

FALL 1977  
CDC/No. 14/00200

Maine State Library

\$1.25

# FARMSTEAD MAGAZINE

## Home Gardening & Small Farming



**Home Grown Tractors & Hand-Built Log Cabins**  
**The Fall Garden—Planting Green Manures**  
**Gathering Wild Fruit & Cooking Game**  
**From Stump To Stove—A Look at Wood Heat**  
**All About Hens & Chickens**  
**Bayberry, Juniper & Herbs**  
**Cooking in a Wok & Kraut**

SEP 27 1977

P 5 004  
MAINE STATE LIBRARY  
MAY 78 \*\*\*\*\*M001499  
AUGUSTA ME 04330



UNION TRUST



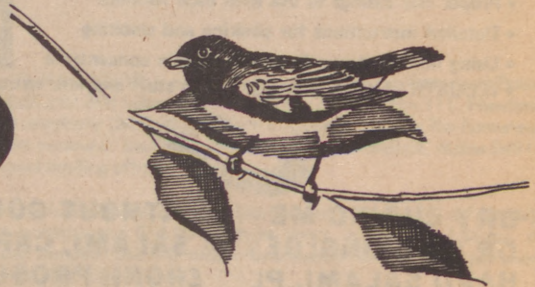
SERVES  
MORE PEOPLE  
MORE WAYS  
IN MORE  
COMMUNITIES





# Let Blue Seal help you with your feeding and management...

your Blue Seal Dealer has your free copies,  
look for him in the Yellow Pages under Feed Dealers  
or write to



## FEEDS

Lawrence, Mass. 01842



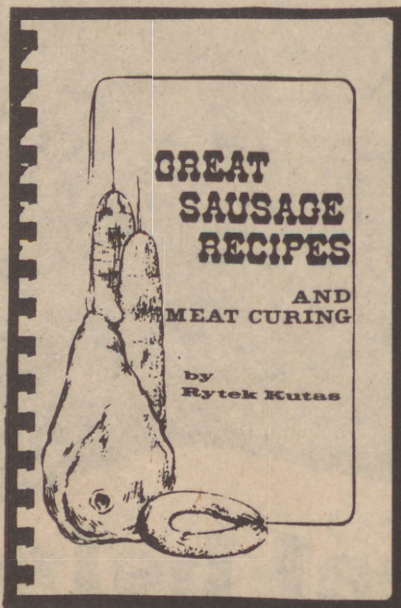
# THE SECRETS ARE OUT!

No Need to Buy Pre-mixed Spices Any More!  
You Know What Goes Into Every Recipe!  
Use Your Own Table Spices for Every  
Recipe in This Book!

**SAUSAGE —**  
COOKED & SMOKED  
Wieners  
Mettwurst  
Farmer Liver Sausage  
Portugese Linguisa  
Polish Sausage - Smoked  
Kosher Style Salami  
Swedish Potato Sausage  
Kiszka - (Blood Sausage)  
Knockwurst  
Liverwurst  
Hungarian Rice Liver Sausage  
Chinese Sausage  
Blood & Tongue Sausage  
Bockwurst  
Bratwurst  
  
**FOR THE HUNTERS**  
Venison Polish Sausage  
Venison Thuringer  
Venison Breakfast Sausage  
Venison Salami  
Venison Summer Sausage  
**SEMI- DRY SAUSAGE**  
Goetborg  
Cervelat Summer Sausage  
Thuringer  
Mortadella  
  
**FRESH SAUSAGE**  
Hot Whole Hog Sausage  
Breakfast Sausage  
Polish Kielbasa  
Italian Sausage - Hot or Sweet  
Mexican Chorizo  
Kosher Style Beef Sausage

**LARGE SAUSAGE AND LOAVES**  
Bologna  
Capicola  
Braunschweiger  
Souse  
Headcheese  
Old Fashioned Loaf  
Krakowska  
Cooked Salami  
Leberkase

**DRY MEATS AND SAUSAGE**  
Pepperoni Sticks  
Hard Salami  
Dried Farmers Sausage  
Genoa Salami  
Proscutti Hams  
Capicola



- 10 POUND sausage formulas for home use
- 100 POUND Commercial formulas
- Formulas to cure small or large amounts of meat
- Building smokers, using old freezers, barrels or refrigerators
- Using smokers on the farm, home or homestead
- Blooming sausage?
- Liquid smoke, how it's made and its use today
- Photographs of sausage making equipment, smokers, etc.
- DESTROYING TRICHINAE in pork by cooking, freezing or dry curing following government regulations
- "THE WHOLESOME MEAT ACT" - you have to know about it if you go into the meat business today
- Proper size casings to use with each formula
- Detailed instructions for cooking and smoking
- Using non-fat dry milk or soy protein concentrate
- ILLUSTRATIONS showing how to stuff and link sausage



**DRY CURING MEAT WITHOUT COOKING OR SMOKING: GENOA SALAMI, CAPICOLA, HARD SALAMI, PEPPERONI, PROSCIUTTI OR PLANTATION HAMS.**

- Government Regulations Covering the Dry Curing of Meats



## What Do You Know About Casings?



- The only available book that offers a complete and ILLUSTRATED chapter on natural casings.
- When a formula calls for a certain casing, you'll know what to look for.
- Tells average approximate diameters.
- Average approximate capacity per piece hank or set.
- Storing casings in common table salt.
- Ready to use preflushed natural casings
- Collagen casings — what they really are and how they're made.

## Why Cure Meat? Find Out for Sure!



- Artery Pumping of Hams
- For Safe, Easy Curing
- ILLUSTRATIONS and Details on Finding and Saving the Artery
- Artery pumping helps to eliminate sour hams
- Read about the Latest Regulations Covering the Curing of Meat
- Read Back to 900 B.C. when Meat Curing First Started
- Complete Formulas for Curing Meats
- Types of Meat to Use
- Proper Curing Periods and Temperatures Required

FOR EXPERIENCED PROS AND PEOPLE JUST STARTING OUT —

There's never been anything like this fully-detailed, authoritative account of every phase of meat curing, smoking and sausage making.

Choosing types of meats, casings, curing, smoking and cooking schedules — it's all here together with many illustrations.

- Goes beyond generalities
- Easy to read
- Will not only interest those who know how to make sausage or cure meat, but will certainly serve those who are merely "learners".

**This book contains the following Hard to find formulas:**

Canadian Bacon	Spray Pumped Hams
Bacon, Dry Box Cure	Curing Pork Shoulders
Bacon, Spray Injected Cure	Curing Picnics
Beef Bacon, Brine Cured	Country Hams
Beef Bacon, Dry Cure	Pastrami
Kosher Style Corned Beef Briskets	Smoked Hams - Dry Cure Method

**OVER 25 YEARS OF RESEARCH AND EXPERIENCE IN THE ART OF MAKING SAUSAGE, CURING AND SMOKING OF MEATS. CONSIDER A QUARTER OF A CENTURY FOR ONLY \$12.95, NOT JUST A BOOK, BUT A LIFETIME!**

Make check or money order payable to: RICHARD S. KUTAS Dept. 2 179 MILITARY ROAD BUFFALO, NEW YORK 14207		<b>GREAT SAUSAGE RECIPES — \$12.95</b>	
NAME		Date	
ADDRESS			
CITY		STATE	ZIP
<b>SORRY, NO C.O.D.s</b>			
Payment enclosed for		copies @ \$12.95 AMOUNT ENCLOSED \$	
N.Y.S. Residents add 7% sales tax.			
For faster service, send money order or certified check.			





# FARMSTEAD

## Table of Contents

Volume 4, Number 4

Fall 1977

4	Letters	
7	Ask FARMSTEAD	
12	The Wise & Useful Farm - Garden Guide	
16	From The Cabin Steps	Dennis King
20	Home-Grown Tractors	Charles Page
25	Green Manure For The Fall Gardener	Dennis King
28	Wild Harvest: A Guide to Edible Wild Fruits of the Northeast - Part II	Norman S. Bailey
34	Building a Log Cabin by Hand	David VanderZwaag
39	Making a Sheepskin Rug	Amy Alpine
41	Gourmet Game Cooking	Diane King
47	Happy in Hendom	Joan Wells
51	Taking Antique Chickens Off The Shelf	Jack C. Barnes
57	Juniper - Bayberry	Darrell A. Rolerson
60	From Stump To Stove	Jack Bulger
66	Woodburning Basics	Albert Barden, III
70	Sauerkraut	Clarice Moon
72	Herbs in the Fall Garden	Madeleine H. Siegler
77	A Wok Full of Bok Choy: Cook Your Harvest Chinese Style	Lynda Diane Gutowski
89	The FARMSTEAD Reviewer	
92	The Feedbag	

### Staff

#### PUBLISHER - EDITOR

George Frangoulis

#### ART EDITOR

Robert Shetterly

#### ASSOCIATE EDITORS

Dennis King

Eleanor Thurston

Olga Willmann

#### ADMINISTRATIVE ASSISTANT

Mary Weaver

#### ADVERTISING - CIRCULATION

Jane Ingraham

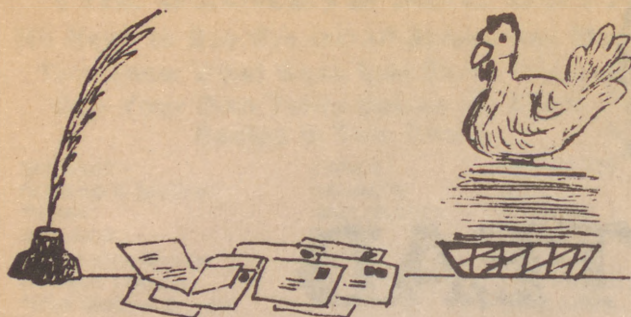
Leanne Lubeski

FARMSTEAD MAGAZINE is published bi-monthly by The Farmstead Press. Advertising, Editorial and Subscription offices are at P.O. Box 111, Freedom, Maine 04941; telephone (207) 382-6200. © Copyright 1977 by The Farmstead Press. All rights reserved. Second class postage paid at Belfast, Maine 04915 and at additional mailing offices.

Subscription rate is \$6.00 for one year (six bimonthly issues plus an Annual), \$10.00 for two years and \$14.00 for three years, in the United States, its possessions and Canada. Subscriptions surface mailed abroad \$8.00 per year; airmailed abroad \$10.00 per year.

POSTMASTER: PLEASE SEND CHANGE OF ADDRESS FORM 3579 TO FARMSTEAD MAGAZINE, BOX 111, FREEDOM, MAINE 04941





## Letters

Dear FARMSTEAD:

I am one of your new subscribers on Cape Cod. And while I hope to have a small farm someday, it is those practical articles on foraging, fishing, and good cooking I enjoy the most. I can only hope more people will realize you are not just a Maine magazine, but an excellent magazine that anyone desiring a better life with more self-dependency should read.

Thanks,  
Dan Cambra  
South Yarmouth, MA

Dear FARMSTEAD:

I am writing you concerning the article "Nutrition and the Vegetarian Diet" in the early summer issue of this year. I am glad to see some effort on the part of nutritionists to consider the vegetarian diet. I have learned something from becoming a vegetarian over the last 2 years and I wish to share this with you. I am what Katherine Musgrave would call a lacto-ovo-vegetarian. I noticed on the vegetarian vitamin chart there was no mention of seaweed or miso. Dulse is said to be an "especially good source of iodine" in *The Dictionary of Health Foods* (Jeffrey Blish, P. 43). Seaweeds and miso, a fermented soybean paste, contain vitamin B-12\*, an especially important vitamin to the vegetarian, since it is not present in other plant foods. Local seaweeds in Maine include dulse, kelp, and alarra. These contain vitamin B-12, magnesium, and iron. Shephard and Linnette Erhart who live in Franklin, Maine collect and sell those seaweeds and they could send you more exact information on the nutritional analysis of these 3 seaweeds.

Love your magazine.

Carol Dixon  
Sargentville, Maine

\*(*East West Journal*, "Getting the most from Soybeans" by William Shurtleff — Akiko Agegi, P. 21.)

THE WHITE PINE CONE  
AND TASSEL, MAINE'S  
STATE FLOWER, IS A  
BEAUTIFUL AND IMPORTANT  
PART OF NATURE'S ROLE IN  
THE MAINE DIFFERENCE.



## The Maine difference.

Pride, ingenuity, love of the outdoors, independence. All part of the Maine difference.

We know the Maine difference because we know the needs, the problems, the unique way of living that makes Downeasters very special people. And the ingenuity, resourcefulness and pride we take in our banking services make *us* the Maine difference in banking.

**MERRILL BANKS IN:** Bangor (4)/Belfast (2)/Brewer/  
Bucksport/ Calais (2)/Castine/ Dexter/Dover-Foxcroft/  
Eastport/Hampden/ Jonesport/Lincoln/ Machias/Millinocket/  
Milo/Newport/ Old Town/Orono/ Searsport/Woodland.  
**FEDERAL BANKS IN:** Waterville (3)/Bingham/ Madison/  
Skowhegan/ Unity/Winslow. **WASHBURN BANKS IN:**  
Washburn/Ashland. **HOULTON BANKS IN:** Houlton/Mars  
Hill. **FIRST BANKS IN:** Farmington/Kingfield/North Anson/  
Strong/Wilton.

The Merrill Bankshares Company Banks



Members FDIC



Dear FARMSTEAD:

Your magazine is a joy. Despite the fact that I live one hour from New York City, I can at least have a farmstead of the mind. Actually, we do live in the country, but down here when people start messing around in the dirt it's usually because they've decided to put in a swimming pool. On the other hand I have friends who live within the city limits of Asbury Park, pick all the dandelions off the lawn of the Pepsi Cola bottling plant (and use them to make a much nicer drink), and have been gardening BioDynamically there for five years. So your magazine keeps me in touch with souls who don't have to go underground to admire earthly ways. (Enough!)

Your Early Summer 1977 issue was absolutely crammed with good information. I can think of no other magazine with the variety and relevance of articles that yours has had. The line drawings not only are more informative than grey photographs, they lend character to your publication, as well as being art in their own right.

A question: when do plants stop being companions and just happen to be in the same garden? Is companionship a matter of feet, inches, yards?

Keep it up.

Stewart Beach  
Jackson, N.J.

Dear FARMSTEAD:

Being a new subscriber let me first say I enjoy reading your magazine. I find your information on organic pest control both interesting and useful.

In your article, "The Wise and Useful Farm and Garden Guide" — Summer 1977, you talk of insects and control. Therein you suggest the use of whale oil soap as a spray (p. 15 — p. 17).

This seems both unnecessary and inhumane to eliminate one life form to destroy another. Save the whales — boycott *all* whale derived products.

R. Boudreau Jr.  
Stetson, ME

*We agree with you about the whale oil spray. "The Wise & Useful Farm & Garden Guide" is a continuing feature which is composed of excerpts from the old American Agriculturist, circa 1859. Although many of the old techniques are every bit as good today, some, like the whale oil spray, are no longer appropriate or available.*

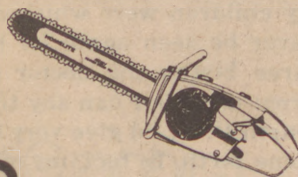
Dear FARMSTEAD:

I just wanted to let you know I've really appreciated your magazine — learned a lot from it. I've especially enjoyed the articles on herbs and wild plants — they are a big interest of mine. I also thought the articles on home childbirth were very good.

Nancy Marsteller  
Auburn, ME.

### ELLSWORTH CHAIN SAW SALES SCHOOL STREET, ELLSWORTH

CHAIN SAWS  
GENERATORS  
LAWN MOWERS  
PUMPS



**HOMELITE**

AUTHORIZED  
DEALER

Residence 667-8842

Shop 667-2275

### MAN-SIZE **ECONOMY** TRACTOR for a good day's work

Rotary Mowers  
48" & 60"

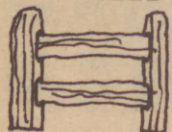


All-gear drive converts nearly 100% horsepower into work. Big wheels, high clearance, extra weight and traction. Does more work per gallon of gas. 5' mower, 12" plow, 32" tiller, 42" snowblower, 4' dozer, 1/2-ton loader, other tools. Come in for a demonstration.

**HANCOCK AUTO BODY WORKS**

R.F.D. 4, BOX 442 ELLSWORTH, MAINE 04605 667-2357

NEED FEED and GARDEN SUPPLIES?



# CARTER FEED & FARM SUPPLY Co



Shop Any of Our 3 Convenient Locations:

Outer Broadway  
Bangor, Maine  
945-3693

61 Railroad Street  
Bangor, Maine  
942-8620

13 Lincoln Street  
Dover-Foxcroft, Maine  
564-2581

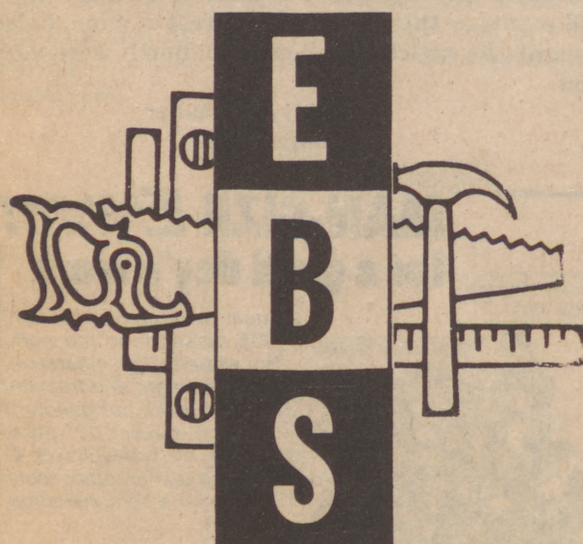
**FEEDS:** Carter, Wayne, Blue Seal, Purina

**GARDEN SUPPLIES:** Seed in Bulk and Packages Fertilizers - Tools - Fencing

**PET SUPPLIES & WELL EQUIPPED TACK SHOP**



THE  
LARGEST  
INVENTORIES  
OF  
HARDWARE  
AND  
BUILDING  
MATERIALS  
IN  
EASTERN MAINE



HEADQUARTERS  
FOR THE  
PROFESSIONAL  
AND  
THE DO-IT-YOUR-SELFER

Free Delivery Service

Castine to Eastport

Orrington to Deer Isle

**ELLSWORTH BUILDERS SUPPLY INC.**

BRANCHES IN CHERRYFIELD  
AND BUCKSPORT

667-2501 546-7384 469-2078

Dear FARMSTEAD:

Here is as good a place as any to tell you that we enjoyed the articles on Home Childbirth. My wife and I delivered our two children at home and consider ourselves fortunate to have been able to have done so. The first time we couldn't get a doctor to come out. The second time he arrived about 25 minutes after birth. Both times mother and child were fine. We credit pre-natal care and an attitude of being ready for what could happen.

Dennis Harrington  
Brooks, Maine

Dear FARMSTEAD:

I see by your summer issue that some of your readers objected to the articles on home-births . . . mainly because they didn't believe this subject should be dealt with in a periodical devoted to homesteading. I say you would be amiss if you didn't.

Home births were certainly a part of family life on the homestead and farm about 40 years ago and why not now? With our modern day technology (we've been on the moon four times) home births should be all that much safer. Both my parents come from very large families and ALL the children were born at home with no attending problems that I know of.

I'm the father of three children who were born in hospitals and I can honestly say that none of the three occasions was a satisfying one. I was separated from my wife in traditional style and had to guess what was going on from my location "down the hall" in the father's waiting room. Once born, my children were whisked away to the nursery to never be seen again for hours. And in two of the three births the doctor didn't make it on time. From all this I can say that if and when there's a fourth time, I'd give very serious consideration to a home birth. In fact, my mind is already made up . . . now if I could just convince my wife!

That is not to say that experienced and knowledgeable people shouldn't be in attendance. Of course they should, and with the apparent revival of midwifery and home births, there seems to be no good reason whatsoever not to consider having your children at home and no reason that FARMSTEAD shouldn't publish information on that subject. Keep it up!

Sincerely,  
R.E. Nickel  
Saskatoon, Sask., Canada

*We wish to offer overdue apologies to Liz Buell, author of "Babies Born at Home", which appeared in the Early Summer 1977 issue, for the extremely unfortunate scrambling of the text of this fine article. We particularly regret that this error occurred in an article of such deep and personal meaning to the author.*

*The Editors*



# Ask Farmstead

*We encourage questions from readers. Also if you have a better or another response to a question already answered send it in! Many of the questions will be answered by experts from the University of Maine Extension Service.*

**What is the difference between canning with a water bath canner and a pressure canner?**

Alice Wright, UVM Extension Foods and Nutrition Specialist, advises: Canning can be a tricky business. Sometimes, even though you followed all the rules, something goes wrong.

Be sure to use the appropriate canning method for the type of food you wish to preserve. Acid foods such as fruits, tomatoes, and pickles should be canned in a boiling water bath canner. Meat, poultry, fish, and all vegetables except tomatoes require processing in a steam-pressure canner.

Any large vessel will do for a boiling water-bath canner as long as it has a snug-fitting cover and a wooden or wire rack to keep jars from touching the bottom. It should be at least two inches deeper and one inch wider than the jars to allow extra space for brisk boiling.



To use, place filled glass jars in the canner, making sure they don't touch each other or the sides of the container. For raw pack in glass jars, the water in the canner should be hot but not boiling.

As soon as the water begins to boil, cover tightly. Start counting the time from when the water returns to a rolling boil and process as long as required. When processing time is up, remove containers from the canner immediately and complete the seals if necessary.



*"Quality Printing and Photography. . .  
Custom tailored to your needs!"*

**Downeast Graphics**

114 Main Street • Ellsworth, Maine 04605 • 667-8844

PRINTING • PHOTOGRAPHY • LAYOUT & DESIGN

## Allen, Sterling & Lothrop

The Complete Garden Store



TULIP BULBS  
FROM  
HOLLAND

191 U.S. Rt. 1, Falmouth, Maine 04105

## BAR HARBOR BANKING & TRUST COMPANY

AMERICA'S BANKERS



Each depositor insured to \$40,000



Bar Harbor  
Blue Hill  
Deer Isle  
Lubec  
Milbridge  
Northeast Harbor  
Southwest Harbor

The *PACESETTERS*

**A hometown friend.**  
Deposits Insured to \$40,000 by F.D.I.C.



If you're preserving non-acid foods, you'll have to use a steam-pressure canner instead. Make sure you read and understand the manufacturer's instructions first.

