, during which the doe will prepare a nest of hay or straw. Shortly before kindling, she will pull wool from her chest, belly and legs to add to her nest. Her young, usually numbering six to eight per litter, will be born on a maternal bedding of pure angora softness.

Experienced breeders often remove this bedding or cut it into tiny bits two or three days later. If left alone, the squirming of the newborns may spin the wool into threads that wind around the young, causing loss of limbs from lack of circulation or death by strangulation.

Until the bunnies are about 3 weeks old, they look like any other breed of rabbit. Then the hair starts to grow. By the time they are weaned (about 6 weeks), the coat has grown enough to make the rabbit look as fluffy as a dandelion puff, and irresistibly cute.

Angoras will tolerate surprisingly small cages, but since some exercise

is vital for good health, a cage size of at least 30 x 36 inches is preferred. If you can spare the space or are generous by nature, 30 x 50 inches is even better.

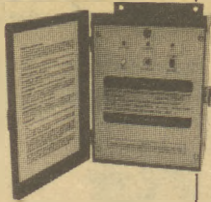
Like most rabbits, German Angoras can be kept out-of-doors all year. During the most bitter weather, they should be provided with some extra protection: mounds of straw to burrow into, a heating brooder lamp or an insulated nest box to huddle in.

Relief from the extremes of summer is equally important. No one in his right mind would voluntarily wear a 3-inch-thick angora sweater in 90 degree heat. So too with our furry friends. Removal of the coat should be timed so it will be at its shortest during the hottest weather. At 80 degrees, the rabbits will be uncomfortable; at 90 degrees they may be lost to heat stress. Good ventilation is a must to carry off excess heat. One trick to reduce temperature of this densely woolled



**PROTECT YOUR WELL PUMP!**  
Against Low Water Level &  
Inlet Screen Blockage

Total Protection  
Low Cost  
All Electronic  
Auto. Operation  
Easy Installation  
Max. Water Yield  
Saves Energy  
Extends Pump Life



2 models for submersible pumps  
up to 7 1/2 H.P. FREE Info.

**DOUBLE STAR SUPPLY CO.**  
1045 W. St. Rte. 73  
Springboro, OH 45066

• INSECTS • FLEAS •  
• PARASITES •

**KNOCK 'EM DOWN**  
**DIATOMACEOUS**  
**EARTH**

A NATURAL PRODUCT  
NON-TOXIC

Write or Call  
**ZOOK & RANCK, INC.**  
Gap, PA 17527 717-442-4171



**No Previous Experience Needed**

See how easy it is to learn about Animal Care. No need to quit your job or regular school. Even beginners learn fast—first aid, animal lore, care and feeding, grooming, breeding, sanitation and medical terminology are just a few of the subjects covered.

**Which of these ANIMAL CARE CAREERS Do You Want to Learn About?**

- Zookeeper • Humane Agent
- Pet Shop or Kennel Owner
- Veterinary Assistant
- Laboratory Aide
- Animal Hospital Aide



**Experts guide you Every step of the way.**

We show you what to do, how to do it—everything is explained in simple, everyday language, complete with photos, diagrams, drawings. You read what to do and follow easy directions that guide you step by step. We provide special learning aids.

• Opportunities vary in different areas, and we cannot promise you a job. However, we encourage you to check the classified ads for jobs in any metropolitan Sunday newspaper.

**Send for FREE Information!**

North American School of Animal Sciences, Dept. YEO95  
925 Oak Street, Scranton, PA 18508

Rush facts about how I can train to be a Veterinary Assistant. I understand I am under no obligation and no salesman will visit me.

Name \_\_\_\_\_ Age \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Phone ( ) \_\_\_\_\_

animal is to use plastic milk bottles filled with water and frozen overnight. The rabbits will gladly lay on or next to these personal air conditioners.

Even though they are larger than the French and English Angora breeds, the Germans do not consume any more feed than medium-sized rabbits. A diet of rabbit pellets with additional handfuls of good quality hay is recommended. Some breeders believe that supplementing feed with a mixture of cereal grains will promote a better wool harvest. Providing a good diet is the best way to insure a healthy coat.

Probably the greatest problem associated with raising Angoras is wool block. Inclined to cleanliness in the extreme, the Angora licks up and swallows hair when grooming. These indigestible hairs form a blockage in the stomach that interferes with digestion and appetite. To minimize loss from wool block, the breeder should feed hay for roughage and use a bi-monthly preventative treatment of oils or cat hair-ball preparations. Most importantly, the wool must be promptly removed when the staple reaches 3 1/2 to 4 inches in length. As with any condition adversely affecting health, early detection and treatment are the keys to success.

Depending on the rabbit's age, and the season, wool is harvested every 10 to 14 weeks, or when the staple length exceeds 3 1/2 inches. The German Angora has been developed to be shorn like a miniature sheep. Since the market in the United States and Canada caters mostly to hand spinners, a "plucked" wool is preferred.

Plucking is done by taking small tufts of hair and gently pulling them away from the rabbit. German

Angoras do not release their wool as easily as do the other breeds. After a bit of practice and perhaps a light massage to relax and reassure the rabbit, plucking should come easily. If removal of the wool is causing undo discomfort, stop and consult someone with experience to find out what the problem is. In general, Angoras are not going to look forward to having their coats removed, but it should not hurt them. Once the wool is gone, they do seem to revel in the rediscovery of their skin.