You should also check your equipment carefully. If your pressure gauge is off by four pounds or less, you can make the necessary adjustments when you process your food. For example, if the food is to be processed at 10 pounds of pressure and the gauge reads one pound high, set it at 11 pounds.

The rubber gasket should be flexible but never brittle or cracked. If it is, replacements may be purchased at most hardware and appliance stores or ordered from the manufacturer.

When you're ready to begin, put two or three inches of water in the bottom of the canner. Set the filled glass jars on the rack so steam can flow around them.

Then fasten the canner cover securely to prevent steam from escaping through openings other than the vent (petcock or weighted gauge opening). The steam should be allowed to pour out the vent for about 7 to 10 minutes, however, to remove all air from the container.

Next, close the vent and let the pressure rise to 10 pounds (240 degrees F). When this level is reached, start counting the time, keeping the pressure constant by regulating the heat.

Remove the canner from the heat when the time is up. Leave it until the pressure registers zero, then slowly open the petcock or weighted gauge. Unfasten the cover and tilt the container away from you to let the steam escape.

Before storing your jars of canned foods, let them stand upright for at least 12 hours, then test the seal. Check band-type jars by removing the metal band. If the cap is tight and somewhat indented, the jar is sealed.

To test bail-type jars, loosen the bail completely, and gently pull on the glass cover. It should remain tight. If your jars aren't sealed properly, reprocess or use the food immediately.

#### Can Bermuda onions be grown in Maine? Why would a Maine gardener be unable to grow garlic?

Wilfred H. Erhardt, Vegetable Crop Specialist for the Cooperative Extension Service at UMO, answers: The length of day (photoperiod) influences the growth habit of several vegetable plants. Spinach and onions are notorious examples of vegetables grown in Maine that are influenced by photoperiod.

The climatic factors most important in determining the suitability of onion varieties are length of day and temperature. The time an onion plant will

## BUILDING MATERIALS AND HARDWARE PLUMBING & HEATING INSTALLATION & SUPPLY L.P. GAS



*only* **morsø**

When you first see these elegant Danish stoves and fireplaces you will be moved to touch them, to feel the unique satin finish with the glowing sheen that only MORSØ craftsmen produce in cast iron. These are high quality pieces, designed for those who value excellence in style, function and safety. They will lend a friendly Scandinavian flavor to your home that is distinctive yet compatible with any interior decor. And they work wonderfully well. The precisely controlled draft features of these closed airtight units provide efficient and economical burning of wood fuel while producing a maximum amount of heat. Come in and see why MORSØ enjoys the finest regard of discriminating Europeans. We're sure you'll be pleased. Only MORSØ.



# L.A. GRAY CO.



In Business Since 1927 Hancock Sullivan Bridge / 422-3268 / 422-3321

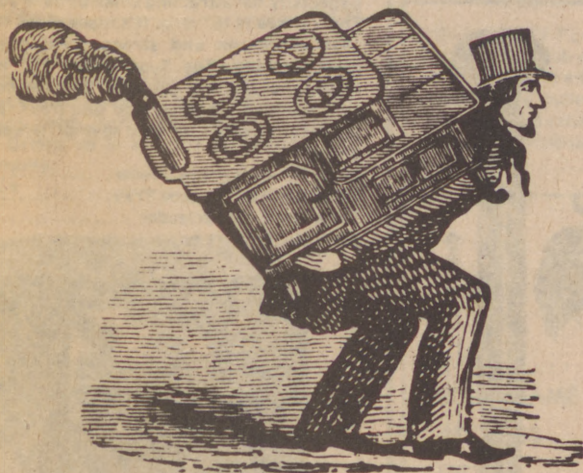


start to bulb is determined by the photoperiod and temperature and not by the age of the plant. Since bulbing is controlled by the photoperiod and temperatures, the plants begin to form bulbs at about the same time regardless of time of planting. Leaf initiation ceases when bulbing starts and the growth of the bulb depends on the leaves already present when bulbing commences. In general, bulbing will commence when the daylength reaches 12-15 hours depending on variety and when the average temperature exceeds 60°F. Onion varieties are classed as long-day and short-day varieties. The short-day varieties (12 hours) are adapted to the South while the long-day varieties (14-16 hours) are mainly grown in the northern part of the United States. Yellow Bermuda is an example of a short-day variety. Because of its early bulbing, it makes a small bulb in the Northern part of the United States. With this in mind, select a long-day variety for our Maine climate.

In our area, it is almost impossible to obtain good yields by sowing seed directly in the garden because seeding is usually done at a date when the photoperiod has already passed the minimum for bulbing. Above all, onion sets or transplants must be placed in the soil in Maine as early as is feasible. In order to have full-sized dry onions plant before May 15 in Maine. Sets and transplants planted after June 1 will not attain full size in Maine due to our photoperiod limitations.



The best chance for successful garlic production in Maine is to plant early in September, mulch heavily, and harvest the following year. Spring planting of garlic is not desirable because bulb size and yield is generally below normal because garlic has a photoperiod response similar to onions.



## MOVING?

Please Let FARMSTEAD Know...

We need your help to assure prompt delivery of magazines. As we have grown, changes of addresses have caused one of the biggest service problems to our circulation operation. If you plan to move, please use this form to notify us at least six weeks in advance. Also, please attach the mailing label from the front cover when writing about service or change of address. Thank you.

### Subscription Service

#### TO SUBSCRIBE OR RENEW:

- |   |  |
|---|--|
| <input type="checkbox"/> new subscription | <input type="checkbox"/> 1 Year \$6.00   |
| <input type="checkbox"/> renewal          | <input type="checkbox"/> 2 Years \$10.00 |
| <input type="checkbox"/> Payment enclosed | <input type="checkbox"/> 3 Years \$14.00 |

CHANGE OF  
ADDRESS  
AND  
RENEWAL:

PLEASE ATTACH  
MAILING LABEL HERE

name \_\_\_\_\_  
(please print)

address \_\_\_\_\_

city \_\_\_\_\_ state \_\_\_\_\_ zip code \_\_\_\_\_

MAIL TO: Farmstead Magazine, Box 111, Freedom, ME 04941



# The Farmstead General Store



## BREAD LOAF FEEDER

Outfit this feeder with a loaf of bread and watch the birds flock to it! Or fill with other scraps — cake, celery, apple peelings . . . 8" x 5" x 4".

No. 202 . . . . . \$5.95

## Enjoy Feeding

## Wild Birds . . .

201



203

## SANDWICH SIZE FEEDER

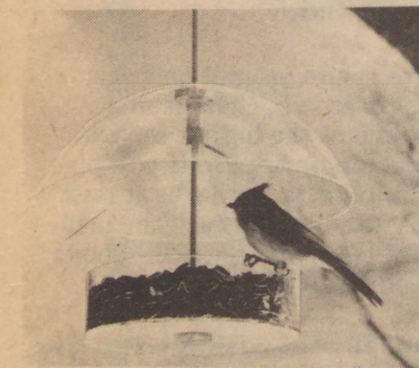
Just perfect for small birds! Flip top. Fill with scraps. 3" x 4" x 2".

Stock No. 201 . . . . . \$2.95

## TRIANGLE FEEDER

Open the flip top and fill this feeder with bread, suet or scraps. 10" x 9" x 6".

Stock No. 203 . . . . . \$6.95



## SEED SAVER

A futuristic feeder made of unbreakable GE Lexan. The adjustable dome roof allows you to feed the size birds you want, lowering to an opening that lets in only chickadees, finches and other small birds. Can be hung or post-mounted. Dome, 10" diameter, dish below, 7".

Stock No. XI . . . . . \$11.95

## SATELLITE

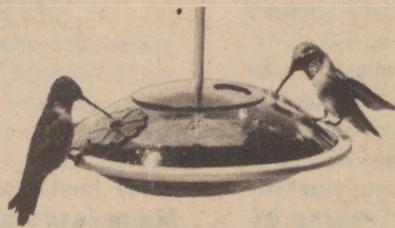
Colorful space stations for small birds only. One bird at a time they land, pick out a sunflower seed and then dash away, making the Satellite spin! Made of polished Plexiglas with choice of color on top hemisphere. Squirrelproof! 6" diameter.

Stock No. 650 Silver Satellite . . . . . \$8.95

Stock No. 650-R Red . . . . . \$7.95

Stock No. 650-Y Yellow . . . . . \$7.95

Stock No. 650-O Orange . . . . . \$7.95



## HUMMINGBIRD FEEDER

Unique! Three red feeding ports attract hummingbirds to this sturdy feeder. Made of sun-resistant Plexiglas with aluminum hardware trim and hanging hook. 6" diameter.

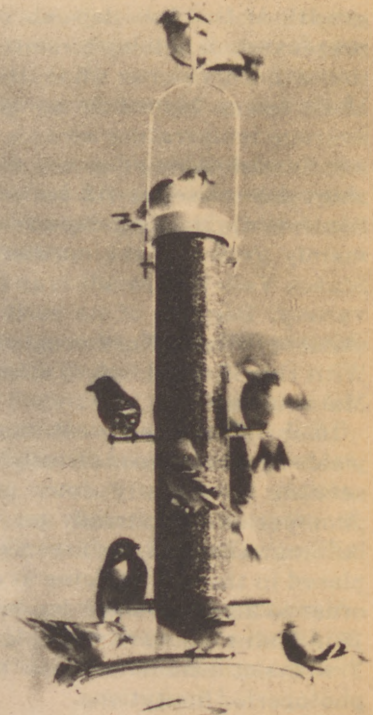
Stock No. LF . . . . . \$7.95



## SQUIRREL SPOOKER POLE

Non-Climbable! Keep pesky squirrels away from your post feeder! When a squirrel grasps the movable sleeve on the pole, his weight causes the sleeve to slide down. He loses his footing and jumps off unharmed! Sleeve returns to original position automatically by means of an interior weight. 72" black steel, comes in 1 section. All flat bottom wooden feeders can be mounted. Threads for mounting Droll Yankee feeders (A6, B7 and TF) come with pole.

Stock No. 455 . . . . . \$13.95



## THE YANKEE AND THE SUPERFEEDER

Especially for attracting small birds to your yard! The Yankee is 16" long. It's made of the finest die-cast aluminum and strong, weather-resistant plastic tubing. The Superfeeder, 21" long, has three times the seed capacity. Both can be hung or post-mounted. Optional seed spill trays (pictured) are recommended for seed savings. Great for gift-giving!

Stock No. A6 Yankee Feeder . . . . . \$13.95

Stock No. A6-T Yankee Tray . . . . . \$ 3.50

Stock No. B7 Superfeeder . . . . . \$24.95

Stock No. B7-T Tray . . . . . \$ 4.50



## WING-DING

For small clinging birds like this perky chickadee, who needs no perch. Interior funnel keeps seed at proper level. See-thru quality plastic. 6" diameter. Holds 2 lbs. seed.

Stock No. 350 . . . . . \$5.95

## FLIGHT DOME

Watch birds feed only inches away! Durable all-plastic feeder clips easily to your windowsill. Clear roof slides forward so you can refill feeder from indoors.

Stock No. 711 . . . . . \$12.95

## WIRE WONDER

Ingenious wire "fencing" allows only small songbirds to enter and feed. Successfully keeps large birds out. Hopper holds 1½ qts. seed. Plastic roof and tray are 12" diam. Can be hung or post-mounted.

Stock No. 204 . . . . . \$17.95



Do-It-Yourself  
&  
SAVE

# The Farmstead General Store

Food

Dryer

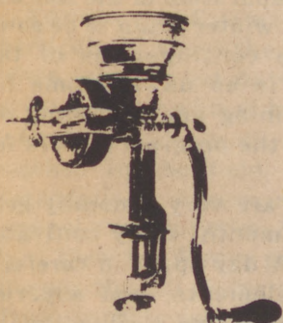


Kits

## FARMSTEAD FOOD DRYER KIT

Dryer kit includes motor, fan, heating unit, cord, thermostat, and complete instructions. Does not include cabinet or shelves.

Stock No. 17 .....\$29.95



## STONE HAND MILL

Adjustable for grinding very fine flour or cracking cereal by hand in your own home. Grinds all grains. Easy to operate . . . Grinds up to a pound per minute. Five year warranty.

Stock No. 6a .....\$49.95

## STEEL CEREAL MILL

Adjustable for grinding fine or coarse cereal by hand in your own home. Grinds wheat, corn, soybeans, nuts, seeds, herbs, etc. Speedy . . . easy to operate. Grinds up to a pound per minute. Five year warranty.

Stock No. 4 .....\$19.95



## BRAUN ELECTRIC BREAD MIXER

Tedious manual work and time consuming tasks are taken off your hands. Powerful enough for tough mixing of bread dough, but gentle enough for your favorite cream sauce. Three speed mixer, two mixing bowls, dough hook, beater whisk and spatula. All designed for easy clean up. One year warranty. Serviced locally.

Stock No. 12 .....\$169.95

## NUTRI-FLOW FOOD DEHYDRATOR

For home drying of fruits, vegetables, and meats, with preset safety thermostat. Six trays are included which gives half bushel capacity. Up to six extra trays may be purchased separately giving one bushel maximum capacity. One year warranty.

Stock No. 18b .....Six tray model: \$119.99  
Extra trays \$2.99 each



## HANDBUTTER CHURN

Perfect for making butter at home, or mixing and blending by hand. Mixes powdered milk in a jiffy. Heavy duty specially contoured hand-blown glass jar. Quality gear type crank action. Made in England.

Stock No. 23b .....\$39.95

New

Food Storage

Ideas . . .



## HEAVY DUTY FLOUR MILLING STONES

For the real do-it-yourselfer. Buy these heavy duty stones complete with motor mounting arbor and instructions to build your own electric grain mill. You make the cabinet and supply your own motor. Ten year free replacement warranty.

Stock No. 1b .....only \$39.95

## OLD FASHIONED APPLE PEELER - CORER - SLICER

This amazing hand-operated appliance peels, cores and slices apples in one operation. Movable cutting head follows the contour of the apple. Sturdy cast iron construction designed to give long reliable life.

Stock No. 22 .....\$15.95

## PITOMATIC FRUIT PITTER

For cherries, apricots, plums, prunes, and olives. All metal construction — automatic — patented design — versatile — lifetime quality — one-year factory warranty. Made by Frutorex in Switzerland.

Pitomatic No. 34 .....\$19.95

Extra gaskets No. 34b .....\$ 1.49 each



## ASSEMBLED READY TO FINISH FLOUR MILL

Top quality electric wheat grinder. Makes finer flour, runs cooler, grinds 65 pounds per hour. Completely assembled ready to varnish. Ten Year Stones Warranty.

Stock No. 1E .....\$159.00

# The Farmstead General Store

Box 111 Freedom, Maine 04941

DATE .....

YOUR NAME .....

ADDRESS .....

CITY .....

STATE .....

ZIP .....

DELIVER TO:

NAME	Stock Number	How Many	Price Each	Amount
ADDRESS				
CITY STATE ZIP				
name to be signed on giftcard				
<input type="checkbox"/> Use card I've enclosed (not over 3"x5")				
<input type="checkbox"/> Rush Special date				

POSTAGE AND INSURANCE CHART						
If your Order Totals	Up to	\$5.00 to	\$7.50 to	\$10.00 to	\$15.00 to	Over
	\$4.99	\$7.49	\$9.99	\$14.95	\$19.95	\$20.00
ADD	\$ .95	\$1.25	\$1.50	\$ 1.75	\$ 2.00	10%

Subtotal

Postage and Handling

TOTAL

Maine Residents add 5% Sales Tax



# The Wise and Useful Farm and Garden Guide

## September



**S**eptember is, in many respects, one of the most important months in the farming year. The great staples, wheat, rye, oats and grass are secured, and corn is often sufficiently advanced to enable us to fairly estimate the yield. It can, in most instances, be pretty accurately decided whether the year has been a profitable one for the community and for individuals. Taking the country together, we hear but one opinion expressed — it is a year of plenty. But all have not shared the full measure of the bountiful yield. No favoring sunshine nor timely showers can atone for neglect or

mismanagement. They have profited who have planned judiciously and followed up their plans with energy — lost by drought and tornado excepted.

A farmer to succeed must fix his eye upon results years ahead. Every crop should be put in with reference to improving the soil as well as with a view to present profit. Now is the time for laying plans for the succeeding year. If there has been failure because too much space was given to some one crop, arrange the plan with a view to a variety; some one of the staples almost invariably succeeds. It is unwise to venture the whole year's labor upon a single crop. Thorough preparation of the soil will go far toward securing the winter grain to be sown this month, against the contingencies of the season. A wet basement is as unwholesome for crops as for men. Let draining and subsoiling occupy a prominent place in the program of work for the month.

Agricultural exhibitions are very generally held at the North during this month; every cultivator has an interest in them. A day spent in carefully examining improved implements, and superior samples of grain, vegetables, etc., will often be worth many dollars in suggestions of practical value. Each should also be willing to contribute

**Camden  
national  
bank**

CAMDEN • ROCKLAND • UNION

The local,  
independent bank —  
serving the citizens  
of Mid-Coast Maine  
since 1875.

Member FDIC

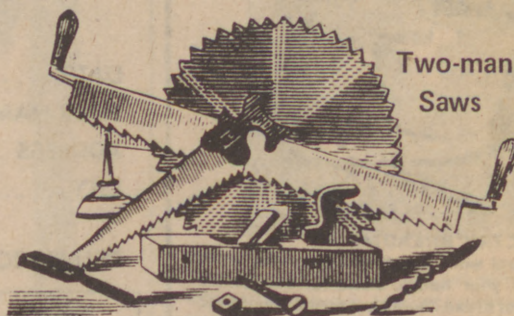
Aladdin Lamps, heaters and parts

Buck Knives — Swiss Army Knives

Select Cookware, enamel, clay, stoneware,  
iron, stainless steel, Sabatier cutlery

Raleigh & Motobecane — Bicycles & Repair

Snow & Nealley Axes and Wood Tools



## SHEPARD HARDWARE

Main Street  
Ellsworth Maine

667-8675



whatever would add to the interest of the exhibition.

Buildings of all kinds should be put in thorough repair before the driving storms of Autumn find an entrance. Provide sufficient shelter for all stock. Erect sheds for sheep, and for storing manure.

Beans — Pull and dry. The straw properly cured, and also the beans themselves are much relished by sheep, for which they are excellent food.

Cabbage — Market early varieties now matured; and continue to hoe later plantings.

Cellars — Thoroughly cleanse and put in order for the reception of Fall crops of roots, apples, etc. Arrange for ventilation; destroy rats and mice.

Eggs — Pack in salt in a sufficient supply for Winter use.

Fences — Examine and keep in repair, particularly about the corn fields. Build new lines when wanted, but have as few as may be — they are necessary evils at best.

Grain — Early threshing, especially of that stacked in the field, will save much from the depredations of vermin. Have grain bins secured against rats and mice. Market as soon as prices are fair. Plow for Winter grain if not already finished. Deepen the soil an inch at each successive plowing. Try subsoiling part of a field, and note the results.

Poultry — Give them free range, and feed regularly, if they have not access to grain stubbles.

Root Crops — Keep the ground well stirred and free from weeds. The horse hoe greatly reduces the cost of growing these crops.

Turnips — Thin late sowings, feed early ones, and keep all well hoed. Sow more of the quick growing varieties on vacant ground.

Weeds — all left to scatter seed will multiply many fold another season. All that have been left to mature should be cut and burned.

The principle work of the month in the orchard will be securing and marketing or otherwise disposing of the fruits as they ripen. Most tree fruits are of better flavor if gathered while yet firm, and allowed to mellow in a cool dry room. They also bear transportation much better than when fully ripened. Care and judgment must be exercised to take them from the tree at just the right period—picking a few days too early or too late will make considerable difference in the value.

Drying Apples — Common sorts which are of little worth in market, will meet a ready sale next Winter if properly dried. Remove all the skin and core, slice them thin, dry quickly but not at too high a temperature, and keep from being wet. A screen of netting over them to keep out flies and other insects, will add much to the appearance. Scatter a few bits of sassafras bark among the fruit when putting it away, to keep out worms.



Flameware skillet by Winchester

## We have the wedding gifts young people really love to live with.

We make it our business to know what makes a great gift. You'll know what we mean when you get here. A most complete collection of Flameware for the bride or for yourself. Functional and decorative handblown glass. Stoneware, mugs, goblets, and a lot more at prices anyone can live with.

We'll gift wrap as well as ship anywhere in the country.

**STRONG CRAFT GALLERY**  
LEADING AMERICAN CRAFTSMEN



Bar Harbor Rd., Ellsworth, Me.

Monday - Saturday 9-5  
667-2595

the "How To" small farm magazine  
**Countryside**  
Packed with the facts on:  
Organic farming, Livestock,  
Machinery & Tools,  
Crops, Gardening &  
Country Cooking

Including monthly sections on bees, home poultry flocks, dairy goats, beef & dairy cows, hogs, sheep, rabbits, veterinary advice, organic farming methods, home & farm management, garden, machinery repair, country kitchen, ecology and other topics of interest and importance to small-scale farmers. Since 1917.

**SPECIAL OFFER**  
**SAVE \$5.50**

Mail this coupon today and receive the next 18 monthly issues of *Countryside* for only \$12.50. You SAVE \$5.50 off the regular cover price.



MAIL TODAY

☐ **YES** Send me 18 months of *Countryside*, \$12.50 enclosed. (Canada add \$1.00. Other countries add \$2.00.) Allow 6 to 8 weeks delivery of first issue.

☐ Single copy, \$1.00.

Name \_\_\_\_\_

Address \_\_\_\_\_

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

Mail to: **Countryside**  
Hwy. 19 E., Dept. FS0  
Waterloo, Wisconsin 53594



# October



Most of the accounts with the fields are to be closed this month. There is yet a balance due the farmer of sundry potatoes, beets, turnips, etc., to be drawn from the ground, and if he has not been in season with his work, the unhusked corn will soon be suffering from rain and from vermin. Preparations are to be made for the approaching inclement season, and no time is to be lost. There is comfort as well as economy in having everything snug for the winter.

**ORGANIC BEEF** — frozen in family packages in 42 lbs. cartons U.S.D.A. Farm pickup or air shipments monthly from our Saltwater Farm and its herd established for years.