For anyone considering a large-scale operation, shearing is the only way to go; handplucking is far too time consuming. For someone with a limited number of rabbits and a commitment to producing the highest quality of angora wool, however, plucking is a good place to start.

The purebred German Angora is white. Because the wool can be dyed to any color, purebred wool is highest in demand. For those who crave the subtle pastels of naturally colored wool, do not despair. Much devotion has been spent breeding color into rabbits with the character, texture and size of the Germans.

German Angoras are the perfect combination of beauty and practicality. They produce one of the most valuable and softly warm fibers available. A rabbit in good condition has wool so clean it requires no preparation prior to spinning. Because hand-plucked angora has a staple length of at least 3 inches, it is not difficult to spin. What can get tricky is spinning it finely enough to take maximum advantage of such an indulgent wool. Hand-plucked, hand-spun angora yarn will shed very little. This is welcome news to people who enjoy the softness but can't stand shedded fuzz floating around them.







# HOW-TO BOOK CLUB

Practical Projects . . . Exciting Ideas  
Time- and Money-Saving Ways to  
Do-It-Yourself the Right Way!

## Select 5 Books for Only \$2<sup>95</sup>

Values to \$117.75

Join Now, Get a  
**FREE Shop Apron**



1128  
List \$14.95



1244P  
List \$14.95 (paper)



1518  
List \$18.95



1554P  
List \$12.95 (paper)



1528  
List \$18.95



1763  
List \$16.95



1687  
List \$15.95



1566  
List \$16.95



1801  
List \$14.95



1307P  
List \$11.95 (paper)



1757  
List \$24.95



1323P  
List \$7.95 (paper)



1655  
List \$21.95



1461  
List \$16.95



1122  
List \$17.95



1657  
List \$24.95



1046P  
List \$8.95 (paper)



1952  
List \$22.95



1809  
List \$22.95



1839  
List \$19.95



1415  
List \$19.95



1458P  
List \$12.95 (paper)

## 7 very good reasons to join the How-To Book Club

**Big Savings.** Save 20% to 75% on books sure to increase your how-to know-how

**No-Risk Guarantee.** All books returnable within 10 days without obligation

**Club News Bulletins.** All about current selections—mains, alternates, extras—plus bonus offers. Comes 13 times a year with hundreds of up-to-the-minute titles to pick from

**Automatic Order.** Do nothing, and the Main selection will be shipped automatically! But . . . if you want an Alternate selection—or no books at all—we'll follow the instructions you give on the reply form provided with every News Bulletin

**Bonus Books.** Immediately get Dividend Certificates with every book purchased and qualify for big discounts of 60% to 80%.

**Extra Bonuses.** Take advantage of added-value promotions, plus special discounts

**Exceptional Quality.** All books are first-rate publisher's editions selected by our Editorial Board and filled with useful up-to-the-minute information



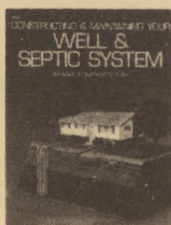
1666P  
List \$13.95 (paper)



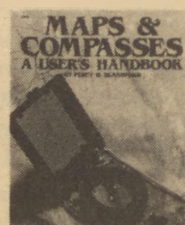
1672  
List \$18.95



1909  
List \$21.95



1654  
List \$19.95



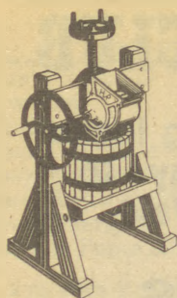
1644  
List \$15.95



1587P  
List \$13.95 (paper)

If card is missing, use this address to join: How-To Book Club, P.O. Box 8, Dept. FMS-985 Blue Ridge Summit, PA 17214





## GET MORE JUICE FROM YOUR APPLES!

The secret is the "APPLE EATER" grinder which reduces fruit to a fine pulp. Has stainless steel knives and will grind a box of whole apples in less than 5 minutes.

Makes 2 to 3 gal. of cider per tub. Heavy 1 1/2" acme screw & cast iron cross beam. All hardwood construction. 3 models—from single tub to double tubs. Completely assembled or low cost kits. Send \$1.00 for catalog.

Happy Valley Ranch, R.R. 2, Box 83-9  
Paola, Kansas 66071 • PH (913) 849-3103

## The Original, Incredible Victorio SQUEEZING STRAINER

With Squirt Guard

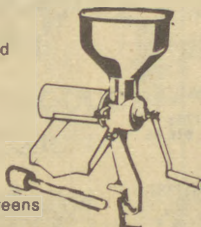
**\$36.70** Prepaid

Standard Model  
Includes Tomato-Apple Screen

DELUXE MODEL,

**\$58.75**

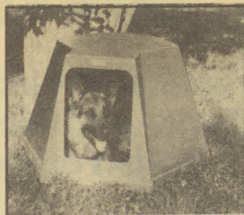
With Berry & Pumpkin Screens  
Plus Grape Spiral



**MELLINGER'S INC.**

2378L Range Rd. North Lima, OH 44452-9731  
Ask for FREE catalog

## CANINE CASTLE "FLEA FREE DOGHOUSES"



GREAT FOR:

- BACK YARDS
- KENNELS
- CAMPING
- HUNTING

• Hygienically clean... warm in winter, cool in summer. • One piece molded polyethylene, virtually unbreakable. • Surfaces are smooth, will not irritate skin or permit flea infestation. • 5 sizes, 3 styles, and 5 different colors. • Limited 5 year warranty against cracking and peeling. • Prices include shipping to your door. • For more information and prices call:

TOLL FREE 800-351-1363 — IN TEXAS 915-646-1566

**CANINE CASTLE CO.**

P.O. Box 1059, Brownwood, TX. 76804

## RAISE RABBITS



Put a high protein meat on your table from your back yard at nominal cost. Profitable as a Business or Retirement Hobby as well as interesting for young or old alike. —**GET THE FACTS**— 64 page illustrated booklet describing many breeds, Housing, Breeding, Feeding Care, \$1.00. Let this National Association of Rabbit Breeders help you start right.

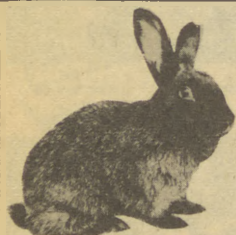
**AMERICAN RABBIT ASSOCIATION, INC.**  
T 15 Box 428, Bloomington, ILL. 61701

## DWARF FRUIT TREES

Enjoy lovely blossoms and luscious full-sized fruit from your garden. Leuthardt pedigreed trees are the result of more than 100 years of family specialization. Choice varieties of fruit. Send for catalog. Visit our nursery.

**HENRY LEUTHARDT**

BOX 666-F, EAST MORICHES, NY 11940



**'FIRST AID'**  
for Animals

Relieve symptoms of colds, snuffles, and irritation of skin mites immediately with VetRx™ remedies!



**VetRx™ Rabbit Remedy**


Other quality remedies from Vetree Products, Ltd.

- VetRx™ Pigeon Remedy
- VetRx™ Poultry Remedy
- VetRx™ Caged Bird Remedy
- VetRx™ Small Furred Animal Remedy

**Proven Formula since 1874**

Available at your local farm, feed, or ranch store.

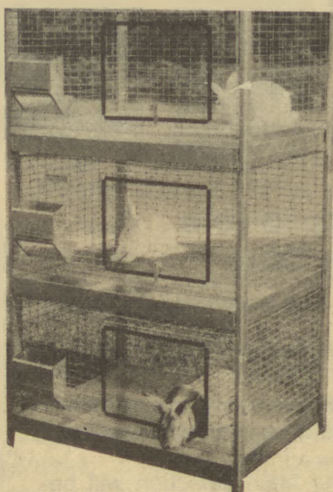
Also from Sears Roebuck special Farm, Ranch and Garden catalog.

When you want functional products that are built to last. Look for the red 

## QUALITY CIRCLE



*the complete line of quality rabbit raising equipment & supplies*



For more Information Write:

Circle K Industries Inc.  
25563 N. Gilmer Rd.  
Mundelein, IL 60060-9536

**CIRCLE K INDUSTRIES, INC.**

25563 N. GILMER RD., MUNDELEIN, IL 60060



Because the Germans are well fleshed, excess stock can be used as meat. This should be a last resort, however. There is little advantage in eating one animal that could produce enough raw wool annually to purchase several meat rabbits. Purebred Angora stock is in considerable demand, selling at more than \$100 per rabbit. A taste for rabbit would be better satisfied by a different breed.

In Europe the German Angora is highly regarded. But in this country the highly practical breed is the unrecognized renegade. The adorable, but inefficient English seems the most popular breed of Angora. The French is an excellent producer and easy to keep, but many people object to the higher percentage of guard hair. One can only hope that in time the German Angora will be granted the recognition it deserves. It has gained amazing popularity chiefly because there is no comparison to the German Angora when it comes to wool yield. In my opinion, it is the winner, hands down. □

*Editor's note: The American Rabbit Breeders Association [ARBA] does not recognize German Angoras as an official breed—at least not yet. The German's will have their first showing at this year's national convention October 28-31 in Houston, Texas [three consecutive showings are required to become an established breed.] For more information write Mark Roller, convention coordinator, Rt. 2, Box 2056, Pearland, Texas 77584 or the ARBA, 1925 S. Main St., Bloomington, Illinois 61701.*

**Leslie Samson manages the Brusen-Bunnies Rabbitry in Burlington, Ontario.**

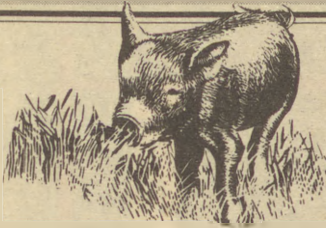




# YOUR SMALL STOCK

*A Newsletter About Livestock Care*

## Hogs Payoff



Raising beef cattle, sheep or hogs may pay off for small, part-time farmers, but just how much depends on the livestock they choose. In a three-year analysis of records on several farms participating in the Ohio Supplemental Enterprise Livestock Farm (SELF) demonstration program, researchers found that hogs were more profitable than beef cattle or sheep. In the final year of the study, small farmers raising pigs made an average of three times more money than those with beef cattle (excluding the maintenance and variable costs of both). Hog raisers also came out ahead of sheep owners, making almost double their income, even though the cost to keep sheep was much less.