Bayside campsites are available also on our Recompence Shore. Please request our price list and brochures.

**WOLFE'S NECK FARM, INC.**

R.R. 1 Freeport, Maine 04032  
865-4469

Buildings need thorough examination and repair before the driving storms have damaged the gathered crop. Every crack in the horse and cattle stalls, where the old wind can enter, will cost many pounds of hay come Spring. See that roofs are tight, and doors, shutters, hinges, fastening, etc., are all in good order. Provide sufficient shelter for all animals. If paint is needed, now is a good time to apply it.

**Cisterns** — A convenient supply of water for the stock may be obtained by constructing a cistern to the drip from the barns and sheds. This will also save much manure now wasted by washing away. Forest leaves are excellent for bedding, and manure. Provide a large supply undercover, for use as wanted.

**Hogs** — Commence feeding for fattening, giving cooked food. Supply with leaves or straw for bedding, and keep the yard well covered with muck for manufacture of manure.

**Pumpkins** — Store them before injured by frost. Handle with care to prevent bruising. Feed plentifully to milk cows and other stock.

**Sheep** — Keep them in thriving condition by an occasional allowance of hay, roots, and grain, as the grass fails. A gradual change of food is best. Salt them at least once a week. The males should not be turned with the ewes until later in the season.

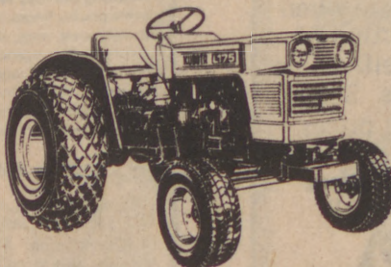
Plants  
Pots  
Paraphernalia  
**the ROOT SELLER**

33 Exchange St., Portland, Maine  
Open Daily 11-5 Telephone 773-4028  
Come In and Browse



## 'good things come in small packages!'

It's true, good things do come in small packages, and the Kubota is no exception. Larger than the garden type, smaller than the giant-size. Kubota is the in-between tractor in six different models. From 12.5 to 30 H.P. Designs with 2, 3, and 4 cylinder liquid cooled diesel engines, with 2 and 4 wheel drive, front and rear PTO'S, live hydraulics, differential lock and many other quality features.



**KUBOTA**  
85 years of customer satisfaction

SEE US SOON FOR A DEMONSTRATION

**FAIRBAIRN EQUIPMENT CO.**  
547 Riverside Dr., Augusta 622-3145



**Tools** — Collect and put all implements in their proper places under cover. Put all in good repair during rainy weather, repaint wood-work, clean all iron and steel surfaces, and coat them with a mixture of oil and resin to keep from rusting.

The remaining garden crops are mostly to be secured this month, before they are injured by frost. Winter Squashes, Cabbages, Potatoes, Beets, and other vegetables are to be marketed or housed, and a general clearing up of the grounds is to be made. Next Spring's work can be greatly forwarded now, by plowing, trenching, spading, and preparing manures. Land trenched now, will be ready for early working next season, and the beneficial action of the elements through the Winter, will be much more effectual by turning it up loosely.

**Beets** — Pull before hard frosts, twist off the tops, and if the weather be fair, leave them to dry a day or two before storing. Feed the tops to milch cows.

**Celery** — Earth up while dry. Keep the earth from falling between the stalks, by tying with soft strings which will not bruise the stalks. Harvest.

**Spinach** — Cover, that sown last month, and sow seeds in cold frames. Weed and thin former sowings, cooking the surplus plants.

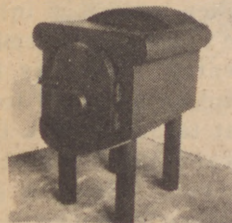
**Turnips** — Gather and market or store early varieties. Rutabagas and other late sorts may grow awhile.

101 High St.  
P.O. Box H  
Belfast, Maine 04915  
Phone 338-4038

## *Alternative Resources*

Where fine tools of lifetime quality help create a more self reliant, natural way of life.

### **FUNKY STOVE**



AVAILABLE IN 24"  
and 18" models.

*Designed by Maine  
Metal Sculptor*

*Ron Cross*  
High efficiency baffle system  
— airtight.  
Dealer inquiries invited.

Jotul, Lange and Fisher — Coal and Wood Heaters, Cookstoves and Fireplaces.

Agents in Maine for Ram Wood Burning Furnaces, Boilers & Tile Stoves — Dealer Inquiries Invited.

Exclusive Agents for "Katrina" Hearths and Protective Wall Panels — Dealer Inquiries Invited.

Pro Jet Insulated Chimneys.

Velux Roof-Windows offer passive solar heat.

National Greenhouses — greenhouse windows, house connected and free standing models to the largest professional houses. National is known for excellence.

Nova Shower Heads — Save 75% of the water heated and volume used.

Composting Toilets — Toa-Throne and Others.  
Installations and Chimney Cleaning Service.

Write for our free ALTERNATIVE RESOURCES sheet.

# We're here

**We're the local bank in town. That makes us different. We're owned and managed by Bangor people. If you live, work or do business in the Greater Bangor area that will mean something to you. It means your money is put to work here in Bangor. It means you do business with people you know. It means you come first.**



**Merchants  
National  
Bank of Bangor**

BANGOR --- Main Office, One Merchants Plaza;  
Union at 14th Street; 458 Main Street  
BREWER --- 77 Main Street  
EAST CORINTH --- Corner Routes 15 and 43  
ORONO --- 68 Main Street



## Jim McHale - Champion of the Small Farmer

By Dennis King

**J**im McHale is a man you should know. He's been fighting battles for farmers and rural people for the better part of twenty years. During the late 40's and 50's, he was a typical "bigger is better" dairy farmer in Pennsylvania, until he realized that the bigger and better and more efficient his farm became, the deeper he got into debt and the less real freedom he had.

Jim became active as an organizer for the Farmers Union in the early 60's and sold his dairy farm because he found he had little time for it any more. He gained national prominence in 1971 when Governor Milton Shapp appointed him Secretary of Agriculture for the Commonwealth of Pennsylvania. In that job he devoted much of his time supporting small family farmers and the revitalization of rural areas. He asked a lot of embarrassing questions of the agribusiness establishment, oftentimes related to why the middlemen take so much of the food dollar. There was the time in 1974 when he bought a 1450 lb. cow for 15¢ per pound and had the meat evaluation center of Penn State University dress the cow, take out the top cuts (good steaks and roasts), grind the rest as hamburger, then calculate the cost of the hamburger. The calculated cost of the hamburger, including butchering cost, was 29.5 cents per pound. That same week hamburger in grocery stores in Pennsylvania was selling for \$1.09 per pound. When the Governor publicly announced that the state should set up cooperatives and buy the butcher cows and make the meat available to senior citizens at cost, the grocery store price immediately dropped to 89¢. It is easy to see why this kind of question didn't sit too well with the agribiz community, especially that part of the community that was getting the difference between \$1.09 and 29.5¢ per pound. Jim was forced from his job as Secretary of Agriculture in 1976, but Governor Shapp immediately appointed him Special Coordinator for Rural Planning and Programs, the job he holds today.

I met Jim at the recent Spring Growth Conference in Maine, at which he was a keynote speaker. He agreed to send me copies of several of his recent speeches, testimony he has made to various U.S. Senate and House of Representatives committees, and policy statements on agriculture he prepared for the State of Pennsylvania. The following brief summary of some of Jim's thoughts and accomplishments were taken from that material.

**O**ne of Jim's assertions is that "today's urban problems are yesterday's rural problems." If we had solved the rural problems of twenty-five years ago, our urban problems

wouldn't be so severe now. Between 1945 and 1970, twenty-five million people left rural America. Government and private policy which emphasized the concepts of "bigger is better" and attempted to maximize agricultural efficiency per farmer, purposely depopulated rural America. If the USDA was to be able to continue reporting increasing food production per person in agriculture, it could be accomplished either by increasing food production or decreasing the number of farmers. The second course was chosen. "Some of the ill effects of migration to the cities by farm families are: Rural communities lose the human abilities and purchasing power of whole families and lose tax income which supports schools. The rural communities lose tax income, small businesses go bankrupt because corporation farms buy production supplies in large volume from out-of-state wholesalers and manufacturers located in trade and metropolitan centers." As people moved from rural areas, the rural communities disintegrated, in many instances, leaving only the elderly and the poor.

Jim found that of the 400,000 people who left Pennsylvania in the 60's, 357,000 were from rural areas. They left because of lack of opportunity and lack of public services. It is for these identical reasons that people are leaving urban areas today. We are seeing our urban centers decay today just as we saw our rural areas decay twenty-five years ago. The difference is that rural decay was a matter of planned public policy while our urban decay today is not. If we hadn't planned its demise, we probably could have prevented rural decay, but we have been caught unsuspecting by urban decay and don't seem to know what to do about it. Our national policy has been toward industrialization and urbanization and we can't seem to get untracked. Urban ghettos, urban unemployment, urban disillusionment were merely transferred from rural areas of yesterday. Jim rejects the myth that most of America's rural and small town residents are superfluous and obsolete and that their ultimate destiny is to be drawn or driven into cities. He states in his policy for the Pennsylvania Department of Agriculture: "It is our conviction that a rural renaissance is possible in Pennsylvania. We will do everything we can to help families who wish to do so move back to the land." As most of us know, people have been moving back to rural areas for the last several years, with or without the help of government policies or plans. Jim is obviously way ahead of other politicians on this subject, and to his credit, only a few years behind the people.



One of the primary difficulties which small farmers have is in their operating margin. Government policy has maintained low prices for farm-produced raw materials (wheat, corn, etc.). Farm operating costs have, however, escalated at or above the general rate of inflation. As a result, profit margins for farmers have been squeezed lower and lower. The USDA edict to farmers has been "Get bigger and get more efficient or get out." Most small farmers, farming small acreages, with small production have had to get out.

At the other end, prices of food to consumers have continued to escalate. This has happened because the spread between the price of farm commodities to the farmer, and the price paid by the

consumer has increased drastically. What has been the impact of vertically integrated corporations in agriculture or family farmers? Where does the food dollar go? Why should farmers be asked to produce at world market prices when no other segment of the economy does? And many more. "This is badly needed to give us a compass sighting as to where our Ship America is in relation to its own people."

In a more direct solution to the middleman problem, Pennsylvania was a leader in encouraging direct marketing from producer to consumer. One of Jim's objectives was to educate both farmers and consumers to the benefits of direct marketing. Farmers can receive a better price for their products and thus a larger share of the food dollar. Consumers can receive higher quality, fresh food,



consumer has increased drastically. Did you know that a \$3.00 bushel of wheat made into dry wheat flake cereal costs the consumer more than \$50.00? The transporters, traders, speculators, processors, wholesalers, retailers, (middlemen, by whatever name), keep taking a bigger and bigger chunk. Jim has been in the middle of this one for a long time and has proposed several approaches to determine where the food dollar goes and how small farmers might get a larger share of it.

Several times he has proposed a complete examination of the American economy and how it relates to rural problems. He would ask questions like: Who owns the land of rural America? What are the facts about rural income and how does it com-

pare with urban income? What has been the impact of vertically integrated corporations in agriculture or family farmers? Where does the food dollar go? Why should farmers be asked to produce at world market prices when no other segment of the economy does? And many more. "This is badly needed to give us a compass sighting as to where our Ship America is in relation to its own people."

There is a lot more to Jim McHale than I've summarized here. He's a courageous, creative, whirlwind of a character and he believes we can solve our problems if we put our minds to it and are able and courageous enough to reorganize our priorities. Most of all, I wanted to say he's in there fighting and he's on our side.



FROM SWEDEN THE ALL NEW

# Affordable "FORTY-NINER"

by

## JONSEREDS

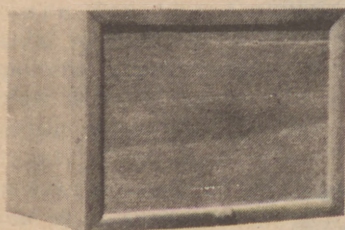


The FORTY-NINER — a model between the too small mini-class and the too costly large saws.

**Brown's Small Engine Repair**

County Road  
Searsport, Maine 04974  
Tel. 548-2775

## PERFECT HOMEMADE BREAD AND YOGURT



If you make your own bread or yogurt you know that a constant source of low gentle heat is necessary to produce sweet, creamy yogurt and high rising dough.

The vagaries of weather cease to be a problem in the controlled 85° environment of our box. Beautiful as well as functional and safe, it is made of the finest natural mahogany and heated by an electric bulb (not included). It will accommodate two large mixing bowls or six 5 1/2" x 10" bread pans. Thermometer and complete instructions are included.

\$16.95 post paid.

(ck-m.o.-Bank Am-Master Charge accepted)

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_  
Bank # \_\_\_\_\_

N.J. residents add 5% sales tax

**CREATIVE ART**

**BOX 325, CLAYTON, N.J. 08312**

## Flannel Sheets from England

Our English cotton flannel sheets and pillowcases will keep you warm and snug. Far better quality than domestic "blends," they really take the chill out of climbing into bed. Available in a spectrum of colors.

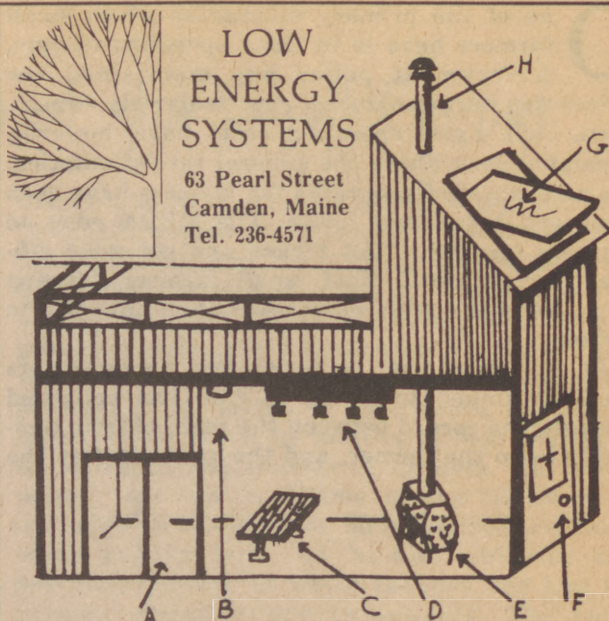
Amazingly soft, our women's **Pure Wool Undershirts** are warm, yet lightweight, never bulky or binding; in three styles. Also, button front Spencers.

Please send 25¢ for flannel swatches and brochure. Visit our shop in Franconia.

**Garnet Hill** 277F Main Street  
Franconia, New Hampshire 03580

## LOW ENERGY SYSTEMS

63 Pearl Street  
Camden, Maine  
Tel. 236-4571



- |                      |                           |                   |
|----------------------|---------------------------|-------------------|
| A. Peachtree Doors   | D. Lighting by Lightolier | G. Velux Skylight |
| Malta Windows        | E. Imported & Domestic    | Windows           |
| B. Smokegard Smoke   | Wood & Coal Stoves        | H. Metalbestos    |
| Detector             | F. Architectural          | Chimneys          |
| C. Muscongus Butcher | Hardware                  |                   |
| Block Furniture      |                           |                   |

**WOODSTOVES:** Vermont Downdrafter, Efel, Morso, The Elm, Tempwood, All Nighter, Petit Godin, Surdiac, Supra, Canadian Stepstove.

We sell the finest products of modern energy technology for the building and renovation of today's homes.

## MARTIN SUPPLY CO.



*The one store for all  
your farming needs.*

Main St., Bucksport, Maine

Tel. 469 - 3321



# Garden Way's Country Wisdom Bulletins

MANY NEW  
EXCITING IDEAS!



Country Wisdom at its Best ...  
Brief, accurate and ever-so-helpful!



Here, in precise, accurate "how-to" terms are the natural methods for getting back-to-basics. And you don't need a huge volume to find what you want. Each Country Wisdom Bulletin treats a single subject—thoroughly, but without the frills, like serious "how-to" books should!

**A. Home Strawberry Growing.** Packed with easy-to-understand explanations of selecting and planting strawberries, caring for them, keeping old beds and starting new ones.

**B. Easy-To-Grow Herbs and How To Use Them.** Tells you how to grow 30 herbs for flavor, vitamins and beauty in your garden.

**C. Perennial Spring Vegetables.** Here's how to grow five old-time favorites that merit a place in every garden: Asparagus, rhubarb, horseradish, Jerusalem artichokes and comfrey.

**D. Sharpening and Using Axes and Chain Saws.** If you're cutting wood to burn in your home, this will save you cash and time. The explanation of chain saw sharpening alone is worth the bulletin's price.

**E. How to Raise a Pig Without Buying Feed.** Top quality pork at a bargain price. John Vivian has stuffed this bulletin with meaty advice on buying, feeding and housing pigs.

**F. The Homestead Way to Grow Grapes.** Answers all of the beginner's questions on selecting varieties, planting, pruning.

**G. Raising Ducks on the Small Place.** You'll love this project, and you don't need a pond for it either. This easy method promises roast duck, a delicacy, at far less than the cost of stew beef.

**H. Growing Raspberries and Blackberries.** Read these secrets of how to raise all you can eat, and enough to crowd the freezer, on a small plot of land.

**I. How to Build and Use a Root Cellar.** If you can swing a hammer, you can build the root cellar shown here, and it will pay for itself the first year. All the tricks of storing produce too.

**J. Small Scale Maple Sugaring.** How to get the sweetness from your own maples without spending more money than it is worth. Plus other trees you can tap for syrup.

**K. Homegrown Lettuce 10 Months a Year.** Explains an easy way to raise delicious lettuce at little expense, almost the year-round.

**L. Eggs and Chickens with Minimum Feed.** Have fresh, jumbo eggs, fat hens and a little "egg money" of your own. How to beat the high feed costs by raising some yourself.

**M. Plowless Gardening for the Homesteaders.** Edward H. Faulkner wrote this in the 40s, and its message is as timely, helpful and thought-provoking today as it was then. Brim full of ideas for the progressive gardener.

**N. Making Apple Cider.** Tells how to blend and press your own tangy, crisp drink. It's fun. And if you like cider with a little muscle, the secrets of making hard cider are told here too.

**O. Growing Corn for Many Uses.** Want the earliest corn in your neighborhood. The best? Make corn meal? Raise your own pop corn? Get rid of the coons? Parch corn? All these questions are answered in this fact-jammed bulletin.

**P. Preparing Your House for Winter.** Your money back if you can't save 10 times the cost of this bulletin from only one or two of the hundreds of ideas for getting ready for winter.

**Q. Tomatoes — Home Grown the Year 'Round.** Say good-bye forever to those square, dry supermarket specials. New varieties and new methods, fully explained here, make it possible to have home-grown tomatoes, fat and juicy, all year.

**R. Beans . . . And Peas Too.** Offers thoughtful advice on varieties, tells how to get the most from your rows and is full of hints on planting and storing you'll find helpful.

**S. Apples, the Old Varieties.** How to find and grow those fine old varieties of apples that just can't be bought anymore. Here's all you need to guarantee bountiful harvests.

**T. Gourmet Gardening.** Looking for something different in your garden? New taste experiences? Instructions here for raising and cooking nine delightful treats that will be the envy of your neighbors.

**U. Pumpkins, The Biggest and the Best.** Author Hugh Wiberg grows those 100-plus pounders. Here he tells you each step, from where to get seeds, prepare the bed, make sure the big pumpkins have elbow room and lots to eat.

**V. Veal Raising, A Family Project.** Clear, concise explanation of how to buy a calf, feed, house and care for it, on a small homestead, to get oh-so-expensive veal at a bargain price.

**W. The Grafting Manual.** Simple explanations and clear illustrations take the mystery out of grafting, make it easy and fun. You can improve the quality and expand the varieties of fruit on your homestead. A real how-to bulletin.

**X. Planning Your Orchard: Dwarf Fruit Trees.** Here Larry Southwick answers all of your questions on laying out an orchard on your land (no matter how small it is) and selecting varieties.

**Y. Keep It Clean: Making Housework Easier.** Specific ways to save time, money and energy in work around the home.

**Z. Woodlots: Measure Your Profits.** A foolproof system for measuring wood in woodlot, and planning for more profitable growth.

**Bulletins are 24 pages long. 75¢ each, any 3 for \$2.00, any 7 for \$4.25, any 12 for \$6.50, any 16 for \$8.25, all 26 for \$13.00.**

If less than \$5.00, please add 50¢ postage and handling.

Send to: **Garden Way Publishing Co.**

Dept. 74409 • Charlotte, Vermont 05445

"Thank you very much for your attention to my order . . . Best Wishes of Success in the future of your publishing company. I'm sure your motto must be: the first in service!"

Mildred Fredeen  
St. Louis Park, Minn.

To: **Garden Way Publishing Co.,** Dept. 74409

Charlotte, Vermont 05445

Sirs: Please send me immediately the Country Wisdom Bulletins circled below:

A. B. C. D. E. F. G. H. I. J. K. L. M.  
N. O. P. Q. R. S. T. U. V. W. X. Y. Z.

Total order is \$\_\_\_\_\_. If less than \$5.00, please add .50¢ postage and handling. Satisfaction Guaranteed or complete refund without quibble.

Mr./Ms. \_\_\_\_\_

Address \_\_\_\_\_

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





# Home Grown Tractors

by Charles Page

**B**ehind rural homes in Maine they sit, fenderless and seemingly abandoned, the modified trucks and cars, the homemade tractors, and the Deer Isle pickups. Whether they evoke grins or testimonials, one thing is certain: people pass them by not recognizing their worth or giving them credit where credit is due. The average tourist can't appreciate their usefulness for hauling everything from pulpwood and farm machinery to pulling floats in Fourth of July parades. The story of their conception from recycled road vehicles by trial and error backyard mechanics, and their history from the first automobiles to present day high speed vehicles aroused my curiosity and launched me in search of the homemade tractor.

I traveled along the winding roads stretching from Castine to Deer Isle that weave together the towns of Penobscot, Blue Hill, Sedgewick, Brooklin and Brooksville. Braving barking dogs and maneuvering through a winter's accumulation of rural junk, I approached houses sporting interesting specimens to ask, "Pardon me, could I take a look at that tractor by your barn?" and to receive, with a smile of disbelief, a consenting, "Yes, I guess so."

---

*Charles Page works for Cornerstones, a school for owner/builders, in Brunswick, Maine. Photos are by the author.*

---

We see only those that survived. The rest, though rusting, broken down, or mired in the backwoods mud, can be found in the stories of the men who built and used them. Over cups of coffee I talked with a few of the many Maine people skilled in the art of building and using homemade tractors. I'm convinced that they are the most slapped together, well built, bastardized pieces of working junk I have ever seen, or will ever see.

Three categories emerge: the shortened trucks and cars, the trucks left stocksize yet modified in some other way, and the Deer Isle pickups, or "DIP's." The DIP's are sedans and station wagons with the body behind the driver's seat removed and replaced with a wooden flatbed. Used to carry clamhods by clam diggers and to carry hay for farmers, DIP's are a familiar sight in rural areas. Though I appreciate what DIP's have done for Maine and New England, I was more interested in the other two categories which require a bit of special genius to make and use.

The essence of tractors can't be appreciated in a first glance. Anyone can see that they are different. They have shortened wheel bases, springless rear axles, dual wheels or extra-large 20 inch rear wheels encased in tire chains. The quality of the cab varies from undamaged rust to early automotive dent. The uninitiated tend to miss the



mechanical subtleties involved in their creation and evolution. Let me explain.

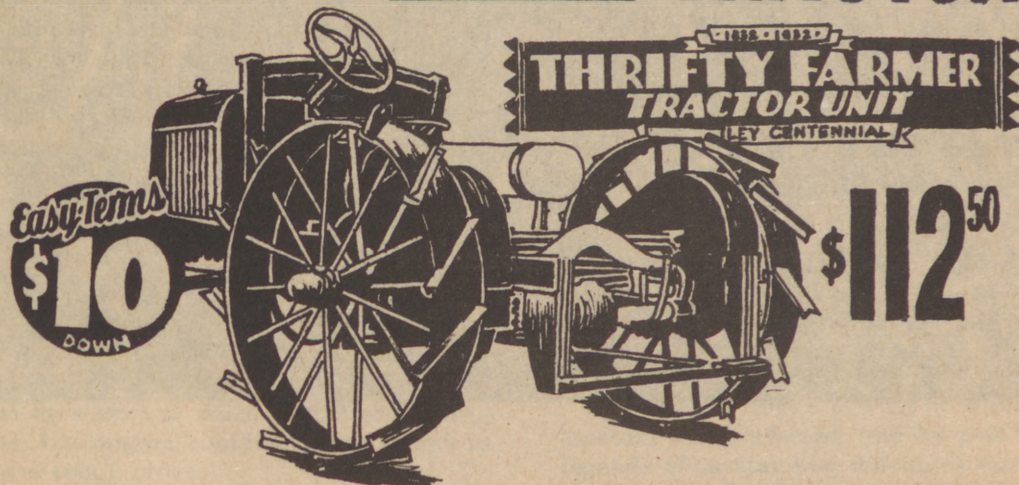
**T**here was no textbook for the early experiments in rural New England in the 1910's and 1920's. Homemade tractors were not born at a Kitty Hawk or a Menlo Park, but rather where the right conditions existed: a barn to work in, a cheap (under \$25) car or truck, and a man with the desire to build one. As the American love affair with the automobile progressed, so did the number of junk vehicles, dump picker specials, backyard mechanics, and homemade tractors. Most of the early makes and models of cars and trucks were converted into off-the-road working vehicles. The list includes Fords, Buicks, Willys-Overlands, Studebakers, Maxwells, Hupmobiles, Hudsons, Packards, and many others. The idea behind the modifications was to make a machine that could do the work of horses in fields or in woods but with less effort. A machine like a farm tractor, but without the high cost of farm tractors was the objective. The extent of the modifications depended for the most part on what the machine was to be used for. Farmers wanted short vehicles with small turning radiuses to pull harrows and plows around narrow fields. For woods work, a longer body was desirable to accomodate pulpwood. The extra traction that the pulpwood load gave to the rear wheels was helpful in pulling pulpwood trailers or for skidding out logs.

There was no orderly sequence of events leading to the ultimate homemade farm or woods vehicle. Communication between coastal towns was slow. People didn't travel much either. A trip from Castine to Brooklin was a long way to go, even to see relatives. In the winter people walked. A man down the road talked of draining the oil out of his family car each winter night and bringing it inside. After pouring the oil back into the car in the morning, there was only a 50-50 chance that the engine would start. This lack of communication perpetuated trial-and-error building techniques well into the 1940's.

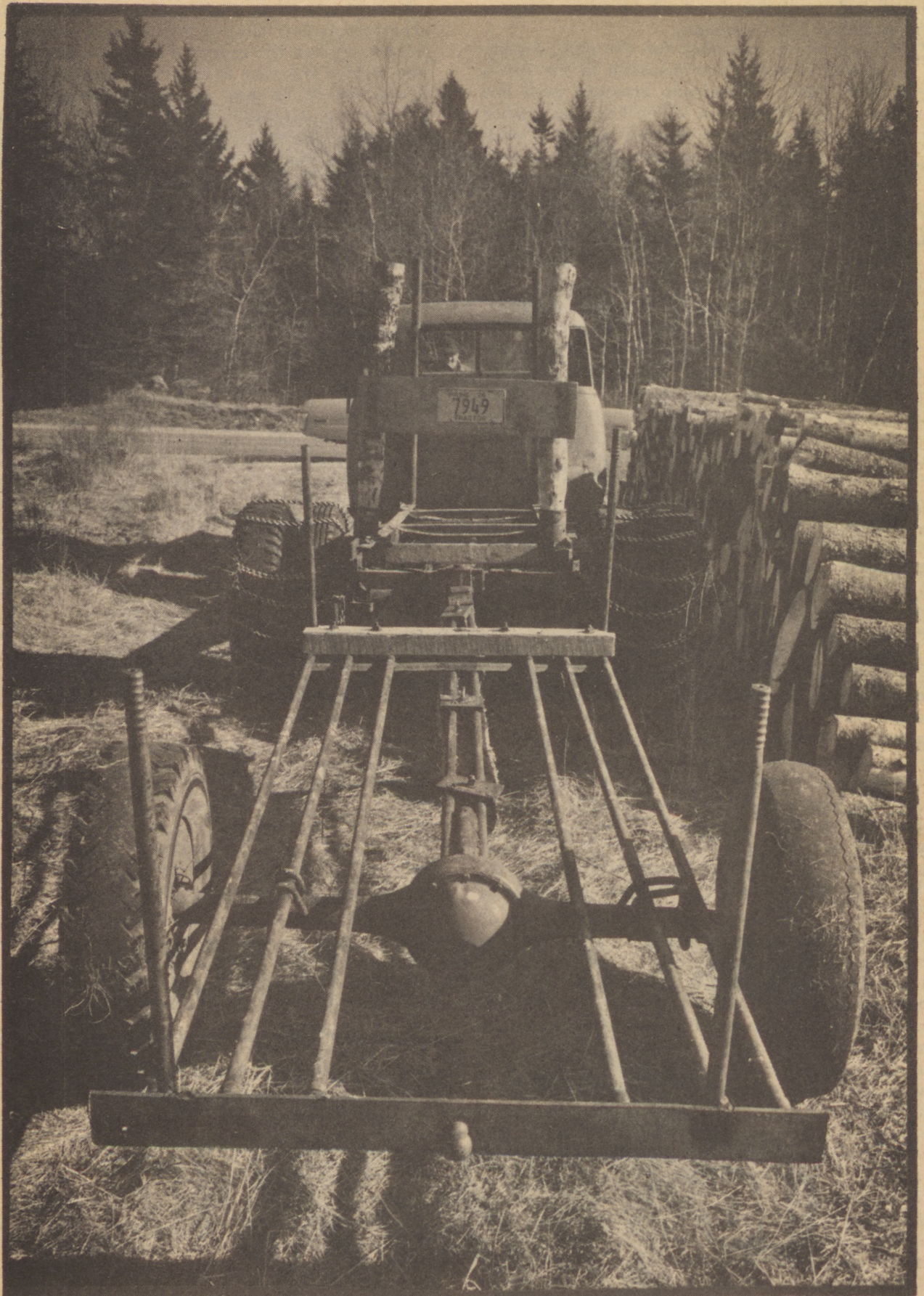
No better example illustrates how trial-and-error experimentation shaped homemade tractor development than the case of a Brooklin, Maine man who welded the rear axle onto a shortened truck frame which he had reinforced. Loaded with pulpwood and traveling over rough ground, the back left wheel would rise up in the air if the front right wheel went into a hole, and vice versa. The rigid frame cracked after a while, and he was forced to follow in the footsteps of a lazy neighbor who lashed his tractor together with baling wire, making his machine so flexible that the wheels would remain on the ground no matter how rough the terrain. Although what these farmers did was the talk of the town, the news never reached the next town of Blue Hill. There the same situation occurred. Once again, a slapped together, backyard wiring job proved more successful than a carefully planned and professionally-welded machine.

**I**nsuring flexibility by bolting the rear axle onto the shortened frame instead of welding it had its drawbacks. While pulling heavy loads, the rear axle would have the tendency to roll forward, pulling the universal joint off the spline shaft of the transmission, thus causing the driveshaft to drop to the ground. The problem was solved in different ways by different people, but the most common method was to bolt the differential to a crossmember on the vehicle's frame. Care had to be taken in shortening the vehicle's original driveshaft. Some people simply removed the short front driveshaft, called the jackshaft, and attached the rear driveshaft directly to the transmission. Others, desiring even shorter tractors, cut the rear driveshaft, removed a section, and welded the two pieces together. Bent or poorly balanced driveshafts wobbled, shook, rattled, and eventually ruined the universal joints and all the seals in the differential. Lining up the rear axle with the front axle wasn't easy. Unsuccessful attempts led to vehicles with minds of their own, determined to circle, bounce, and jog rather than head in any one direction.

## MAKE A GENERAL PURPOSE TRACTOR









Lugging power, the power to carry or drag heavy loads slowly over rough terrain, was desirable. V8 engines, which have to turn at a high RPM in order to get the same power that a six-cylinder would have at a much lower speed, proved inadequate for most vehicles. In general, tractors with V8's would spin in place, drive off helter skelter over stumps and rocks, or stall under heavy loads. Engine weight was also a factor. The weight of a V8 tended to drive the front end of the tractor into soft ground. Six cylinders worked nicely, but four cylinder engines worked even better. The simplicity of the light-weight, easily maintained, four cylinder Ford engine made it popular in this region of Maine.

There was always someone who had a four or six cylinder tractor with a three speed transmission who wanted extra lugging power from the engine, or someone who had a tractor with a V8 engine and needed a lower gear reduction. A second transmission added to the first transmission would lower the gear ratio enough to allow the engine to carry heavy loads at an idle without stalling. The joint between the two transmissions was made by welding a universal joint that fit one transmission onto the second transmission's clutch plate. By this method, Ford transmissions and rear ends would be used on Chevys and vice versa. Unsuccessful attempts to weld the second transmission securely to the frame led to the more flexible arrangement of bolting it to a crossmember of wood or steel. It was learned the hard way that the tremendous torque generated by the first transmission would twist apart a second transmission of equal size. Two ton truck transmissions were used behind 1 1/2 ton transmissions. Truck four speeds were used behind car three speeds. The lowest gear was obtained by putting both transmissions in reverse and driving forward! This gear was so low in some cases that loggers could leave their tractors unattended, in gear and running, while they piled pulpwood on the back as the tractor crept along.

**M**ore often than not, rear springs did more harm than good. A load of pulpwood on springs would sway and bounce over rocks and stumps, causing the load to loosen and pulpwood to be thrown all over the place. In addition, without rear springs, the body was lower, making it easier to throw on a load of pulpwood or hook on farm machinery. Bolting the springs down to the frame was another technique used to prevent the load from swaying.

Front springs were also considered a handicap in some ways. Unlike Chevrolets, Fords until 1974 had transverse front springs. This was a desirable feature because the hinge in the center allowed the front wheels to move up and down easily over rocks and stumps. To reduce the force necessary for the front wheels to move up and down, the springs on both the Fords and Chevrolets could be removed and replaced by a central yoke. With free floating front wheels, the engine could use less power to maneuver over rough ground.



There is a long standing disagreement concerning the advantage of dual wheels over single rear wheels. There are those who claim that single 750-20 inch wheels trample less ground when harrowing and are narrower and higher than dual wheels, making the tractors more maneuverable in the woods. Dual wheels, on the other hand, have more traction on bare and icy ground and in deep mud. This extra traction proved valuable when hauling farm machinery and pulp trailers. Chains were essential for traction in the woods regardless of wheel style. For dual wheel tractors, chains proved valuable in another respect. When mired in the mud, a cable securely wrapped around a tree would be attached to the tire chain between the two wheels, and the machine winched out as it was driven forward. I have the feeling that likes and dislikes of wheel style were shaped more by what was available at construction time than by any scientific principle.

In the 20's and 30's Fords and Chevrolets were the most plentiful and therefore underwent the most modifications. One vehicle, the Model A 1 1/2 ton Ford truck, emerged as the classic homemade tractor in New England. Not only was it easy to maintain and to get parts for, but its simple yet rugged construction made it last longer as a woods or farm vehicle.

**B**y 1932 Sears Roebuck was selling kits to convert Ford Model T and A cars and trucks into tractors. These kits consisted of two large metal wheels which attached to an axle bolted onto the frame in front of the existing rear axle. A gear on the rear axle fitted into a larger gear mounted on the spokes of the metal wheels, and thus reduced the gear ratio to the engine to 51 to 1. This Thrifty Farmer Tractor unit was a great improvement over the other brands which required flipping the back axle and differential over in order to avoid having three speeds backwards and one speed forward.

By the early 1950's the art of making homemade tractors was perfected, and by this time also, the legends of outstanding machines were well known.



By 1950 Herb Bowdens' 1929 Model A 1 1/2 ton tractor had hauled out hundreds of cords of pulpwood and thousands of logs. His secret was in the set up of his trailer and in his skill in using it. He attached the back bobs from a horse-drawn woods sled to the rear of his shortened truck with two long beams. Chains from the sled's runners were crossed and attached to the tractor's frame, enabling the sled to track the wheels as the machine maneuvered around trees and rocks in the woods. This sled-tractor combination would carry two cords of wood or 1000 board feet of logs each trip. To-day that is comparable to a small modern-day woods skidder costing about \$30,000. To pack down his winter road, Herb would back into the woods, drive forward, then back in again, packing the snow as he went. Herb was not alone in his skillful use of the homemade tractor. Though working techniques and machines varied from one person to the next, it is obvious that many millions of board feet of logs and pulp have been hauled by these tractors since their conception.

All the people with whom I talked had favorite vehicles or engines or transmissions that were outstanding to them. These included the Chevrolet 235 engine, the Ford low speed differential, and the fish plated Chevrolets. The trouble is that all these were from older vehicles long since gone. Modern cars have high speed short stroke engines with high gear ratio transmissions and differentials. What was so simple for the Model A to do would be quite difficult for the vehicles of today. Some of the larger trucks, two tons and more, have six cylinder engines and low speed drive trains, but they are so big they would swallow a garden in one bite.

**M**assive amounts of road salt used today, coupled with the increased demand for scrap metal, has made the availability of junk parts limited. Cost is a factor, too. Where a Model A

tractor would have a cost a few dollars to make in 1940, it would cost about \$600 to make a tractor to-day, provided you could find the right parts. Of the 25 working homemade tractors I took a close look at, only two were made after 1950. I did not see the owners' sons out in back with wrenches in hand, working under some junk. Nor did I hear of anyone planning to build one. There was one neighbor, a mechanic who had a homemade tractor, who said one evening with a sparkle in his eyes as I stood up to leave, "You know, if you took a four cylinder Ford Pinto engine and put it into a 1 1/2 ton truck body and had an automatic transmission in front and then had a four speed behind, you would really have something."

My neighbor's enthusiasm for homemade tractors, seeded by countless dealings with them over the years, now begins and ends in a daydream. As parts break down with age and become harder to find, and the men who built and used them no longer like to tinker to hold them together, their numbers dwindle. The next time you see one, stop to look closer, kick a tire or two, bend to look beneath the rusted frame, climb carefully over out-reached seat springs and sit where you can think awhile. Daydream about the machines you knew or maybe ones you'd like to build or use, and above all else, give credit where credit is due.

---

*Special thanks to Kendell Ellis, Bob Leach, Sonny Farnham, Berwyn Hutchens, and Herb Bowden of Penobscot, Bunk Black and Vernam Ryan of Brooksville, Arthur Smith and Stanley Gray of Brooklin for information, enthusiasm, and love for the homemade tractors they have made or used.*

---

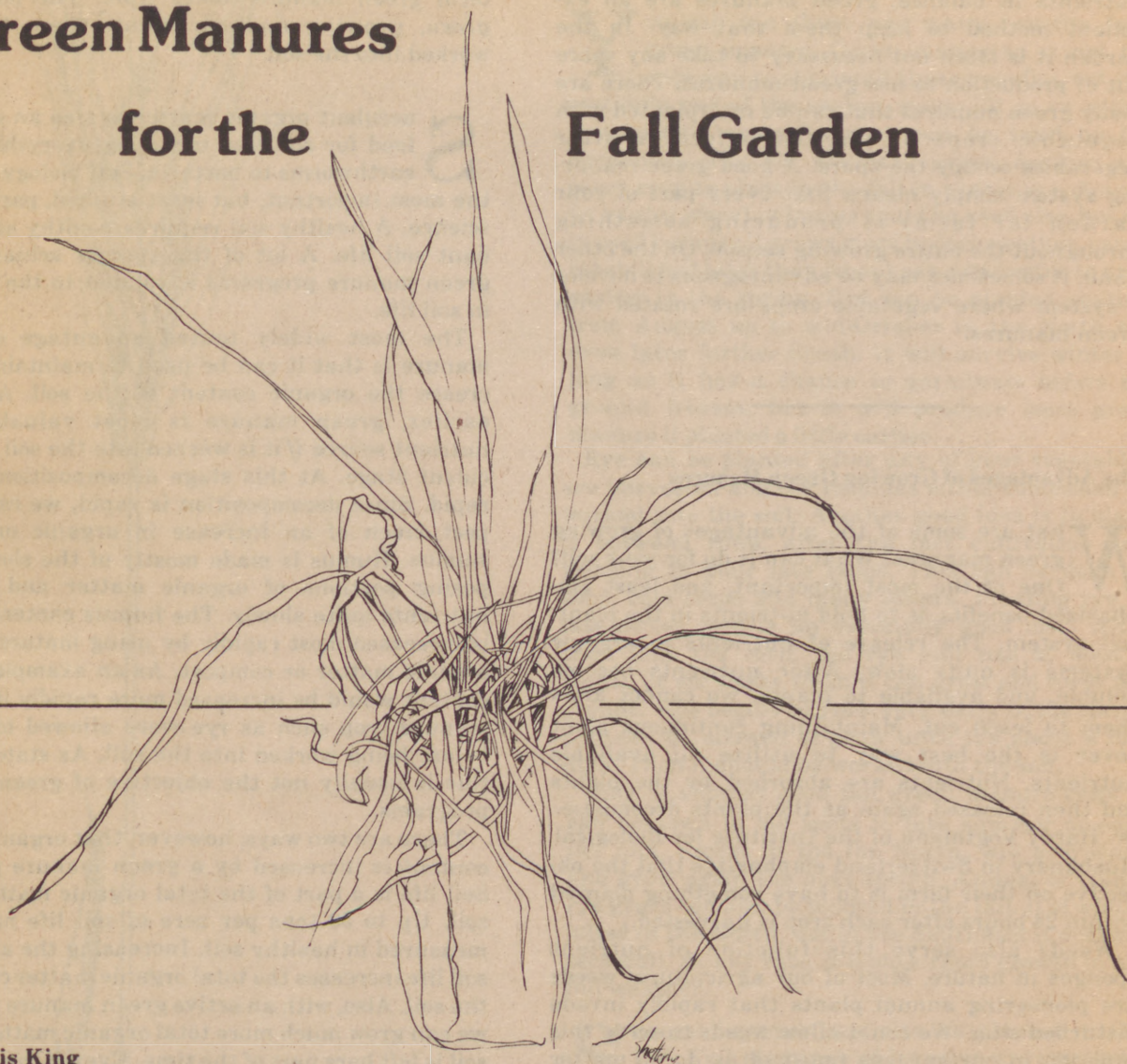




# Green Manures

for the

Fall Garden



by Dennis King

**G**reen manuring is the practice of growing crops for the sole purpose of working them into soil as a means of soil improvement. It was a widely used agricultural practice in the 19th and first part of the 20th century. Cheap chemical fertilizers and the farmer's economic imperative to produce saleable crops on every acre has resulted in the decline of this practice. As the era of cheap resources passes us by, green manuring will again become a necessary agricultural practice. In fact, the soil receives many necessary benefits from green manure which cannot be provided by chemical fertilizers and continuous monoculture cropping.

Green manures have always been a viable alternative for the sensible gardener. It provides a method of maintaining healthy soil without having to import large amounts of organic matter. Even though the use of waste organic matter (sewage

sludge, waste manures, waste hay, etc.) is commendable, permanent agriculture, or permanent gardening cannot continually depend on moving organic matter over long distances. Every time we use organic matter produced in another area on our garden, we may be improving our garden soil, but in the long term we are impoverishing the area from which the organic matter was removed. The previous statement is obviously an oversimplification and all of us could think of exceptions to this rule, but in general it is true and sets the tone for the justification of green manuring. *We can provide organic matter for our gardens and fields from our gardens and fields.*

Green manuring is no magic cure-all, as it is proposed to be by some advocates. If a soil contains mineral deficiencies or imbalances, these must be corrected. If soils are extremely low in organic matter content, it may be a long and costly process to



improve them with only green manures. Given a halfway decent soil to begin with, with mineral nutrients in balance, green manures are an excellent method to keep them that way. In the garden it is often not necessary to take any space out of production to use green manures. There are many green manures that can be interplanted with vegetable crops or planted before or after vegetables occupy the space. A good green manuring system simply means that every part of your garden (or farm) is producing something throughout the entire growing season. On the other hand, it sometimes may be advantageous to develop a system where vegetable crops are rotated with green manures.