--Ohio Report, Vol. 69, No. 5

## Emergency Care

If your livestock get sick, don't wait too long to call a vet. Here's the information he or she needs to know: How long has the animal been sick? Is it eating? Are body eliminations functioning? Are other animals sick? What treatment has been given?

It's important to keep an ill animal comfortable until the vet arrives. Keep animal out of mud, keep it warm and dry and use minimum restraints. Don't medicate an undiagnosed illness.

--University of Vermont Extension

## Wild Horses

This is the round-up that never fails. Every year, the U.S. Interior Department's Bureau of Land Management (BLM) sends its wranglers into Nevada and other desolations out West to cull the surplus wild horses and burros. Captured, the animals are brought out and put up for adoption to private citizens across the land.

This has been going on for 12 years now. The round-up of 1984 was the largest in history--17,000 wild creatures, brought out alive.

The round-up and removal is called Adopt-a-Horse and is designed to relieve grazing pressures on public lands. Facing political pressure to protect these lands, the BLM's choices are shoot or remove. So far, no shooting has been done although that is the ever-present option should adoptive homes not be found for the horses

and burros that are brought out of the wild.

Given that this is a nationwide program administered by the federal government, the adoption procedures are surprisingly simple and the rules are few. To adopt a wild horse or burro you need only fill out a simple form, pay a fee and pick up your animal at one of the adoption centers spotted about the country. No advance notice is required--you just show up at Lewisberry, Pennsylvania, complete the questionnaire, pay the \$215 (\$140 for a burro) and load up your animal and drive away. A year later, after your horse has been certified to still be healthy, the BLM will issue you a title to the animal.

Qualifications are minimal. You need a corral at least 20 x 20 feet for a horse, smaller for a burro, and a trailer to bring your animal home. Your use of the animals is restricted only a little--no rodeos, pony rides for a fee, or other exploitive uses. The \$140-\$215 fee is high enough to ensure that animals will not be sold at a profit to meat packers, an earlier problem when adoption charges were lower. The BLM reserves the right to drop by and inspect the animal during that first year.

To receive the flyer "So You'd Like to Adopt a Wild Horse...Or Burro?" write BLM, 350 South Pickett Street, Alexandria VA 22304.

--New England Farm Bulletin, Issue 228.

## Black Market Pets



Kershi Cambata lost his German shepherd on October 21, 1984. It was the third dog he had lost since moving to Bath County, Virginia, two years earlier. He has reason to believe all three dogs were stolen, and recent evidence indicates that the county dog warden might have been involved in at least one of the thefts.

The theft of pets is a nationwide problem. Some of these animals are taken by organized theft rings and sold to dealers or public officials, who, in turn, sell them to laboratories to be used as research tools. For more information on the increasing problem of pet theft and the black market trade in pets for research labs, contact: Action 81, Route 2, Box 151, Berryville, VA 22611.

--Animal Agenda, June 1985





# Take A Lesson From The Farmer

## Talk To Your Farm Neighbor

**A**nd you'll learn a lot from the people who make their living from farming.

When it concerns fence and wire products, the brand full-time farmers demand is Red Brand®. For generations farmers and ranchers have relied on the field fence and posts with the familiar red tops.

Because your animal confinement needs are much like those of your full-time farming neighbors, you should demand Red Brand, too. For quality. For durability. For value.

Whatever the size or kind of farm you have, there's a Red Brand fence or wire product that's right for the job.

They install easily, are affordable and will last.

Red Brand field fence, Square Deal® horse and yard fences, Keyline® hardware cloth and poultry netting, along with posts, barbed wire, nails and more can solve all your confinements problems.

Look for the Red Brand family of fence and wire products at farm supply and feed stores, hardware and home centers or building supply stores. Also, see the Yellow Pages under "fence" for the dealer nearest you.

For a free Red Brand full-line catalog, write: Keystone Steel & Wire Co., 7000 S.W. Adams St., Peoria, IL 61641.

**RED BRAND**  
The Most  
Respected Name  
in Farm Fence.



# The FARMSTEAD Peddler

## Acreage

**HOW TO FIND AND PURCHASE BARGAIN COUNTRY LAND.** Free Details. Triple J Box 332F Cedar Pines Park CA 92322. HA2p

**JOIN OUR EXISTING COMMUNITY,** combining cooperation, freedom, ecology, personal growth, individual ownership of land, homes. Self-Reliant Life Seminars. Ponderosa Village, Rt. 1 #17-70, Goldendale, WA 98620; 509/773-3902. Su3p

**FREE CATALOG. TENNESSEE Farm, Mountain, Lake, and Retirement Properties.** Easy Financing. Kay Realty, Rogersville, TN 37857. 615/272-9321. Sp4p

**FARMS AND HOMESTEADS** in the Missouri Ozarks. Beautiful fields and forests, good grass and water, mild climate, low taxes, reasonable prices. Write Renee Wood, Graven Realty, Box 234-F, Willow Springs, MO 65793. 417-469-4040. Su3p

## Businesses

**\$40,000 ON 1/3 ACRE! UNBELIEVABLE?** No. New Hydroponics works! Inexpensive startup. Free information. Walter's, Box 1214, Franklin, TN 37065-1214. Fa1p

**MAKE BIG MONEY REPAIRING WIND-shields & Plate Glass!** Up to \$60,000 yearly! Call TOLL-FREE for Valuable FREE report. 1-800-321-2597. Glas-Weld Systems, 63065-FS Sherman Road, Bend, OR 97701. Fa1p

## Do-it-Yourself

**INSTANT SIDEWALK - Polyethylene Step-**pingstones. Round or square...15' - \$15. Colorful, lightweight, movable, year's warranty. Many uses. Dealers needed. \$2.00 for sample and details. PATRICO, Drawer 2F, Francis OK 74844. Su4p

**AAA FREE DETAILS** Become completely independent, work for yourself not someone else!! Write to Smith's, Dept F-100, 2621 Suite "B" Mass Ave, Homestead FL 33039. Su4p

**77 SUPER BARN PLANS.** All Sizes, Types. Animals, Garages, Workshops, Homes. Catalog \$4. (Refundable). ASHLAND-BARN, 990F Butlercreek, Ashland OR 97520. Su4p

## Garden

**AT LAST** Grow plants much faster and taller than normal size, with no additional fertilizer. Guaranteed. Send \$2. plus stamped-self-addressed envelope for secret to: L.C.M. Company, P.O. Box 807, Dickinson ND 58601. HA2p

**OWN EXTRA LAND?** One day's labor will earn you \$1,800.00 per year, per acre! Complete plan-\$5.00. Riley, Box 891, Moses Lake, WA 98837. Sp4p

**AMARYLLIS BULBS FOR FREE!** How? Grow you own from seed and make your own seed! Now you can have all the beautiful Amaryllis bulbs you want and extra to sell too! For complete, illustrated instructions send \$5.00 to: Nelson's E.Z. Order Supply Company, Dept. F9, 3406 Church Street, Fortuna, CA 95540. Free gift with every order! Fa1p

**CLONE PLANT CUTTINGS** all year. \$3.00 to 38 Berger Lane, Petaluma, CA 94952. Fa1p

**GINSENG! GOLDENSEAL!** Profitable crops, good demand. Have select planting stock. Comfrey. Free information. Jon Collins, Viola, IA 52350. Fa4p

**MUSHROOM GARDENING.** FREE BRO-chure. Catalogue \$2. Rainforest Mushroom Spawn International, Box 1793, Gibsons B.C., V0N1V0 Canada. Fa2p

## GINSENG

**GROW GINSENG FOR US.** Now selling \$120.00 pound. We sell 100% quality tested (Stratified) seeds \$18.00 thousand. New seeds 10,000 \$100.00 - One year old live planting roots 500 - \$50.00 - - BIG LARGE-7-year old seed bearing planting Goldenseal roots (Special this month) \$30.00 Hundred. Big-385-Page book everything about growing ginseng \$5.95 --Over 100-Pictures. Goldenseal book \$3.95- 100-Live (COMFREY) roots for planting \$40.00 Hundred. Big-9-year old ginseng roots heavy seed bearing, grow your own seeds \$50.00 pound green. We buy wild dried ginseng. Everything prepaid. Cash or Moneyorder.

**PICK'S GINSENG DEPT. FS**  
Tompkinsville, KY. 42167  
Telephone [Night] 502-487-8441

## Livestock

**LLAMAS PROVIDE BEAUTIFUL** warm wool for spinning, carry heavy burdens plus a companion to you, your children and your livestock. Write: Llama Association of North America, Dept. FA-M, Box 1174, Sacramento CA 95806. HA4p

**NATIONAL PYGMY GOAT ASSOCIA-TION,** for information on membership, shows, breeders, contact NPGA, Dept. E, Fern Ave., RFD 1, Amesbury MA 01913. Su3p

**IRISH DEXTER CATTLE,** Average height 42". Ideal Farmstead cow, just the right amount of milk and meat for your family. Info \$1 and SASE. D. Archer, RRT. 3 Box 233, Harrah, OK 73045, 405/391-3057. Fa1p

## Miscellaneous

**REDUCING UNSOLICITED MAIL!** You can dramatically reduce junk mail you receive with my system. Send \$2.00'SASE (business size envelope) for detailed description to: R. Meeder, 4300 NW 23rd Ave. Box 59, Gainesville, FL 32602. Fa3p

**PADDI DOLL FAMILY PHOTO & Recipe** Collection. Fun gift! Details \$2.00 (refundable). JLC, Box 66083-F, Seattle, WA 98166. Fa2p

**EARN \$10,000-\$20,000** Growing Elephant Garlic. Free details. "Honey-Do" Hill Farms, Rt. 3 Box 158-C, Summit MS 39666. HA2p

**HEAR WELL AGAIN SAVE HALF** Free details. Earchek-FM, Box 28763, San Diego CA 92128. Phone (619)480-6530. HA4p

**ELECTRIC FENCE CHARGER;** Battery monitor; hearing aid; photovoltaic battery-charge controller, much more. Free details. Danocinths, Dept-FS Box 261, Westland MI 48185. HA6p

**FREE QUILT PATTERNS** in "Quilter's Newsletter Magazine", plus Catalog Illustrating Hundreds of Quilt Patterns, Quilting Stencils, Quilting Books, Supplies, Kits, Fabrics--\$2.50. Leman Publications, Box 501-F66, Wheatridge, CO 80033. Fa1p