---

### The Advantages of Growing Green Manures

**W**hat are some of the advantages of growing green manures? What can it do for your soil? One of the most important, and least emphasized benefits, is to hold nutrients in the plant-soil system. The release of nutrients in organic systems is quite slow. After nutrients become soluble, and available to plants, we cannot allow them to leach out. Maintaining continuous plant cover is the best way to utilize all available nutrients. Nutrients are absorbed by the plants and then released again as the plants decompose. Dr. Hardy Vogtmann of the Institute for Biological Husbandry in Switzerland emphasizes that the objective on their farm is to have something planted within 24 hours after each crop is harvested.

Weeds also serve this function of nutrient sponges in nature. Most of our agricultural weeds are pioneering annual plants that rapidly invade disturbed sites. We could allow weeds to serve this function in our gardens (most of us do no matter how hard we try not to) but if allowed to go to seed, weeds often interfere with succeeding crops. This is a good point to remember. Some manure crops can become troublesome weeds if allowed to go to seed also. Seeding all harvested areas to a green manure crop immediately after harvest can be a means of controlling and suppressing weeds. An added advantage is that we can grow more organic matter at a faster rate than most species of weeds.

Another function of green manures is to provide available nutrients to succeeding crops. Most plants, still in a succulent stage of rapid growth, contain enough nitrogen so that decomposition is rapid. If plants are worked into the soil at this stage, their nutrients are rapidly available to the next crop. On the other hand, however, if green manures are allowed to mature, their nitrogen content diminishes and decomposition is slow. It usually even takes extra nitrogen to assist decomposition which must come from the soil and is robbed

from the next crop, if mature plant material is worked in just before planting. That is where the term green manure comes from. The plants *are green*, growing and succulent, when they are worked into the soil.

**S**ucculent organic matter is also an excellent food for soil life, including everything from earthworms to bacteria. Soil biology is one of the most important, but least studied, parts of soil science. A healthy soil requires healthy and abundant soil life. A lot of the success achieved with green manure programs is related to the increase in soil life.

The most widely touted advantage of green manure is that it can be used to maintain and increase the organic content of the soil. As I said earlier, green manure is most valuable as a nutrient source *if* it is worked into the soil at a succulent stage. At this stage decomposition is most rapid. Since decomposition is rapid, we cannot expect much of an increase in organic matter as humus. Humus is made mostly of the slow-decomposing portions of organic matter and releases nutrients quite slowly. The humus content of soils is increased most rapidly by using mature and dry organic matter or compost. As an example, humus content would be increased more rapidly if a green manure crop such as rye were allowed to mature before being worked into the soil. As stated above, this is usually not the objective of green manure programs.

There are two ways, however, that organic matter content is increased by a green manure program. Soil life is a part of the total organic matter of the soil. Up to 50 tons per acre of soil life have been measured in healthy soil. Increasing the amount of soil life increases the total organic matter content of the soil. Also, with an active green manure program, we can grow much more total organic matter than if soil is left bare part of the time. Even if the green organic matter is rapidly broken down, the content in the soil is increased.

Green manure crops can also provide extra nutrients to the soil! Alfalfa is noted for having roots that penetrate to a depth of 20 feet, excellent at bringing up subsoil nutrients. Buckwheat, with its ability to grow in very poor soils, increases the organic matter content of these soils. Organic acids dissolve and release mineral nutrients, thus making them available to succeeding crops. Legumes (clover, alfalfa, peas, etc.) have the ability to attract nitrogen-fixing bacteria to their roots. Atmospheric nitrogen thus feeds the legumes and is released to other plants when the legume or the nitrogen-fixing bacteria decompose.

Erosion control can be another important function of green manures and cover crops. Plant cover on slopes is essential to hold the soil during heavy rains and spring runoff and reduces wind erosion. Plant cover also reduces surface compaction caused





Winter Rye

by heavy rain hitting bare soil. Soils that are crusted by heavy rain are much less permeable than loose soils to succeeding rain.

#### Green Manures to Plant in the Fall

**Y**ou can see there are many benefits from green manure. Green manuring is not the only way to obtain all these benefits, but it is certainly one of the easiest ways. I'll go on with a few specific examples that can be tried by fall gardeners. The old standard green manure and cover crop to plant in the fall is winter rye. Actually, winter wheat or barley could be used also, but rye is used because it grows more in cool weather, can be established later than wheat can and begins to grow earlier in the spring. Rye can be planted anytime from August up to mid-October in the North and even later further South. It will survive winter as long as it has a chance to germinate before the ground freezes, but it will produce more green manure if planted a little earlier.

Rye can be planted after any of your vegetables are harvested and the residues either composted or worked into the soil. Another good idea is to plant it between rows, after the last cultivation and weeding in your late crops. This can be done in corn, cold crops and many others. Planting rye in late sweet corn is an especially good idea. After frost kills the corn, the rye still has at least a month or six weeks when it can grow and cover the ground. Rye begins to grow very early in the spring and can be allowed to grow until it's about a foot high. Then it should be worked into the soil.

Kale is another good fall green manure crop. It can be sown in old spots in late summer or early fall and, except in the far North, will overwinter and grow again the next spring. Annual or Italian rye grass can also be planted in the fall. It is winter-killed in the North, but in the Southeast it overwinters well. At any rate, it makes rapid growth in cool fall weather.

**S**everal legumes can also be planted in the fall. Fall plantings of legumes are especially good if you plan to leave an area in green manure for the next growing season. Plant them with a grain in the fall. Mow off the grain before it goes to seed and then allow the legume to grow the rest of the summer. Sweet clover, white clover, red clover, vetch, and others are especially good for this. In the North it is possible to get good growth out of most of these legumes in early summer, then till them in and plant late sweet corn.

Crimson clover is used as a winter annual in the South and is the old-time southern soil builder, just as sweet clover and buckwheat were used extensively as soil builders in the North. Crimson clover will overwinter south of New Jersey and blooms the next spring in April or May. If planted early enough, about early August, it has time to make good growth before the ground freezes in the North. Northern gardeners who use annual rye grass in late summer might try mixing in some crimson clover.





Rosa Rugosa

# Wild Harvest

## A Guide to Edible Wild Fruits of the Northeast Part II

By Norman S. Bailey

Our earlier discussion included wild strawberries, raspberries, cherries, and sugarplums . . . a few representatives of the Rose Family which in eastern North America is unrivalled by any other group of plants in the production of a diversity of delectable fruits. Almost every New Englander with rural experiences carries nostalgic memories of wild strawberries, raspberries, blackberries, and an early truant from cultivation, wild apples. Whittier, in "The Barefoot Boy," mentions "strawberries on the hill" and Thoreau wrote a fine essay about wild apples, to note only two familiar local references. In addition to these especially noteworthy fruits, several other rosaceous plants provide tasty nibbles for campers and hikers, or gourmet treats when properly prepared. Descriptions of the more important kinds of fruits produced by rosaceous plants not previously considered follow. Also included are several other types of plants whose fruits ripen in late summer and fall.

---

*Dr. Bailey, a biologist and entomologist, lives on Swan's Island in Maine. Part I of this guide appeared in the Summer 1977 issue of Farmstead. Illustrations are by Pamela and Walter Carroll.*

---

### Rose

*Rosa rugosa* Thunberg  
Family Rosaceae

Years ago, this coarse, vigorous, showy rose was introduced from Eastern Asia and has naturalized so well as to appear to be a native plant. Frequently it may be found on the shores of small islands off the Maine coast that have never been inhabited. It thrives on rocky shores, beachheads, sand dunes, and along roadsides, and may be found throughout eastern North America from Quebec to Minnesota and south into New Jersey.

This shrub grows in dense clumps that gradually spread in all directions by strong stolons. The canes may be two to five feet or more tall and may or may not branch freely. They are densely covered with sharp prickles of varying lengths. The foliage is coarse, heavily veined, and a rich, dark green. The single flowers are large and typically rose-red, but the color is somewhat variable. A pure white form is not uncommon, though it is less vigorous than the reds and has foliage of the much lighter green. Several hybrid forms, some with double, richly scented flowers, are also in cultivation.

In exposed situations, the clumps are often great mounds of green splashed with clusters of red flowers, from June until fall. Marginal stems are



usually only a foot or two tall, but the canes in the center of the mass may be five or six feet high. By early August, the fruits of June flowers are ripening. No other rose known to me produces such large haws. Since they are a brilliant orange-red, they are as colorful and attractive as the flowers. Late in summer, both flowers and fruits occur together.

These large haws, or hips, have a very high vitamin C content. Conserves and jellies may be made from them. This is generally true of rose hips, but those of other species are much smaller and have far less pulp around the seeds.



Wild Apple

*Pyrus malus* L.

**N**ative deer, domestic cattle, birds, and man himself have all unwittingly (except for Johnny Appleseed) assisted in the dissemination of apples. Most everywhere in New England, apples have naturalized in pastures and around old homesites. Some were originally planted and have even managed to survive where old houses have long since completely disintegrated, leaving only the cellar hole maintained by walls of massive boulders or rough-cut granite. The old cellar hole with a long-neglected apple tree or two, and possibly a clump of lilacs nearby, are surprisingly persistent memorials to our pioneering ancestors.

The typical old apple may have a spreading crown with dense, irregular branches. For a few days in spring, their lovely pink and white flowers will lend beauty to an old pasture or homestead otherwise completely overrun by alders and other native trees and shrubs. If examined closely, you will usually find the bark of the older apple trunk and main limbs closely dotted with the shallow circular punctures of sapsucker drill holes, where they annually make a systematic search for bark-dwelling insects.

From late summer until heavy frost, some of these trees will yield their fruits. Some are small, nubby, and sour, but an occasional wild tree will produce fruits that make excellent, tasty sauce, jelly, and pies. Since the trees are unkempt and subject to infestation by numerous fungi and insects to

which apple trees serve as host, it is best to pick only what you can use promptly. Seldom will the apples keep. If such trees are nearby, gather just what you will use in a day or two, and then pick more as needed. Generally they will keep better, and even improve, if left on the tree.



*Pyrus melanocarpa*

#### Chokeberries

*Pyrus arbutifolia* (L.) L.f.

*Pyrus floribunda* Lindl.

*Pyrus melanocarpa* (Michx.) Willd.

Family Rosaceae

**T**hese tend to be colonial shrubs (rarely small trees), quite variable in growth, leaf form, and other characteristics. *Pyrus melanocarpa* is the commonest representative in New England and grows in low, dense, spreading thickets. It has black, juicy fruits 7-10 mm. in diameter. *P. arbutifolia* is commoner to the south and bears red fruits only 5-7 mm. in size. It is most likely of the three species to be arborescent. Finally, *P. floribunda* has dark purple, juicy fruits 8-10 mm. in diameter and is more northerly in its range. All grow on peaty soils among low trees, in thickets with various shrubs, and in clearings where soils may be wet or dry and even thin, as on ledges and bluffs.

Clusters of white flowers, often with a pinkish tinge, resemble mayflowers. The deep forest green foliage is somewhat glossy above. These plants are frequent and seem to hybridize freely among themselves and with native Mountain Ash occasionally.

Their fruits, now seldom used, resemble small hawthorn pomes, are rich in pectin, and ripen from late July into October depending on the locality. They occur in little clusters and make a heavy, sweet, dark carmine jelly.





**Hawthorn**  
(Haw, Thorn, Thorn-Apple)

*Crataegus* species  
Family Rosaceae

**T**hroughout eastern North America, numerous species are scattered and may be locally common. Although easily recognized as a group, identification of particular species is difficult and essentially academic. Most are small trees with low and spreading tops. Their branches are dense, slender, very crooked, and twiggy. The stout thorns quickly become apparent. Several types grow in dense, spreading copses or thickets. They seem to prefer woodland borders and open slopes.

New England species have small leaves with margins variously lobed and serrate. They are a smooth, glossy, forest green above and set off the corymbs of white flowers that appear in May. Generally, the fruits ripen in October and often persist to be eaten by several different birds in winter. They may be yellow but are most commonly some shade of red and are much like tiny apples. The flesh surrounding the seeds may be thin and dry, firm and thick, or juicy and thick. Some are very tart and others sweet. The fleshier, juicier varieties make fine jellies. Consequently, wherever you may be in October, the hawthorns will be worth investigating.

#### **Blackberry**

*Rubus* species  
Family Rosaceae

**C**losely related to the Raspberries is the Blackberry complex. Although even the botanical specialists disagree in their classification, most rural New Englanders know wild blackberries and where to find them in season. Blackberry canes are light green, strongly ridged, and generously armed with needle-sharp, curved,



stout spines. Since the arching canes may be six to eight feet long, picking the wild blackberries can be slightly hazardous and often painfully remembered. Fortunately, rope blackberries are large and firm. Therefore, a quart or two can often be picked in just a few minutes.

Blackberries frequently grow on fairly wet soils, in alder swamp openings, and in thickets with such shrubs as meadowsweet, spiraea, black alder, and wild roses. They flower (white axillary clusters) in July and the fruits ripen from late August into early September.

Numerous types of wild blackberries occur in North America, and as Europeans settled and cleared the land for homes and farms, the native ecosystems were so disturbed that the different wild blackberries were brought into contact and hybridized rather freely. This resulted in a rapid proliferation of new forms. Many of these have established and become locally abundant. This process has obviously greatly complicated attempts to clearly identify wild blackberries.

Blackberries also have a unique and delectable flavor. Fresh berries are mouth-watering with cream and sugar. They also make tasty pies and fine jams and jellies.

#### **Beach Plum**

*Prunus maritima* Marsh.  
Family Rosaceae

**N**ear the sea shore the beach plum often forms dense, low shrub thickets. The tops are gnarled, twisted, and thickly branched. In more sheltered situations, it becomes a small tree. In early spring the dark, almost black, branches set off clusters of small white flowers. By early fall, blue-purple plums, rarely yellowish, mature. These are just over an inch long and make excellent jams and jellies.





Though these plums are typical of coastal areas from southern Maine to Delaware, they may grow on sandy soils along streams and lakes twenty-miles or so inland. In many other parts of eastern North America, related wild plums occur that may yield similarly useful fruits. These wild plums are also preserved by drying.

**European or  
Common Barberry**

*Berberis vulgaris* L.  
Family Berberidaceae

**T**his attractive shrub was early introduced from Europe and has naturalized and become completely wild in eastern parts of central and southern New England. It is apparently hardy from Nova Scotia south to Delaware and westward. The shrub is frequently found growing in New England hedgerows, dry thickets, rocky pastures, woodland borders, and along rural roadsides. Commonly, it is four to six feet tall, with many relatively slender gray-brown stems whose tops tend to arch rather gracefully. Stems and the smaller branches are copiously armed with clusters of needle-like spines which occur in triplets or branch even more freely. The inner bark and wood are noticeably yellow.

The flowers, clear yellow, appear in May or June in compact drooping clusters, to be followed by the



clustered scarlet berries in autumn, making the shrub handsome throughout much of the growing season. However, few nurseries seem to handle it now, possibly in the Northeast because it is so common, and further west because it is the alternate host of the fungus that causes the dread stem rust of wheat and should, therefore, never be introduced to any area where this important food plant is grown.

The ovoid berries have an elongated seed, covered thinly with a sour pulp. In colonial days, and occasionally still, these berries are cooked and the pulp is strained off for jellies, jams, and even pies.

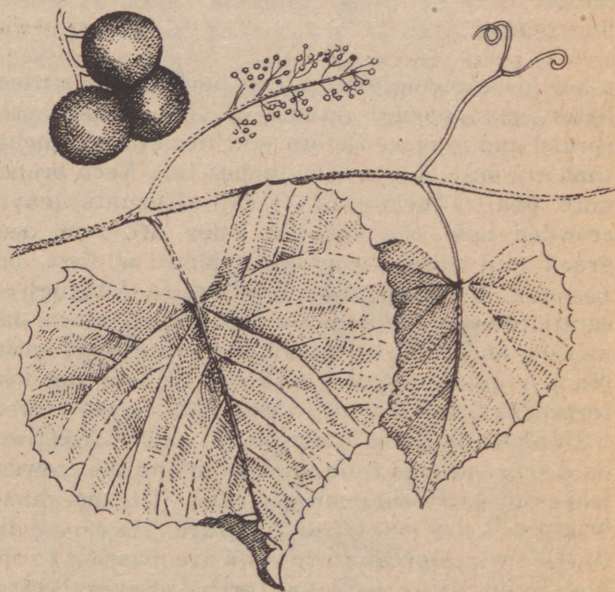
**Wild Grape**

*Vitis labrusca* L.

**Fox Grape**

Family Vitaceae

**G**rowing in thickets along woodland borders, stream banks, and lakeshores, several wild grapes may be found throughout eastern North America. Many are vigorous climbers and develop an almost smothering entanglement in red maples and other native hardwood trees. From *Vitis labrusca* L. the well-known Concord and other hardy cultivated varieties were derived. This

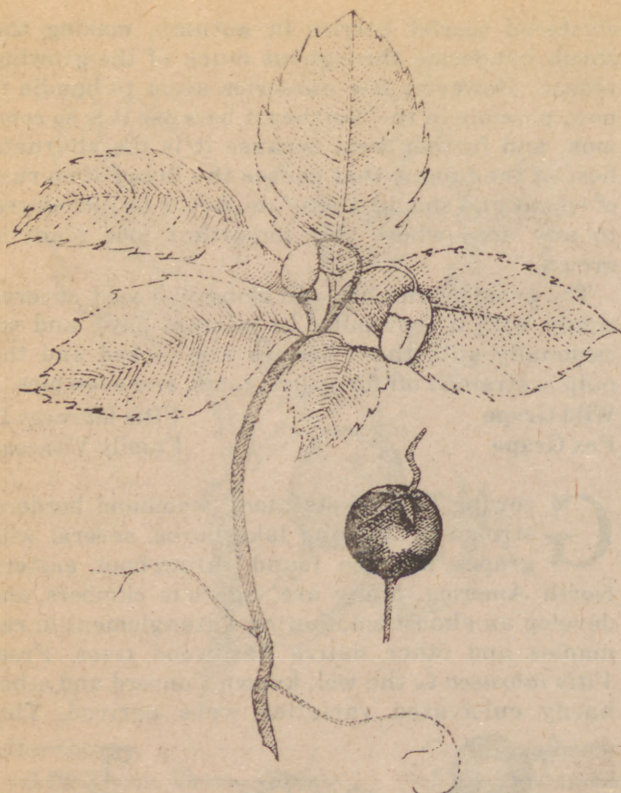


species ranges from southern Maine to southern Michigan and south to Georgia and Tennessee and is variable in many features. The fruits may be white, amber, pinkish, russet, purple, or purple-black. They are 1-1/2 to 2-1/2 cm. in diameter, grow on clusters of up to twenty and, when fully ripe, often after an early frost in September or October, they are sweet and tasty. The somewhat rounded, lobed leaves are large, thick, and strongly veined. Beneath they are thickly felted (tomentose). Where available, the grapes are excellent for jellies, for wine, and for eating fresh when fully ripe.

**Checkerberry (Wintergreen)** *Gaultheria procumbens* (L.) Family Ericaceae

**T**he checkerberry ranges throughout the woods of the Northeast and is a common evergreen ground cover. It grows in clearings and along roadsides where it often merges with mats of the haircap moss (*Polytrichum*) and





other low-growing plants. Just beneath the surface litter, mat-forming stems of the checkerberry spread and produce the upright flowering branches that are only four or five inches tall. Each branch may bear a group of thick, alternate leaves crowded near the summit. They are very deep green and glossy above, succulent at first, but becoming leathery late in the season. Although essentially evergreen, they usually turn a deep, dull maroon and persist through the winter. The entire plant is quite aromatic with checkerberry (or wintergreen) flavor. Small, white, bell-shaped flowers with pink tips hang in a group of only two or three on a short pedicel from an axil among the crowded leaves in early summer. By early fall, the plump, bright-red, dry pulpy fruits mature. They have distinctive wintergreen flavor and are pleasant to nibble, even after over-wintering. Several birds (partridge, pheasants, etc.) are fond of them. Mature leaves are said to make an agreeable tea when steeped.

#### Cranberries

Mountain Cranberry

Highland Cranberry

Lingenberry

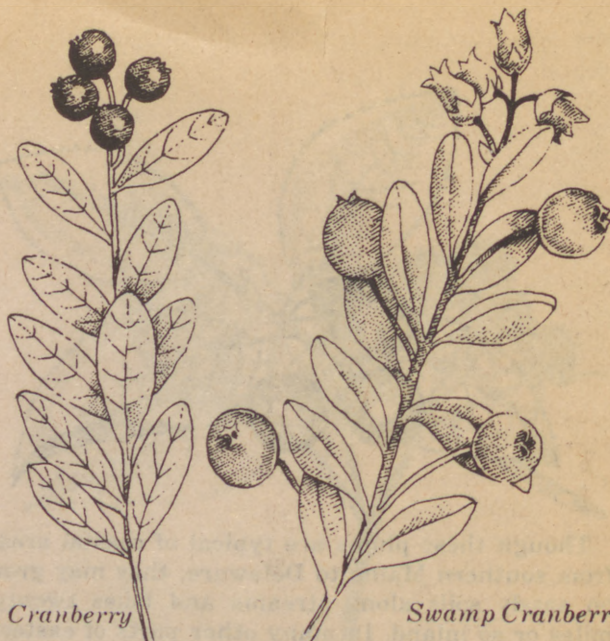
*Vaccinium vitis-idaea* L.

American or Swamp Cranberry

*Vaccinium macrocarpon* Ait.

#### Highland Cranberry:

**T**his handsome little plant is prostrate and vine-like. It prefers dry, peaty soils and may be found associated with the low-bush blueberries. Frequently it forms rich, evergreen mats on the thin turf over ledges just above sea level along the Maine coast. In the southern part of its range, it grows with alpine plants above



Mt. Cranberry

Swamp Cranberry

tree line in the mountains. The brilliant red berries ripen in August or later. Where plentiful they may be gathered and used for making excellent jellies and cranberry sauce. They are often preferred to the swamp cranberries by those who know both. In late June and July the white flowers resemble blueberry blossoms. At each season, the glossy leaves beautifully set off first the flowers and then the gleaming red fruits.