**HOW TO BE YOUR CHILD'S BEST TEACH-er.** For information \$1 to Learning at Home, Box 270-FS0, Honaunau, HI 96726. Fa1p

**MAKE AND SELL** attractive indoor wishing wells as decorative planters. 27" high. Low cost (even use scrap lumber) Large sales to gift and florist shops. Detailed plans \$6.00 Complete Kit and Plans \$20.00 & \$3.00 postage. ND res. add 4%. Prairie Products, Box 1814, Minot, ND 58701. Fa1p

**DRIVEWAY ALARMS** with hidden detector Free brochure! Paxton Enterprises, Rt. 1F, Fortville, IN 46040, 317/326-2838. Fa4p

**FLOUR MILL--12"** Stones, can grind 500 lbs. per hour, \$950.00 plus shipping. C. Lawson, Brandon, MN 56315. Fa1p

**FRESH, HOT, RESPONSIVE NAME LISTS** of mailorder buyers. Most categories, peel and stick labels. Guaranteed Deliverable. For brochure rush \$1.00 to: George W. Keith, RR 1, Owenton, KY 40359. Fa1p

**WOMEN'S WORK GLOVES:** Thinsulate lined and unlined pigskin: small, medium, large. Free catalogue. Womanswork, Dept. F, Rd 539K, So. Berwick, ME 03908. Fa1p

**FOR CHILDREN WHO SING!** "Songs From The Heart" original 30 plus page book & practice tape. \$12.95 plus \$1.50 shpg. E. Cypret, Box 801287, Houston, TX 77280-1287. Fa1p

**RECREATIONAL DOG SLEDS.** Lightweight, easily pulled by average size dog. Ready to assemble handcrafted wood kits \$115.00 ppd. continental U.S. Plans \$5.00 MN residents add 6%. For brochure write: Cut River Resources, Rt. 1, Box 189B, Meadowlands, MN 55765. Fa3p

**HOT WATER NEEDS--**supplied from heating stove, castiron unit installs easily, serves, saves, lasts years, details, schematics, \$2.00, refundable. Ironcraft, 700 Village Road, Freedom, NH 03836. Fa1p



**IS IT TRUE YOU CAN BUY JEEPS FOR \$44** Through the U.S. Government? Get the facts today! Call (312)742-1142, Ext. 5563. Fa1p

**"THE GETTER"** Clear plastic bug catcher educational fun household must a naturalists tool. Box 117, East Sandwich, MA 02537. Fa1p

**FREE BEER-MAKING** instructions, recipes and catalog. Newman's Homebrewing, Rd 1, Box 3Fm, Port Matilda, PA 16870. Fa4p

**EXOTIC ORIENTAL GOLDFISH.** 25 varieties. Young and Prize Winning Pairs. Pricelist \$1.00. New Wave Tropicals Inc., 363 Kirkwood Circle, Boling Brook, IL 60439. Fa1p

**WILDLIFE DAMAGE CONTROL** Products. Scientifically tested and field proven. For free brochure and price list, write McKinzie Scientific, Box 1077 Control Dept. Lancaster, OH 43130. Fa1p

**AIDS UPDATE:** Free: Medically written monograph for the nonmedical reader. Includes precautions: prevention. Please print name: address. Send \$1 for postage/handling. John Trice, M.D., Box 6105, Athens, GA 30604. Fa1p

**FALU RÖDFÄRG** outdoor barn red paint used for centuries in Sweden, protects against rot and mildew. **MIX IT YOURSELF KIT**, all ingredients included, even brushes. Makes about five gallons. \$56.60 plus 5.50 shipping. Master/Visa accepted. Hightower Falls, Inc. Cedartown, GA 30125. Fa4p

**CHRISTIAN MAN WITH GOOD REF-**erences can live in cabin on my wilderness farm. T.R. Route 3 Box 359, Mt. Nebo, WV 26679. Fa1p

**MAGDALENE, SCOTTISH HERADLRY** award winner novel by J.D. Almand, 1985. Beautiful cloth edition, \$22.50 or enquire to CLCB Press, PO Box 99, Newell, NC 28126. Fa1p

**ORIGINAL CANDLEWICKING DESIGNS.** Make pillows, pictures, bags, aprons, quilts. Traditional, hearts, Christmas. 8 for \$6.00. Knotty Designs, Rt. 2, Box 391, Bumpass, VA 23024. Fa1p

**WHETHER YOUR HOME IS RUSTIC,** Sophisticated, Country or a bit Western, **COUNTRY CHARM** has accessories for you! Send for you **FREE Catalog NOW.** Box 2543-F, Carefree, AZ 85377. Fa1p

## Poultry

**WE ARE THE BEST** chick hatchery because we send only the best. Insured shipments. Special discounts for 4H and FFA. All advance orders include special offer. Write Hall Brothers Hatchery, Box 310, Wallingford, CT 06492. Sp4p

## Recipes

**AURORA'S CHICKEN ADOBO!** Uniquely Exotic Philippine Cuisine. Send \$1.00 SASE. Aurora, Box 397-A Rt. 5, Chapel Hill, NC 27514. Fa1p

**WANT THE BEST SWEET PICKLE EVER?** Very Crisp! Send \$1.00 and LSASE to: B. Silence, 135 Tucker St., Ripley, TN 38063. Immediate Response. Fa1p