The ancient Norsemen used these berries for making wine, since the plant also grows in their homeland. In their early voyages to North America (referred to as "Vinland" in the Viking sagas) they recognized it and mentioned it as the "wineberry." Translators of the sagas often made the error of translating wineberry as "grape." But grapes were not grown in Scandinavia. Professor Fernald<sup>†</sup> used this and other botanical evidence from the sagas to argue that Viking landings in North America were north of central Maine, since further south the Highland Cranberry grows only above tree line, as on Mt. Washington.

#### Swamp Cranberry:

**T**he common Swamp Cranberry is frequent in northern sphagnum bogs and other swampy areas across North America. On Cape Cod and elsewhere, it has been brought under intensive cultivation and is an important commercial crop. Cranberries in our markets and most of the jellies and sauces are products of this annual harvest.

The plant is a slender perennial vine whose stems and branches fork freely, often carpeting patches of swamplands. The leaves are narrower, longer, more widely spaced, and much paler green than those of the Mt. Cranberry. The pinkish white flowers rise on wiry pedicels from the upper leaf axils. The dainty pinkish-white flowers have strongly reflexed petals. Fruits ripen in early fall, but may be picked early to avoid infestation by insect larvae. Under cultivation, timely flooding of the

<sup>†</sup>Dr. M.L. Fernald, formerly of Harvard University.



bogs is a technique for controlling many of the cranberry insect pests. But wild berries are gathered when still quite green, since insect control is impractical.

There are other species of cranberries, usually less common and less abundant. Certainly where they grow in sufficient quantities, harvesting can be worth the effort.

**Viburnum** *Viburnum trilobum* Marsh.  
**High-bush Cranberry** Family Caprifoliaceae

#### American High-bush Cranberry:

**T**his large deciduous shrub has opposite, three-lobed light green leaves somewhat resembling certain maple leaves. The bright red berries are borne in flat terminal clusters in late summer and persist on the plants all winter, or until eaten by birds. They become somewhat shriveled and translucent after frost. Each fruit has a flat seed that is relatively large and the pulp is very acid but of pleasant flavor. The sauce is strained to remove the stony seeds and a delicious jelly of beautiful color can be made.

The native High-bush Cranberry ranges from Newfoundland to British Columbia and south rather generally through northern New England. More locally, it may be found in New Jersey, Pennsylvania and westward.

These shrubs grow in rich thickets, especially along streams or woodland margins, and may be as much as twelve feet tall.

Our species should not be confused with the European Cranberry-Bush (*Viburnum opulus* L.), commonly sold by American nurserymen and frequently planted, because the fruits of this related shrub are very bitter and distasteful to anyone familiar with our native plant.

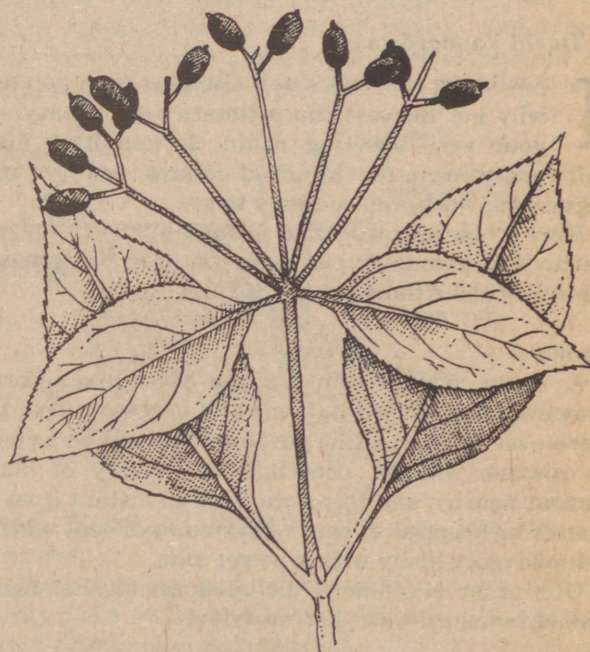
#### Viburnum

Sheepberry, Nannyberry *Viburnum lentago* L.  
 Black Haw *Viburnum prunifolium* L.  
 Withe Rod *Viburnum cassinoides* L.  
 Family Caprifoliaceae

**A**lthough several native species of *Viburnum* occur in North America and several others have been introduced for our gardens from Europe and from Asia, the fruits of most have little or no value for man. Birds and small mammals may rely on the fruits or seeds to some extent in certain localities.

The three species noted here all have bluish or blackish fruits when ripe, with a thin, dry, sweet pulp. Although the stones are large in relation to the pulpy covering, they may be gathered while walking in the autumn woods, offering a diversion as well as items pleasant to chew on. Probably because of the thin flesh, they have not been used in cooking.

Not only are the fruits of these three species similar, they are all vigorous shrubs with creamy or pure white flowers in terminal flat clusters or cymes in early summer. They grow in shrub thickets, along hedgerows, stream banks, and woodland borders. Their leaves are more or less ovate and of moderate size. Nevertheless, each has distinctive features and can be identified with modest effort.



*V. lentago* ranges throughout eastern North America from Hudson Bay to Georgia and Mississippi. *V. prunifolium* occurs from Connecticut to Florida and west to Texas. Finally *V. cassinoides* may be found from Newfoundland south into North Carolina and west to Minnesota. Therefore, one or more of these common Viburnums can provide tasty nibbles in the fall woods.





## Building a Log Cabin By Hand

by David VanderZwaag

**I**f wild greens and Euell Gibbons turn you on, why not harvest the ultimate wild bounty — your very own log cabin. If you have 100 softwood trees, a few hundred dollars, and love invigorating work, you're ready to go!

Here's how my wife and I built our cozy lodge, without previous experience, on our wilderness island off the Atlantic coast of Nova Scotia.

### Tools:

A chain saw certainly saves time and effort. However, we decided in favor of a bow saw; first, to save over \$100 on a saw purchase, second, so as not to disturb wildlife, especially a rookery of blue herons nearby, and third, we were so distant from a doctor or hospital in case of serious accident which seemed more likely with a power saw.

Our other equipment included an ax, hammer, chisel, level, ruler, and screwdriver.

### Trees:

Straight trees without much taper from trunk to crown make the best building blocks.

Thinking big, we chopped like industrious beavers at our first three foot diameter spruce tree.

---

*David VanderZwaag lives on McLeod's Island in Nova Scotia. Illustrations are by the author.*

---

As the giant crashed, I suddenly realized that not even four harnessed whales could tote such a Gargantuan out of the woods. Then insight struck. We would have to build with smaller trees which we could carry, about six inches in diameter, and thus, reduce the cabin size to a snug 16' x 12'. Therefore, we cut the trees into 14' and 18' lengths to allow for a one foot overhang at each cabin corner.

To beat a fast approaching winter, we built with green wood, although seasoned trees would have been much lighter.

Stripping the bark off the trees was necessary to prevent insect attack and was easily done with nothing but an ax, as bark almost falls off during spring and summer when the sap runs freely.

Our work plan was to cut and strip four trees a day and to notch four into place. Figuring on about one hundred trees a room, it took us approximately thirty days to complete.

### Foundation:

Neither time nor muscle allowed us to build a conventional foundation. Cement was out of the question as one hundred pound bags would surely sink our kayak. Yet we wanted a foundation which would not heave with winter frost — in our area about three feet below ground.



Our solution was to dig a three foot hole at each cabin corner. We then piled flat beach rocks in each hole to make four support piers. Each pier projected eighteen inches above ground level to provide a moisture proof base. Although somewhat wobbly at first, the piers stabilized with the added pressure of logs.

After the cabin was completed, we filled in the space between piers with additional rocks for looks, extra support, and additional insulation.

### Sill Logs:

Our biggest trees naturally became the bottom logs, not only for a look of solidarity but to save our backs as well.

To prevent the sill logs from rolling off the foundation, we grooved the log ends where they would lay on the piers (diagram 1). We then brushed on creosote preservative over sills, as they are most prone to rot and insect attack. To counteract the tapering effect of trees, the front sill ran thick end

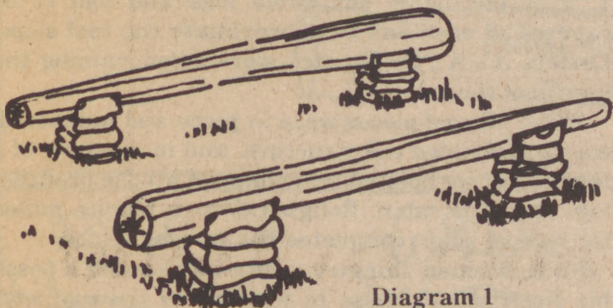


Diagram 1

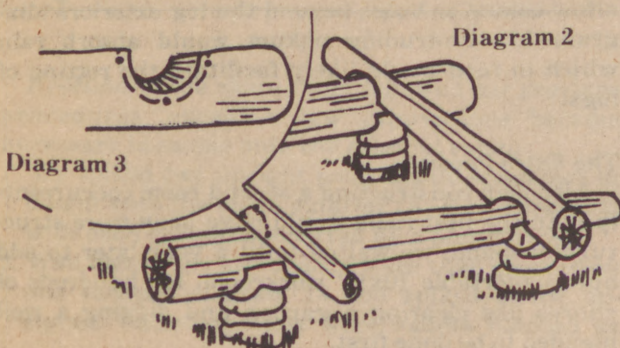
to thin end while the rear sill ran thin end to thick end (diagram 1).

A cardinal rule we followed in placing on subsequent logs was a slender end of a tree goes on top of a thick end and vice versa. This formula assured that all walls would end up close to equal in height.

### First Cross Logs:

We chose to use the popular and easy saddle notch.

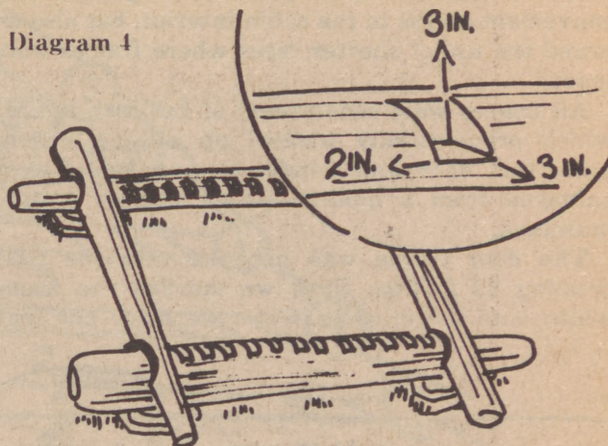
To notch in the first cross logs, we first placed them on top of the sill logs. With a pencil we marked three dots near each cross log end, both inside and out (diagram 2). The lower dots were spaced to match the width of the sill log below while the upper dot was placed approximately at the cross log's midsection. Next, we connected the



dots forming a rough arc near each log end, both inside and out (diagram 2).

Positioning the crosslogs on the ground, marked side up, we then hollowed out all the wood inside our lines with an ax and chisel (diagram 3).

Diagram 4

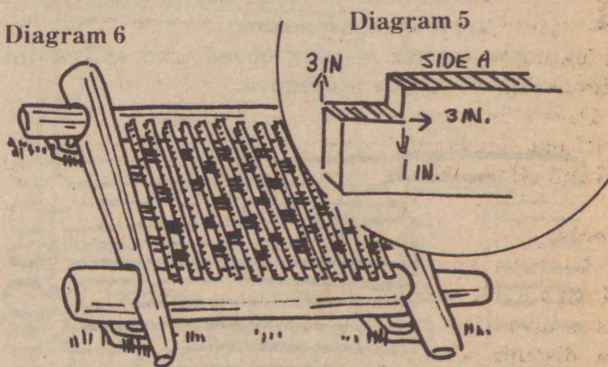


The same procedure was repeated for all subsequent layers of logs. If gaps between logs was greater than one inch, we would hollow notches deeper than original lines. If some logs rubbed together due to crooks, we would hew down the problem spots with an ax.

### The Floor:

To assure stable and longlasting floor joists, we notched our sawmill 2x4's directly into the sills instead of using spikes. The process involved two main steps; first we chiseled twelve equidistant 2x3x3 inch grooves along inner edge of each sill log (diagram 4). Next we notched twelve 2x4's per dia-

Diagram 6



gram 5 and set them (A side up) into the sill grooves.

The joists were further stabilized by nailing scrap 2x4's between all joists (diagram 6). For underflooring, we tacked 4x8 foot panels on 1/4-inch exterior plywood to the underside of floor joists. For floor insulation, we stuffed armloads of dry eelgrass, a ribbonlike seaweed tossed up by tons in shallow island coves, between all joists.

Sphagnum moss, however, would have supplied an excellent alternative. For overlay, 1x5 inch spruce planking, planed on the top side, furnished the final rustic look.

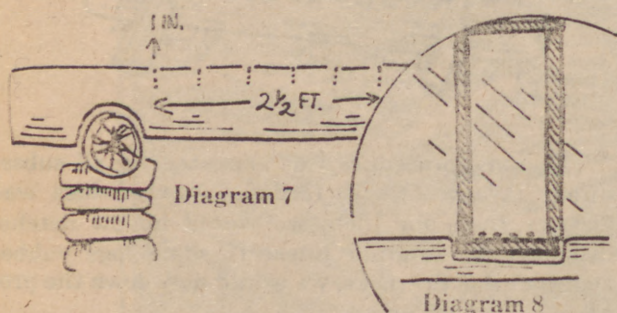


### Door and Windows:

Unlike many cabin builders who cut out window and door openings when all walls are complete, we chose to notch and spike the frames into place while raising the walls. This not only permitted convenient access to the cabin interior, but also allowed the use of shorter trees where frames were inset.

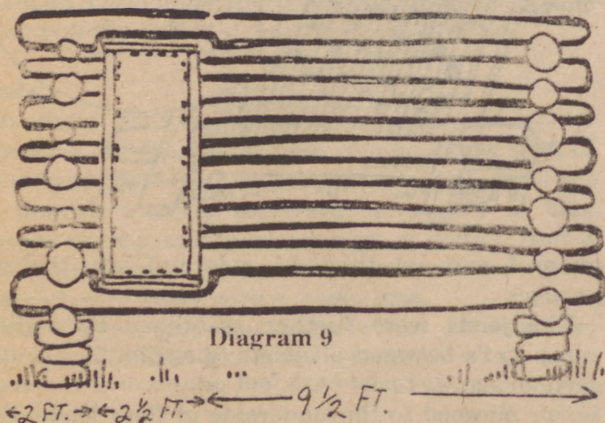
All frames were constructed of 2x6 inch lumber which providentially washed up after a violent gale. Our door and windows, meanwhile, were salvaged from a quaint fishing cottage on the mainland.

The door frame was notched into the first crosslog as follows; first, we marked the frame width onto the crosslog. Then we made one inch



cuts with the bow saw at six inch intervals (diagram 7) which permitted us to easily chip out a uniform groove with the ax. We then set and spiked the door frame into the groove (diagram 8). Subsequent logs around the door were cut into 2 foot and 9 1/2 foot lengths. Outer log ends were saddle notched as usual while inner log ends were spiked to the door frame (diagram 9). The log above the doorframe had to be grooved on the underside to complete the framing in process.

Window frames were grooved and spiked into place with the same procedure.



### The Loft:

Besides giving extra storage space, our loft permits us to sleep in the warmest area of the cabin, a factor greatly appreciated when icy January winds blow through cabin chinking.

When the cabin walls stood about seven feet high, we notched in six old barn beams in the same

way the floor joists were notched into the sill logs, except beams were spaced about 1 1/2 feet apart and extended over just half the cabin area.

Rough barnboards made an impressive flooring while four more tiers of cabin logs (the last being lengthwise) completed the lofty walls.

### The Roof:

Like many an amateur, we quaked at the prospect of performing acrobatic saw tricks fifteen feet above rocks and shale in an attempt to roof the cabin. Even more, we trembled at the idea of having to repeatedly hoist 200 pound timbers high above our heads. Again insight struck. By stationing the final log tier as a temporary foundation on the ground, we could easily "prefab" our roof on firm earth per diagram 10.

All roof notches were cut in tops of logs (rather than on undersides). Therefore, we notched top sides of A<sub>1</sub> and A<sub>2</sub> to hold log #1; we notched top side of #1 to hold B<sub>1</sub> and B<sub>2</sub>, and so forth. Numbers 1, 2, 3, etc., were our gable logs and had to be tapered at each end to approximate the roof slope. Letters A<sub>1</sub>, A<sub>2</sub>, B<sub>1</sub>, B<sub>2</sub>, etc., were poles running the length of the cabin.

When all roof pieces were in place and numbered, we disassembled the structure, and in a matter of a few hours, we hoisted and snapped all the prefitted logs atop the cabin. Rough 1x5 inch planks, nailed to the roof poles, completed the woodsy rooftop.

Since wooden shingles would have posed a possible fire risk, we chose to waterproof the roof with asphalt shingles.

### The Porch:

By cutting our roof poles an extra four feet in length (22 feet), we easily extended the roof beyond the gables to form a protected veranda. Upright poles were spiked to the ridgepole and bottom roof logs to support the overhang.

### Chinking:

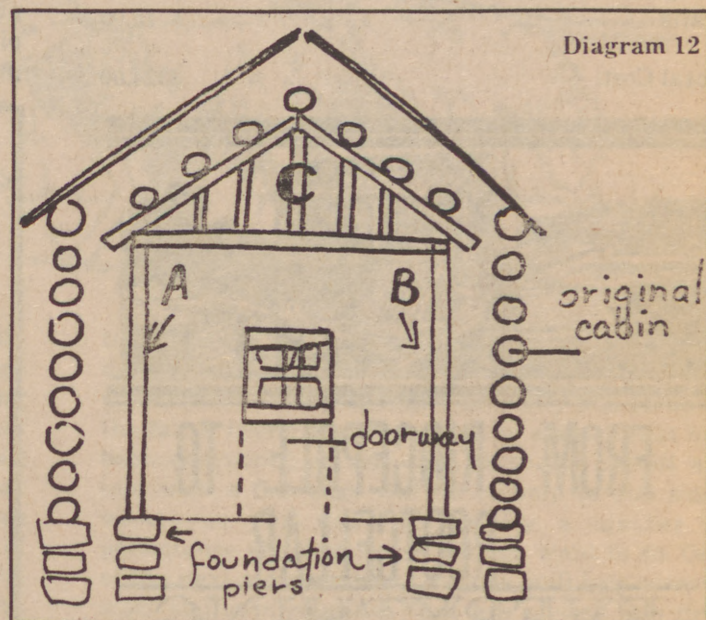
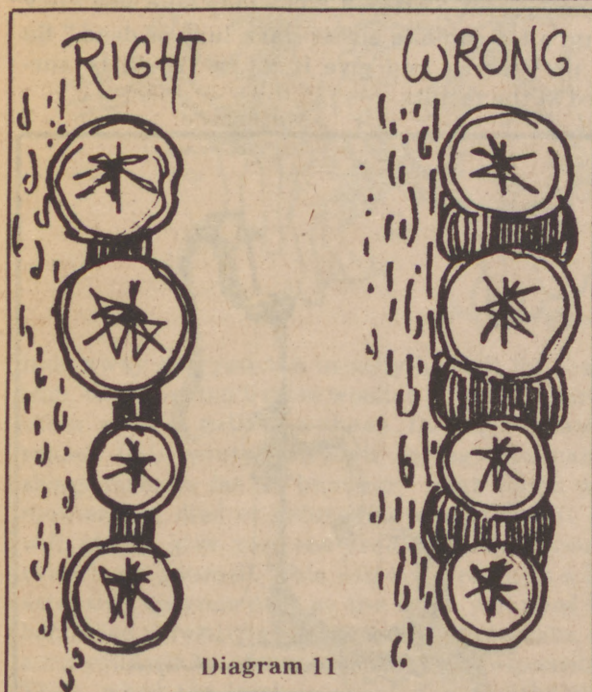
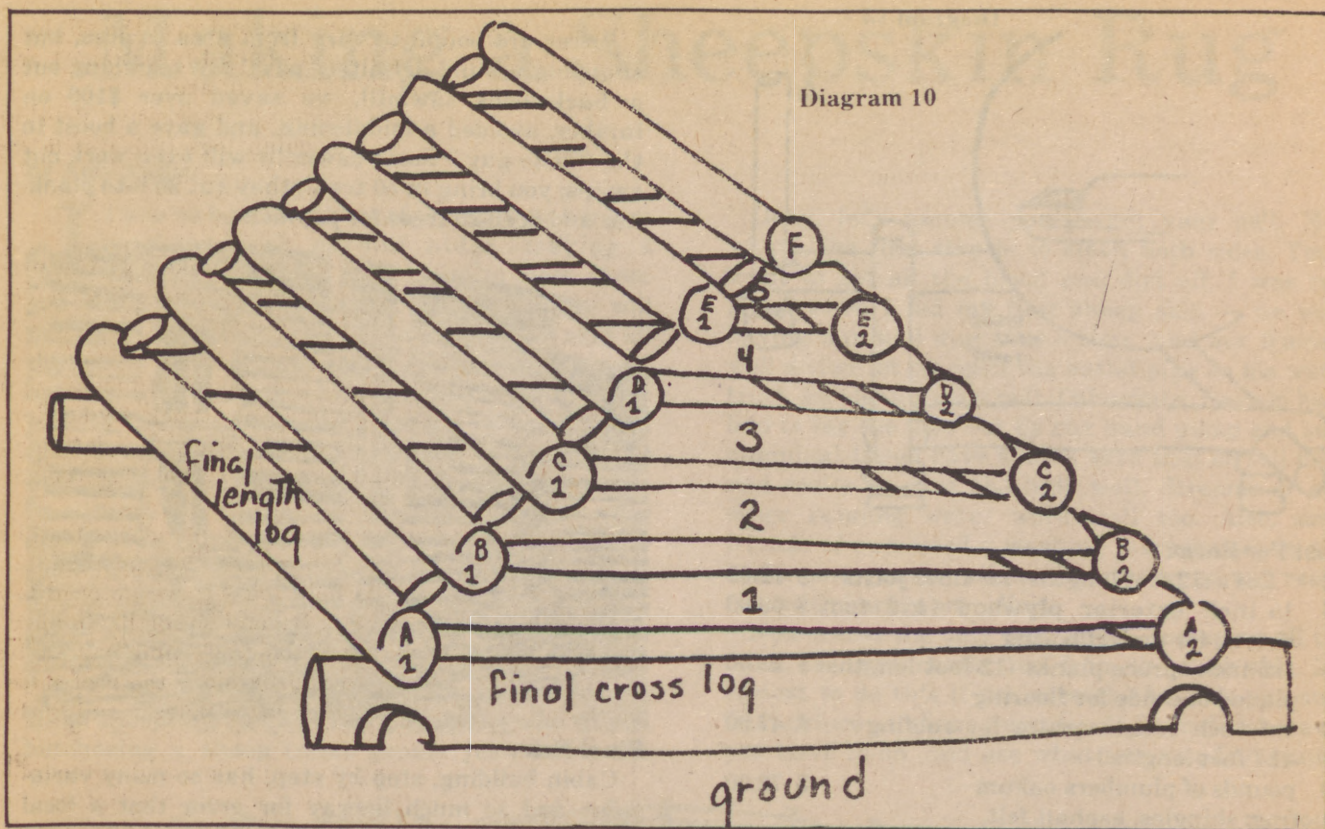
Because sphagnum moss chinking would harbor insects and because mortar chinking would crumble as our unseasoned logs gradually shrunk in diameter, we settled on oakum, a ropelike caulking (available at most hardware stores) used by plumbers and seamen to plug leaky seams.

With a screwdriver we tightly packed the oakum strands between all log gaps, being careful not to allow oakum to bulge beyond the log exteriors (diagram 11). Protruding oakum would absorb rain which in turn would likely facilitate the rotting of logs.

### The Extra Room:

Although constructing a second room concurrently with the first room would have been more structurally sound, we waited until a year later to add our comfortable 10x14' workroom, for hundreds of chores like clearing a garden and digging a well pleaded to be done first.





Erection of the spare room followed our previous procedures, except a few innovations became necessary to couple onto the original cabin:

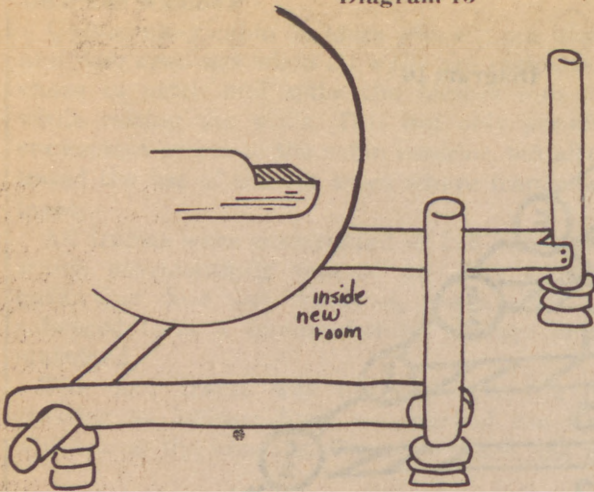
1. We spiked two upright poles about seven feet in height onto the cabin exterior (A, B / diagram 12) with each upright supported by a pier of rocks.
2. Wall logs of the extra room were then grooved on one end per diagram 13 and spiked to the uprights. Outer log ends were saddle notched as

usual.

3. Three poles were nailed in triangular fashion (with verticle braces) above the uprights to support the roof poles (diagram 12, C).
4. Roof poles were supported by gable logs on outer wall (just like diagram 10) but spiked onto the roof support (C, diagram 12) on the inner wall.
5. The window opening was enlarged into a doorway for the new room.



Diagram 13



**Cost Per Room:**

12	2x4's (12 foot lengths) for floor joists	\$ 12.00
6	1/4 inch exterior plywood (4x8 foot sheets) for underflooring	\$ 60.00
39	1x5 inch spruce planks (12 foot lengths) planed one side for flooring	\$ 43.00
39	1x5 inch rough spruce for roofing (14 foot lengths)	\$ 47.00
90	pounds of plumbers oakum	\$ 72.00
	Roofing: shingles, asphalt felt, plastic cement	\$ 75.00
	Nails	\$ 15.00

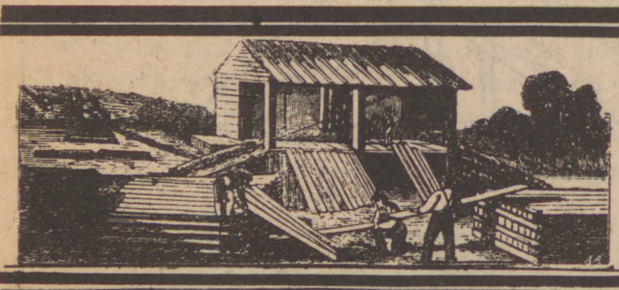
**Total Cost:** \$324.00

Prices are bound to vary from area to area, but shopping around definitely pays! By searching out a backwoods sawmill, we saved over \$100 on lumber, avoided a middleman, and gave a boost to the "little guy." Some sawmills will even work out swaps; you bring in 50 trees, they cut 25 into planking and keep 25 trees for payment.



**Final Note:**

Cabin building, step by step, has so many variations and so much leeway for error that a local oldtimer recently uttered, "The only man who can't put up a log cabin is either darn lazy or dead." So pick up your ax and give it a try! You'll be surprised at the results.



**FROM RIDGEPOLE TO  
ROOTCELLAR  
EVERYTHING  
FOR THE HOME**

**TRY OUR ROUGH CUT LUMBER & SAVE**



**THE HERRICK  
CORPORATION**

Engineers Contractors  
Lumber & Building Materials  
Blue Hill, Maine 04614 207-374-2826



**P. L. JONES AND SON  
MAINE'S LARGEST  
WELL DRILLING FIRM**

R. F. D. 3  
ELLSWORTH

TEL. 667-8040



# Making a Sheepskin Rug

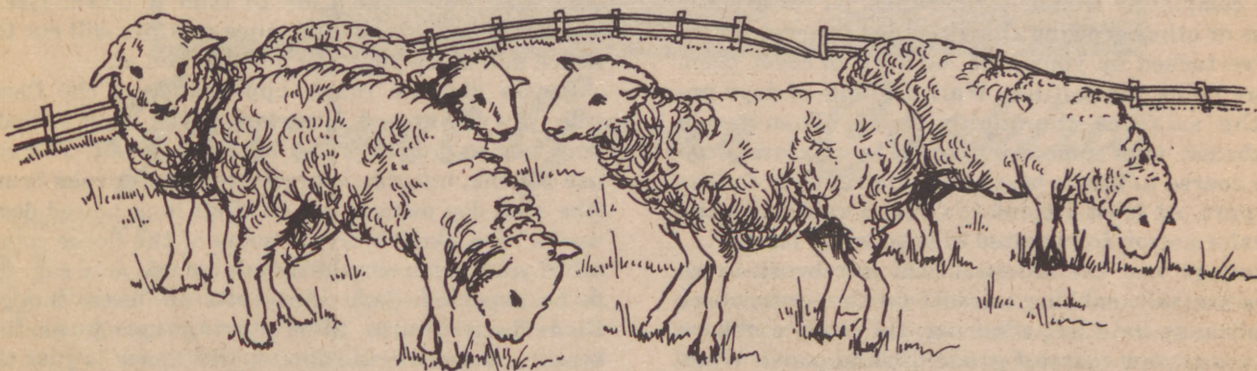
by Amy Alpine

If you've been thinking of trying your hand at working with animal hides, making a sheepskin rug is a good place to start. Since you will probably be wanting a soft rug, you will naturally be keeping the fleece on and can skip all the messy and more difficult steps like scraping, de-hairing, and tanning which would be required for making leather. Since the rug will be used on the floor, there's quite a bit of leeway as to how soft the flesh side can be — from nearly as soft as chamois to almost as tough as rawhide. In fact, for durability's sake, you may want it on the tougher side. In other words, there is no way you can go wrong. If you start with a sheep hide and are willing to do a little work, you're bound to end up with a nice soft sheepskin rug for your efforts.

First, of course, you need a hide from a freshly killed sheep. If you don't know someone who will be butchering a sheep (most people just throw the

Okay, let's assume you've got your pelt. Now what? The first step is to clean both sides. You'll want to get all the blood and dirt off. I was real lucky when I did my first sheep skin — we were having our well dug at the time, and our friendly well driller let me open the outlet pipe on his water truck for cleaning my pelt. Otherwise, I would have had to lay the hide out by our hand pump and kept pumping! If you have a hose, turn that on full blast and really go over the hide well. Streams or any other running water work well too. Also, some friends of ours used a washing machine set to cold water and gentle action. Theirs turned out really nice with hardly any effort.

Now comes the only real work — scraping all the meat, fat, and membranes from the flesh side. It's easiest to do this if you stretch the hide out on a flat surface at about waist level. Then do whatever you have to do and use whatever you find easiest



hide away and you can usually have it for the taking), or if you don't raise woolies yourself, there are other ways of getting a sheep. During the lambing season (late winter through spring) you can ask sheep farmers for a "bummer" lamb (lamb whose mother has died or refused to accept them). Most will gladly give you one free, and then you can raise it up yourself. This will require quite a bit of attention on your part as the lamb will need to be bottle fed three times a day for several weeks, so be sure you will be able to take on the responsibility. Then, when the lamb is about five months old, be sure that you are emotionally able to handle the butchering — and you've got delicious meat for your table as well as your sheepskin pelt. Another way to get a sheep is to buy an aged ewe or ram. Around here, especially in the fall, they often go for as little as \$5.00 per head and there again, after butchering you've got some good cheap food for your table (mutton this time) and your pelt.

to scrape the hide clean. I use an assortment of old dull knives and files and keep some liquid soap and a nail brush handy to really emulsify and scrub at the fat. A friend of ours swears by a spoon that has been sharpened on one side. Actually, almost any tool with a flat edge will be of help to you since whatever you use, it's really a matter of persistence and how fine a job you want to do. One of the next steps, salting the hide, will help remove most of the membranes that are missed this first time around, so provided you get off the pieces of fat and meat, it really doesn't matter if you aren't able to get the flesh side perfectly clean. However, if you plan to progress beyond making rugs (to making buckskin, for example) it is something that you have to learn to do well and maybe even enjoy.

After getting the hide scraped as clean as you're willing and able to do, it is time to tack it up for salting. Ideally, the fleece side should be close to dry and the flesh side damp enough for salt to adhere to it. However, if you have a corner or some other spot which will allow the fleece side to get some sort of ventilation, you

---

*Ms. Alpine lives in Lenby, Minnesota. Illustrations are by Liz Buell.*

---



can hang the hide up while both sides are quite wet. If you can't manage this sort of thing, let the fleece side dry and then wet down the flesh side before tacking it up.

Although most books on working with hides say to tack pelts up in a place away from direct sun and heat, I've had just as much success tacking mine up in direct sunlight or even behind the wood cook stove. So do what you think best, as long as the skin will be out of the rain.

When tacking the pelt up, you will want to do it in such a way that the finished rug will lie flat and be as big as possible. The best way to do this is to begin at the neck, and using as small a nail as you can get, hammer a row of nails down the center of what was the critter's back to its tail. Pull the skin back as you go along to prevent wrinkles. Then pull the legs out and tack them, getting both sides to match, and finish it all off by tacking down the rest of the hide. If you keep the nails close to the edge, the nail holes will be less noticeable. If you plan to trim your rug, they'll probably be trimmed off.

Now comes the easy part. Get a bag of salt (not iodized) and cover every part of the flesh side with it. Be especially generous around the edges or any other part where you were unable to scrape the hide completely free of membranes. (If there's any grass or other growing things under the spot where you've tacked up your hide, be sure to cover them before doing the salting.) Wait a couple of days until the salt has thoroughly dried. Then get a wirebrush and some sandpaper (a mixture from very coarse to fine is best), and you're ready for the fun part. At least I think it's fun. I really like the transformation from salted hide to white leather.

First go over the hide with the wirebrush to remove the salt, rubbing hardest on the spots where membranes were left adhering. On really stubborn spots, use your coarsest grade of sand paper. When you've finished, the hide should have a rough suede-like appearance. To get a more chamois-like texture, use the finer grades of sandpaper to remove the rough edges.

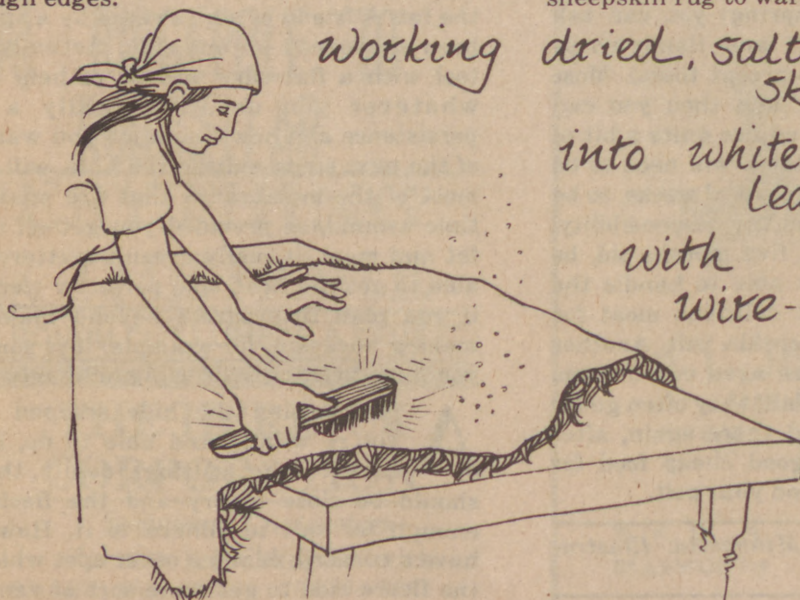


*pull skin back  
while nailing*

When you've got it to your liking, take the hide down and lay it on the ground, flesh side down, to decide whether any of the edges need trimming. If any of them are particularly ragged (if whoever skinned it was new at it, they probably are) or if you want a more finished appearance, now's the time to trim it down. Use a knife for the best results, since scissors will cut the fleece and make your rug look hacked at.

If you like the rough appearance of the fleece side, you're finished. However, if you want to make your rug as soft as it can be, comb it out. You can use a comb, but this is pretty tedious. A rake brush (the kind dog owners use on their long haired dogs) works best. Don't worry if some of the fleece comes off in your comb or rake as you brush your rug. It's to be expected. Save those bits of fleece, though. Birds love to use them during spring nesting season. If you raise rabbits, the fleece is just the thing for providing extra covering for baby bunnies on cold nights.

That's all there is to it — now you've got a sheepskin rug to warm your floor and your pride!



*working dried, salted  
skin  
into white  
leather  
with  
wire-brush*





# Gourmet Game Cooking

by Diane King

**W**e love the meat of wild game animals. When Dennis was young, his father often hunted, and consequently, wild game was often on the table. "As a youngster," Dennis recalls, "I did not really enjoy game meat. My mother usually cooked it in the traditional American way; that is, well done, and did everything to remove or hide the 'gamey' flavor. Even though my mother was and is an excellent cook, I found out in later years that she didn't like to eat or cook wild game. She did it as a wifely duty for a hunter husband." This illustrates our first point: to get the most out of wild game meat, it must be cooked by a person who enjoys preparing it, for people who enjoy eating it. It must be enjoyed for what it is, a tasty wild harvest from woods or field, and not disguised and made to taste like our nondescript domestic meat. When someone says, "That venison is pretty good; it tastes like beef", it's a blatant insult to the deer that provided the venison. To favorably compare pheasant with agribusiness chicken is like comparing tasty dandelion or lamb's quarters greens with supermarket iceberg lettuce.

A second important factor is the way game is handled from the time it is shot to the time it is

turned over to the cook. There are numerous descriptions of how to clean various animals, but we include much more under the heading "handling". Cleaning simply involves separating the edible parts of the animal from the inedible parts. There are many ways to do this and we don't think the technique of how an animal is cleaned is too important. We won't belabor the point here.

When it is cleaned is another matter and it is *very important*. Some animals should be cleaned immediately upon their death and, believe it or not, the eating qualities of others are improved if you wait awhile to clean them. More on that later.

We believe in proper aging of all meat. How do you expect the meat of a four-year-old, well-muscled, mature deer to be as tender as that of a one-year-old cow if the beef has been aged (all grocery store beef is aged) and the venison has not? Aging under the proper conditions allows the natural bacteria in the meat to begin to break down the muscle fibers and make the meat more tender. Aging also brings out the meat's full, natural flavor. Different species should be aged differently, and it is more important for some than for others.

To properly prepare game, one should know the animal's approximate age. Young animals are naturally more tender than old ones, and it is often

---

*Diane King homesteads in Penobscot, Maine. Illustrations are by Liz Buell.*

---



advantageous to prepare them differently, taking more care to tenderize the meat of the older animals.

A general rule is do not overcook. This is just a good general cooking rule, but especially true with game. If you want to enjoy the true, natural quality of the meat, don't cook it into a pile of shoe leather. If you have to do that to make it palatable to you, you really don't like the meat anyway and should give it to someone who does.

#### Handling Game Birds

**G**ame birds are delicious and vary from the delicate white meat of a ruffed grouse breast to the rather strong-flavored dark meat from the breast of a Wilson's Snipe. Many species of birds can, and we could even say should, be aged uncleaned with their viscera left in.

This statement is almost a sacrilege in North America. It is against our Puritan ethics to think that we should not remove those dirty old guts from an animal as soon as we can. There is plenty of controversy about this in North America and we hope the FDA doesn't come down on us for what we are about to say.

Waterfowl — wild ducks and geese — should definitely be aged undrawn (with their viscera in). Like typical Americans, we were repulsed at the thought of this, but after reading several European cookbooks, I talked Dennis into trying an experiment. Here's how Dennis tells the story: "Several years ago, I had bagged three identical adult male mallards. I plucked and completely cleaned one immediately when I got home and then froze it. I removed the viscera from another, but left the feathers on. I left the third duck entirely intact and aged the latter two ducks for four days in an enclosed back room. The average temperature was about 45° - 50° F. Diane then prepared the three ducks for a meal for four of us. The duck that was aged undrawn won a unanimous first place vote. The duck that was immediately cleaned and frozen was a distant second, and the duck that was aged

after being gutted was a close third. The winning duck was very tender and had quite a pleasant duck flavor. The second duck was tough and had a little stronger flavor. The third duck was tender but had quite a strong flavor. Air getting into the body cavity had caused some spoilage." Since that day, every wild duck or goose we've had has been aged, undrawn. We prefer to age ducks and geese for three or four days at about 40° F, but we've left ducks for that period at warmer temperatures and they were still excellent. Older birds, especially geese, should be aged longer, and birds less than a year old will probably be tender if not aged at all. One precaution — don't let flies get at them. That's usually not a problem after hard frosts in the North, and when we lived in the South we put the birds in an old refrigerator for three or four days to age them.

Dennis offers this encouragement for the squeamish: "One would think that it would be a smelly mess to clean a duck that had been dead three or four days. It's not! I think duck and goose guts smell to High Heaven when they are fresh and believe it or not, they smell better after the birds have been properly aged. I wouldn't have believed it until I tried it either, and I have told this story hundreds of times in person and don't believe anyone has ever believed me. Maybe I am ruining my credibility by telling it again, but like Jimmy Carter, I'll never lie to you."

We pick ducks and geese by dry-plucking and coating with paraffin, then peeling off the paraffin to finish the job. We usually save the down and breast feathers for pillows.

**A**n additional note about waterfowl: mallards, blackducks, teal and many other puddle ducks are noted for their culinary qualities. Some species, however, are considered inedible by many people. These include mergansers, scoters, goldeneyes and several diving ducks or sea ducks. "I can tell you from experience," says Dennis, "that it is hard to beat a grain-fed mallard from Saskatchewan, but I have eaten a few diving ducks.





I know two college students from northern Ontario, who lived on duck meat all fall. The only abundant ducks in that country were goldeneyes and mergansers and these were mostly what they ate. They simply filleted out the breast meat, soaked it overnight in salt water, and said it tasted like any other duck. In fact, they did it to all their ducks, even the rare black duck they got. Even though I am basically against this treatment of meat (I know it makes it tough, and believe that it diminishes its nutritional quality), I suppose it is okay if it makes otherwise unpalatable meat palatable. Soaking in salt water is a great equalizer. It would probably make the loin from a young calf taste the same as the breast of a 30-year-old herring gull."

### Roast Duck

This is a loose recipe and can be varied where you wish. We prefer our ducks split in half lengthwise like broiler chicks, but you could use whole ducks and make a stuffing. A stuffing of apple slices, chopped celery, a few cranberries, chunks of orange, diced onions, and salt and pepper is good. For whole ducks, increase cooking time by about 10 minutes. You may or may not serve the stuffing. We like it — others say it is for flavoring only.



Split lengthwise, for 4, 2 or 3 well-aged ducks, (size of duck will determine how many you need). Season ducks with dried thyme, salt, and pepper, and put a dab of butter on skin side. Place on a broiler pan or other shallow pan and put skin side up in a very hot oven — 450 °F.

After about five minutes, brush ducks with the sauce below. Turn ducks after 10 minutes of cooking and brush underside with sauce and pan drippings. Turn again and finish under the broiler, if you have one, for a couple of minutes. If you don't have a broiler do not despair — it is only a finishing touch. Cooking time should be only 15-20 minutes

at the most. The ducks should be rare. Garnish with orange slices and serve with any extra sauce.

### Batter Sauce

Juice and grated rind of 1 or 2 oranges

2-3 tablespoons butter

1/3 cup dry red wine

1/3 cup currant jelly or any tart fruit jam, jelly, etc.

Combine in a saucepan and heat to almost boiling. Keep the sauce hot while you are using it. We usually serve duck with a rice pilaf flavored with orange juice and grated rind, pepper, salt, thyme, onions, and celery. A green vegetable, salad, or pickles of some type are also good, and of course, dry, red wine.

We usually handle woodcock the same as waterfowl. The trick with woodcock is in the cooking (never overcook) and we age them or not depending on when there is time to clean them.

How to cook woodcock is a very controversial subject. Most Europeans demand that the bird be cooked undrawn, usually combining the various entrails in a sauce, while others eat only the traditional parts. The Salmis of Woodcock recipe is prepared with the whole bird. The way we most often have woodcock is sautéed. It's quick, so we do not have to wait so long for the delicacy.