**BEST TACO SAUCE EVER!** Quick recipe. Send \$2.00 to: Quante, Box 11421, Winslow, WA 98110. Fa1p

**HOMEMADE KETCHUP** Send \$1.00 and SASE to L. Wentworth, PO Box 1626, Piqua, OH 45356. Fa1p

**FACTORY DIRECT ALL NATURAL HOT COCOA MIX.** Available in 2 lbs. packages. \$28.95 per dozen. Quantity discounts available. Postage and handling \$1.95. Remit payment to Custom Blends and Marketing, Box 38, Chili, WI 54420. Fa1p

**MARY MARTIN'S HEAVENLY SOLE AND SUMMER SQUASH** delight recipes. Send \$2.00 for both with SASE to Mary, Rt. 3 Box 3327, Pearland, TX 77581. Fa1p

**FOUR YUMMY PUMPKIN RECIPES.** Send \$2.00 and SASE to Mike & Michelle, 21322, Walnutwood, Eltoro, CA 92630. Fa1p

**DELICIOUS HOMEMADE KAHLUA** and Snapps Recipes. Great for cooking, toppings and drinking. SASE \$5.00 ea. TA.SA., 1732W, Skiatook, OK 74070. Fa1p

**RECIPES OF YESTERYEAR CHRIST-**MASES. Indispensable. Punch, breads, turkey or goose, plus appropriate stuffings. Prune or Mince Pie. \$3.75 plus long SASE. Box 419-Cal-Nev-Ari, NV 89046. Fa2p

## Reach a National Market with Your Classified Ad - It's Easy and Economical!

The Farmstead Peddler puts you in touch with your best prospects! At the very reasonable rate of just \$1.50 per word (15 words minimum) for national circulation, your classified ad will reach half-a-million readers. And you can earn a 10% discount if you run in four or more consecutive issues.

### ① Just choose your issues:

- |   |  |
|---|--|
| <input type="checkbox"/> Garden (Jan./Feb.)   | <input type="checkbox"/> Harvest (July/Aug.) |
| <input type="checkbox"/> Spring (March/April) | <input type="checkbox"/> Fall (Sept./Oct.)   |
| <input type="checkbox"/> Summer (May/June)    | <input type="checkbox"/> Winter (Nov./Dec.)  |

### ② Write your copy:

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	
18	19	20	21	22	23	24	25	
26	27	28	29	30	31	32	33	
34	35	36	37	38	39	40	41	

### ③ Determine the cost:

Number of words \_\_\_\_\_ x \$1.50 x number of issues = \$ \_\_\_\_\_, to be enclosed. Less 10% if you run in four or more consecutive issues.

**Fill in your:**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_



**④ To insure that your ad will appear in the issues of your choice, we must have your copy and full payment 7 weeks prior to the date of publication. If you do not specify the issue, or if your ad arrives after our deadline for the issue, we will place it in the next available issue. Send to:**

**FARMSTEAD MAGAZINE, Box 111, Freedom, ME 04941**



**SIMPLY STRAWBERRIES: A COOKBOOK** by Sara Pitzer. Garden Way Publishing, Storey Communications, Inc., Pownal, Vermont 05261. 1985, 123 pages. \$6.95, softcover.

by Heidi N. Brugger

My favorite way to eat a strawberry is to pick it and drop it, still sun-warm, in my mouth. After that I lean toward a shortcake--biscuit variety only--with whipped cream and fresh-picked, lightly rinsed, hulled berries. I have a hard time seeing the need for a cookbook for strawberries.

This book makes a case for itself, however. It is filled with more wonderful ways to fix up strawberries than most folks can imagine:



soups; salads; light entrees; desserts; pies and cakes; ice cream, frozen yogurt, ices and sherbert; jams, jellies and preserves; beverages. Getting hungry? You will. Just reading this book made me get up from my chair and head for the kitchen. By the way, the biscuit recipe for shortcake passed muster at my house. □

**BACK-TO-BASICS AMERICAN COOKING** by Anita Pritchard. A Perigree Book, The Putnam Publishing Group, 200 Madison Ave., New York, N.Y. 10016. 1983, 476 pages. \$9.95, softcover.

by Heidi N. Brugger

If I could buy only one cookbook this year, this is the one I'd get. Nina Clayton's illustrations are tasteful and charming--a perfect complement to Pritchard's selection of recipes and her writing style. Pritchard has organized the recipes

# REVIEWER



by the traditional categories--soups, fish, poultry, meats, sauces and so on. She includes an unusual chapter on American wines with advice on which ones bring out the best in various foods.

What makes this book special is that Pritchard is serious about American cuisine and gives regional specialties within each category. As such it's one of the few books that has recipes for both New England chowder and a Louisiana Red and White (kidney beans on rice). The regional specialties include tricks of the trade used by chefs (and cooks) of the region, which gives the collection the authenticity many cookbooks lack. Homesteaders will welcome the recipes for guinea fowl, venison and other game animals. □

**THE HERB GARDEN** by Sarah Garland. Viking Penguin, 40 West 23rd St., New York, N.Y. 10010. 1984, 168 pages. \$12.95, softcover.

by Heidi N. Brugger

Published in cooperation with the New York Botanical Garden Institute of Urban Horticulture, this book is for the browser and the herbalist. The lavish use of color illustration and photography lead the reader from page to page. **The Herb Garden** is a sourcebook for planning and maintaining a complete herb garden; it is also a guide to individual herbs, including each herb's cultivation, uses, properties and lore. "The Herb Garden in History," "Planning the Herb Garden," "Constructing an Herb Garden," and "Cultivating Herbs" make up the four parts to this book. Each section is equally strong and enticing. This book has more verve than many similar titles and its attractive presentation serves as an incentive to every gardener. □

**IN A PIG'S EYE** by Karl Schwenke. Chelsea Green Publishing Co., P.O. Box 283, Chelsea, Vermont 05038. 1985, 147 pages, \$8.50, softcover.

by Heidi N. Brugger

What this collection of rural life essays has that the others don't is the husbandryman's perspective. Schwenke's style allows all those who appreciate a well-written essay to enjoy the book, but there is a special attraction for those who raise animals--extra special if those animals are pigs. His insights into the essence of rural ways are a comforting litany of truths. The warmth of these essays comes from the author's love of his pigs and the way he sees his herd as sharing life's truths with humankind. No urban transplant to the country and no rural native will want to miss the shaggy pig story. □

**VANMEER'S STEP - BY - STEP GUIDE TO NATURAL GARDENING: AN ALTERNATIVE TO POISONOUS PESTICIDES** by Leo VanMeer. VanMeer Publications, Inc., P.O. Box 1289, Clearwater, Florida 33517. 1984, 209 pages. \$6.95, softcover.

by Heidi N. Brugger

The best I can say about this book is that it is a sincere tribute to organic gardening by a very dedicated practitioner.

But the author must have been in his home oblivious to the greater world for these many years, for he tries to introduce what many if not most have already come to know.

**Natural Gardening** covers all the bases--in baby steps. I've read better and more complete books on this topic. □



# Warm a Friend's Heart... Give FARMSTEAD for Christmas



(and save yourself  
a bundle)!!

Christmas is coming, and now is the time to think about those many friends who would enjoy a subscription to FARMSTEAD MAGAZINE. Give your first gift for \$12.00 and each additional gift is only \$9.00 [a savings of 40% on the newsstand price!!]. Your friends will receive a gift card from us in mid-December announcing your gift and then six great issues of FARMSTEAD throughout the year will remind them of your thoughtfulness. Simply fill in the coupons below.

Fa85

MY NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Also, please enter my subscription.

☐ New ☐ Renew

☐ Payment enclosed ☐ Bill me  
Charge my ☐ VISA ☐ MasterCard  
Expiration date \_\_\_\_\_  
Card # \_\_\_\_\_

FARMSTEAD MAGAZINE 2nd SUBSCRIPTION-\$9.00  
Box 111 Freedom, Maine 04941

Please enroll the person listed below as a subscriber to FARMSTEAD.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Sign card from: \_\_\_\_\_

☐ New

☐ Renew

FARMSTEAD MAGAZINE 3rd SUBSCRIPTION-\$9.00  
Box 111 Freedom, Maine 04941

Please enroll the person listed below as a subscriber to FARMSTEAD.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Sign card from: \_\_\_\_\_

☐ New

☐ Renew

FARMSTEAD MAGAZINE 1st SUBSCRIPTION-\$12.00  
Box 111 Freedom, Maine 04941

Please enroll the person listed below as a subscriber to FARMSTEAD.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Sign card from: \_\_\_\_\_

☐ New

☐ Renew

FARMSTEAD MAGAZINE 4th SUBSCRIPTION-\$9.00  
Box 111 Freedom, Maine 04941

Please enroll the person listed below as a subscriber to FARMSTEAD.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Sign card from: \_\_\_\_\_

☐ New

☐ Renew



# "WHY DO I USE AMERICA'S CHAIN SAW? BECAUSE THIS IS AMERICA'S TIMBER!"



GREG MUSGRAVE—TIMBER FALLER, LAYTONVILLE, CA.

Ask some German woodsman why he doesn't use an American-made chain saw and he'll give you a look that could peel the bark off petrified pine.

So why would an American forest worker be so eager to put his money into the pocket of a German chain saw manufacturer? Or a Swede or Japanese?

It would be different if they were any better than Poulan. But dollar for dollar, feature for feature, Poulan can take on anything that washes up onshore. It's built to handle the long, hard hours we work in America's timber country. Maybe that's why Poulan is America's largest chain saw manufacturer. No other saw can do more. And a lot can't do as much.

So when you've got a Poulan-sized job ahead

of you, don't go halfway around the world for a chain saw. Go with America's chain saw. Go with Poulan.

**Poulan®**  
**AMERICA'S CHAIN SAW**

Beaird-Poulan / Weed Eater  
Division of Emerson Electric Co.  
5020 Flournoy-Lucas Road  
Shreveport, Louisiana 71129  
(318) 687-0100





# Royal Heir<sup>TM</sup>

Royal Heir inherits the superior heating ability of Blaze King woodburning stoves, adding this generation's contemporary appearance.

Its consumer-approved catalytic technology delivers proven economy, reliability, and safety. For your copy of the proof, send one dollar to Royal Heir, Dept. FM, 3301 E. Isaacs, Walla Walla, WA 99362. Phone 509-529-9820.

**Blaze King—The Proven Clean Burners**