### Sautéed Woodcock

Allow at least two woodcock per person and split them down the back (they cook faster this way). Sauté a minced clove of garlic in butter. Add the woodcock, seasoned with salt, pepper, and either thyme, marjoram or rosemary — we prefer marjoram. Turn often and watch carefully. The centers of the breasts should still be red and juicy when done. Cook not more than 10 minutes. We usually serve them accompanied with rice, squash, and a wild berry jam, which really sets it off.



### Salmis of Woodcock

4 woodcock  
1/4 cup dry white wine  
1/4 cup rich beef stock  
2 lemons  
Salt, pepper, and nutmeg  
1-2 tablespoons dry mustard  
6 sliced mushrooms  
1 tablespoon butter  
1 tablespoon flour  
3 tablespoons finely chopped parsley

Roast woodcock slightly (until half-cooked) and cut them into serving pieces. Be sure to cut woodcock on a serving dish to catch blood and juices. Arrange pieces in the blazer pan of a chafing dish. Crush livers and giblets into serving dish with juices; add dry white wine, beef stock and juice of 2 lemons; stir in the finely grated peel of 1 lemon, and season to taste with salt, pepper, nutmeg, and mustard. Add sliced mushrooms, and pour this mixture over woodcock in blazer pan; place over heater and cook, stirring so that each piece of meat is thoroughly moistened and does not stick to the dish. Do not let the Salmis come to a boil. Just before serving, stir in a *beurre manie* made of butter and flour. Sprinkle with finely chopped parsley. Serves four.

### Galanaceous Birds

Galanaceous birds (birds in the chicken family) are somewhat different. French cookbooks call for aging insectivorous birds undrawn, but aging seed-eating birds after eviscerating. We have tried it both ways and can't see too much difference. We would certainly age old birds, even if it was only by leaving the cleaned meat in the refrigerator for three days to a week before preparing it.

The white meat of a ruffed grouse breast is tender and delicate and we never let them age after gutting, because leaving the gut cavity exposed too long to air imparts an unpleasant flavor to the meat.

We have aged bobwhite quail and pheasants and not noticed much difference except with old birds, which must be aged to be tender. We heard that sharptail grouse should be gutted in the field immediately when shot, and tried this with some and gutted others about half a day after being shot. Sharptails have rather dark, strong meat anyway, but the ones which were immediately gutted were much superior than the others.

### Sautéed Grouse

Grouse is another game bird which we prefer sautéed, and we also like it in a Salmis, using the recipe for Salmis of Woodcock. Again, it should never be overcooked, because the meat becomes dry and stringy.

Allow 1 grouse per person. Split lengthwise (sometimes we separate the legs also, since they take less cooking time).

Sauté a minced clove of garlic in plenty of butter. Add grouse halves seasoned with salt, pepper and

marjoram leaves. Do not overcook. There should be a hint of pinkness to the deepest part of the breast. Total cooking time is about 20 minutes. Our favorite way of fixing quail (which we seldom seem to have anymore) is as follows:

### Quail With White Grapes

4 quail  
3 tablespoons flour  
1/3 cup butter  
2/3 cup dry white wine  
2 tablespoons lemon juice  
1/4 cup seedless grapes  
2 tablespoons blanched almonds, sliced

Clean quail; rub with a mixture of salt, pepper, and flour. Melt butter in thick-bottomed casserole and sauté the birds in it until golden on all sides. Add wine and lemon juice; cover and cook over low heat 15-20 minutes. Add seedless grapes and sliced blanched almonds, and cook for 5-10 minutes more, or until the birds are tender. Serves 4.

One of the few ways we are traditionalists is in the way we prefer pheasant — roasted. Most recipes call for strips of bacon placed over the breast, but we prefer to baste the breast with butter every so often. Stuff it with apples and celery.

### Roast Pheasant

2 young pheasants (about 2-1/2 pounds each)  
stuff with: 1 tart apple, coarsely grated  
2 stalks celery, chopped  
combine with 6 tablespoons softened butter  
juice of 1/2 lemon  
1/3 cup finely chopped onion  
2 tablespoons olive oil  
salt and pepper

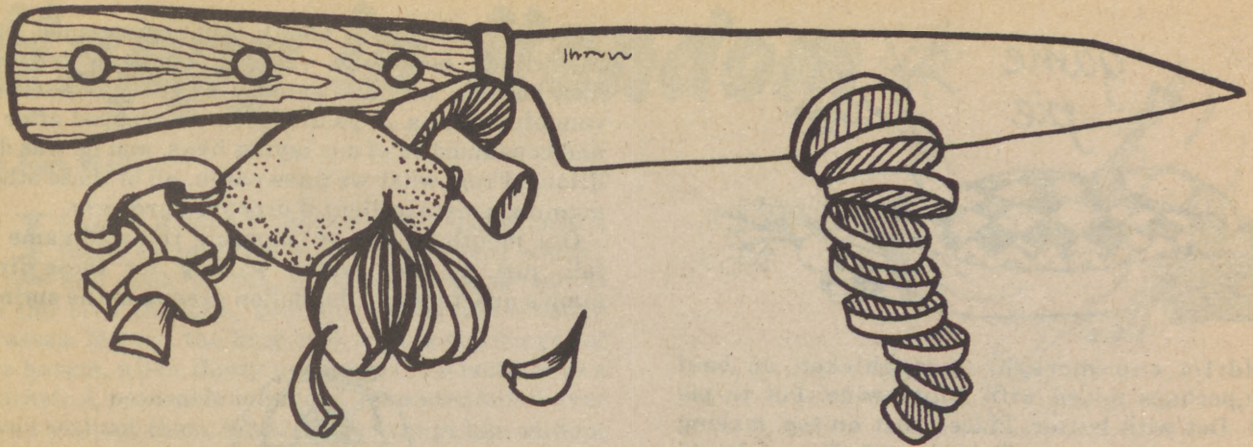
Season pheasants with salt and pepper. Roast in 350 °F oven for about 1 hour, or until tender, basting from time to time with butter, chicken stock, and red wine. Make a gravy from skimmed pan juices (about 1/2 cup; add to it with water and red wine), 2/3 cup chicken stock, 3 tablespoons red currant jelly, and 3 tablespoons freshly grated bread crumbs. Simmer gently until thickened. Serve with pheasants. We like baked squash served with pheasants.

### Mammals

**T**he rule with mammals is entirely different than with birds. They should be bled and gutted as soon after death as possible. Often the shot wound is sufficient to bleed the animal, but field dressing the animals immediately, by opening the gut cavity with a knife and removing the viscera, is a good idea. The remaining blood should be wiped out of the cavity with a paper towel or snow. The meat should then be cooled (not frozen) as soon as possible.

All these rules apply to deer and other large mammals. We have eaten venison which was very





dark and clotted with blood, and it was awful. No wonder venison is not enjoyed by all who eat it! Field dress the animals where they fall, and then cool them as soon as possible. That is usually no problem during deer season in the North, but in other regions it is.

As with most birds, venison should be aged. Especially if the animal is an adult. We age venison with the skin on, but I have known people who age it after skinning and quartering. I don't know if it makes any difference. If the weather stays below 50 °F, we like to age deer (especially old ones) for two weeks. We then cut, wrap, and freeze the meat. An extremist friend of ours would never freeze his venison. He simply hung it in his cool garage and cut off a piece as he wanted it. He said if it took him from November 20 to January 20 to consume his deer, it got better and more tender with each meal.

We truly love the flavor of venison and thus never try to disguise the flavor by marinating it. Since our venison is always aged, we cook it in the same manner as we do good beef, but use marjoram or rosemary for the main herb; whereas, we usually use sweet basil with beef. We prefer good cuts of both meats cooked rare, especially since venison becomes very dry when overcooked. A bit more butter, olive oil, lard, or other fat must be used since venison is usually not very fat. To us, garlic is a must with venison.

**W**e usually "pan broil" the better cuts of steak. This is a method where the frying pan is heated very hot, without fat, and the venison, seasoned with pepper, rosemary, and garlic, is put in. Cook for a couple of minutes on one side, then flip and cook a couple of minutes on the other side. Any liquid that accumulates is poured off, or the pan is swirled until it evaporates. Using this method, one must keep a close watch over the meat, for it cooks rapidly. Never salt steaks until after they are cooked because the salt draws the juices out, thus making the meat less moist.

Large, tender roasts are prepared by simply seasoning with salt, pepper, and rosemary. Insert slivers of garlic on the surface. Roast for 15 minutes in a very hot oven (to seal in juices), then turn oven to 325 °-350 ° until a meat thermometer registers beef-rare.

All other venison cuts we interchange for beef in recipes, including such things as spaghetti sauces, stews, and venison stroganoff (which cannot be beat). Venison also makes superior stews, pot roasts, and soups, which are cooked long and slowly.

Rabbits, hares, and squirrels are handled almost the same as venison. They are gutted and wiped out in the field, and skinned later at home. After skinning, they are hung and aged for three to four days in the back room. Hopefully, the temperature will stay between 30 °-50 °F and the flies won't come out. We once compared aged rabbit meat with fresh rabbit meat and the difference in tenderness and flavor was striking. One of the primary advantages of aging meat is that you don't have to overcook it for it to be tender. The meat can maintain its full, rich, natural flavor.

### Fried Baked Rabbit or Squirrel

Take:

1-2 rabbits or squirrels (according to size), cut up. Dip in milk and shake pieces in paper bag containing flour. Season with salt, pepper, rosemary, thyme, and garlic if you wish. Fry quickly in a mixture of oil and butter — there must be enough to keep meat from sticking. Transfer to baking dish with a bit of the fat, and roast in 325 °F oven for about an hour, or until tender.

Another favorite of ours is game pie, which can be made from any one game meat, or better yet, a combination of several. Make enough pastry for two crusts from your favorite recipe. We use the proportion of: 1 cup flour, 1/2 teaspoon salt, 1/3 cup plus 1 tablespoon lard, and 3-4 tablespoons water, for each crust. For a 10" deep dish pie — line dish with uncooked dough.

Mix together:

2 cups cubed game meat

2-3 carrots, sliced

2 stalks celery, diced

1 diced potato

1 medium chopped onion

1 minced clove garlic

salt, pepper, and a handful of chopped parsley





Add: 1/4 cup more or less chicken or beef stock, perhaps mixed with white wine. Put in pie shell. Dot with butter. Place crust on top, making slits for air to escape. Bake in 425 °F oven for 15 minutes. Then reduce to 350 °F for about an hour or until meat and vegetables are tender.

We believe a cardinal sin in handling meat, almost any kind, is to soak it in water. After all, would you throw a piece of raw steak in water? Soaking causes the exposed muscle fibers to contract and thus toughens the meat. If there is blood or dirt that needs removing, take a damp cloth and wipe the meat. We shudder when we read a recipe which says "Soak the meat overnight in salt water to remove the blood." There are better ways to remove the blood in the field, without ruining the meat. The only exception to this rule is for extremely bloodshot pieces where there are shot wounds, or perhaps to make unpalatable meat at least somewhat palatable. We usually grind this kind of meat or use it in soups.

We can say little about other mammals; i.e., woodchuck, porcupine, raccoon, opossum and the like, because we have eaten very few of these. We vengefully ate a 20-pound 'coon we trapped after it had consumed 12 of our laying hens, and he was delicious. From what we have eaten, all of these other mammals are excellent if prepared properly.

Our mouths water anticipating the wild game of fall, just as they water waiting for those first lamb's quarters and dandelion greens in the spring.



## It's the no-nonsense Tempwood stove.

The Tempwood is so basically simple to operate that people tend to look for gadgets that aren't there.

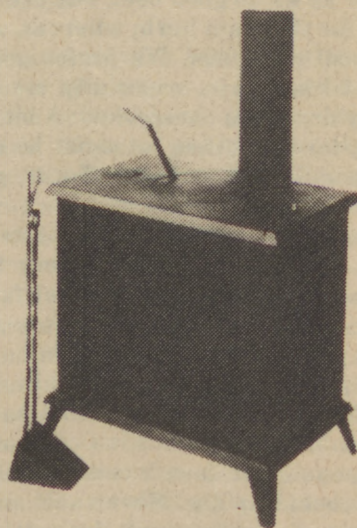
Constructed of precision fitted heavy gauge steel, the Tempwood is welded air tight and lined with a refractory and steel firebox for maximum efficiency.

Tempwood achieves a steady heat rate by positive control of two downdraft vents.

Modestly priced at \$229 and \$279.

Distributed by  
**Kenneth Stewart**  
Old County Rd.  
Waldoboro, Maine

**temp  
wood**



**15 Year Guarantee**

**DEALERS**

**Maine Natural Systems**  
115 Pleasant St.  
Brunswick, Maine 04011  
(207) 725-2667

**Energy Conservation Systems**  
510 Perry Road  
Bangor, Maine 04401  
(207) 947-3368

**Narragansett Leathers**  
Main Street  
Damariscotta, Maine  
(207) 565-5080

(Dealer inquiries invited)



# Happy in Hendom

by Joan Wells

**I**t takes a heap o' chickens to make a farm a farm. Twenty-five multicolored hens scratch and peck in the sunlight, foraging worms in the tree shadows, bobbing among the meadow grasses. Motely, the king cock, struts the fringes of his harem, while Banty ushers his few ladies into a thicket. A peaceable kingdom. I wonder how I ever lived without them. What are mornings like without a rooster's crow? I puzzle, too, how we stomach pale city eggs all those years.

Chickens were our first farm venture, adopted even before we planted our first seed. When a good neighbor offered twelve of her laying hens plus a rooster, we plunged right in. An 8' by 12' crib-style (of 2' by 4' rejects) chicken house went up in a snap, its windows facing properly south. Four laying boxes, 12" by 12" were hung on the short wall, with a rail below for easy mounting, and straight pine branches were laddered up the long wall for roosts. We then littered the sunken earth floor with woodchips (free from the town mill), and held open house for our new brood. Taking our farm neighbors' advice, we brought the chickens home at dusk and locked them into their quarters so they could get the feel of shelter. Leerily, I let the clucking, curious bunch out in the morning to explore their new playground, half afraid they'd run off forever. Instead, they beelined uphill and pecked about the cabin as though it had been home eternally. I was sold. Such loyalty, such adaptation would not go unrewarded. I vowed then and there to become the best chicken farmer on the mountain. (An easy vow; we're the *only* farm on the mountain.) The next afternoon, I gathered my first precious three eggs, then watched amazed at nightfall when my ladies and their cocky mentor, not missing a grub on the way, headed for their quarters. Was this what farming was like? Nothing to it!

That was four years ago. I'm wiser now, less greenly naive; but I still say chickens are a lovely, simple bunch of creatures to raise. Even better in our money-lean lives, they're the only "stock" we've nurtured so far on our small subsistence farm that's paid for itself — with dividends. When I won second prize for my eggs at the County Fair this year, I felt I had reached some farmy zenith.

In the middle of that first summer, a month after we took on the first chickens, two hens settled firmly in their laying boxes and rudely refused to budge. I consulted my neighbor. They were broody, she advised; a good time to order new chicks. Our



order went into the mail that day: two dozen unsexed, mixed day-old chicks. Their kind was the cheapest, and besides, I wanted to add some variety to my Rhode Island Reds, both for beauty and the experience of learning about other breeds.

When, but a few days later, the cheeping box arrived, we moved the two protesting setters into larger quarters — hastily nailed wooden boxes with chicken wire doors. A mayonnaise jar waterer and nice clump of straw completed the decor. Then warily, breath held, I tucked a dozen chicks under each ersatz mother. At that moment, I comprehended completely what the term "like a mother hen" means. Clucking protectively, each hen in turn spread her wings and fluffed her feathers 'til she seemed twice her size. After the twelfth child was admitted, only a subdued cheeping indicated the babes' whereabouts.

After feeding the new families chick mash for three days, and making sure their water wasn't spilled, I opened their doors and invited them into the brave, new world. Mother hens looked cross, scolded my forwardness, but finally, reluctantly, led their wards into the sunlight. The first motherly lesson was how to scratch for food, and the chicks fell to it eagerly. The second was "Thou shalt not stray from my side." If one chick erred and wandered more than inches, mother hen set up a loud scold and rushed to herd the wayward one back to her fluff-feathered circle. "Mother hen" indeed. And another notch in my chicken estimation.

**A**s soon as their first wing feathers appeared, I took the chicks off mash and introduced them to our regular chicken feeding regime: egg laying pellets (store-purchased, sad to say, for we can't buy or grow the appropriate ingredients), wheat, oyster shell, and all the food scraps not already pig apportioned. The chicks thrived and grew quickly, and by Fall, we found ourselves with ten rangey young cocks. Most of these turned out to be sex-links, a large, white, aggressive breed. When they began to wage hourly battles for dominion, we rescheduled our slaughter plans and got them into the pot quickly. The few other roosters, varicolored and of undetermined breed, we saved, staying their execution until Winter, when we'd most need meat on the "hoof." (It was a wise de-

---

Joan Wells, author of *"To Husband a Goat: A Moral Tale"* in the summer issue of *Farmstead*, homesteads in Spray, Oregon.

---







cision, for that Winter we were snowed in for weeks, and without electricity for a meat-keeping freezer, ready chicken dinners proved a healthy salvation.)

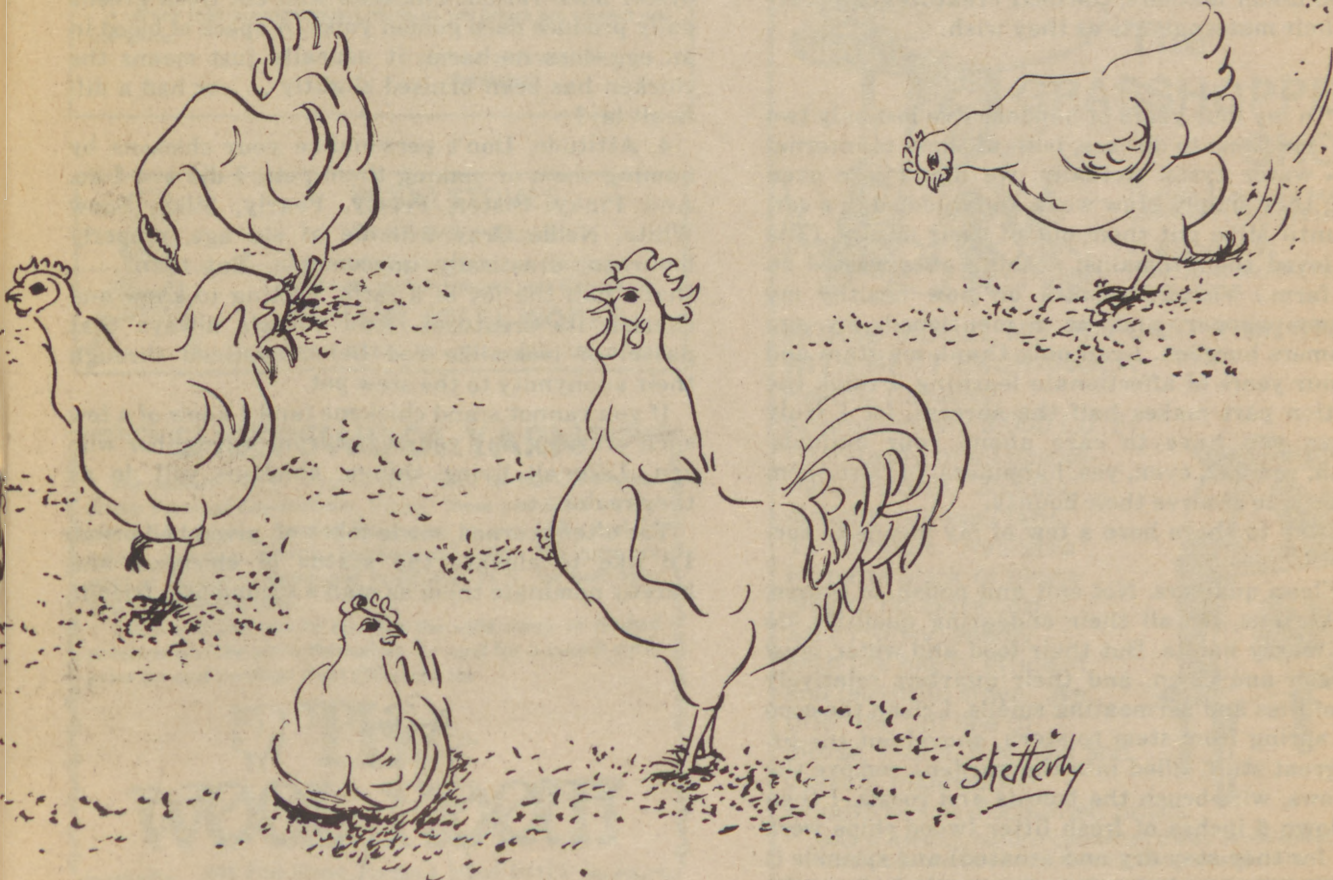
Winters are heavy on our mountainside, and I worried how my chickens would fare. When the October temperatures dropped well below freezing, we nailed windows over the chicken coop wire, allowing the weak sun to shine through. When November's first light snows fell, the chickens emerged from their unlocked door each morning as always and pecked about the whitened earth as though born to the Arctic. When December's endless snows fell, and drifts buried all the familiars, the chickens peered from their windows and nagged, their complaints waxing positively shrewish. You'd think I had hidden their earth. I consoled them with pans of warm drinking water, with desserts of saved bits of greens from our table. But outside of their peevishness, the weather, which reached 20 below at its bottom, seemed not to affect them a bit. Though brief daylight hours cut down their egg production, I felt it best not to mention this to them; they were touchy enough at the theft of their summer.

Late that Winter, we experienced our first predator tragedy. On reaching the chickens' yard one snowy morning, I was greeted by a tangle of blood and torn carcass. Six of my young hens, I managed

to count. In deep mourning, I called on my neighbor. It sounded like weasels, she advised; they could get in to the tiniest places. I examined the coop then, narrow-eyed. Sure enough, one small hole glared from a space of wire above the window. Mending it in quick order, we carved another notch in our chicken learning. Never since that dreadful morning have we left the chickens unprotected by even "the smallest hole," from dark until dawn. And we've never lost a chicken since to a hungry stalker.

By that spring, we had but two young roosters left, the largest and most comely, plus Peter, our original proud cock. However, three roosters was one too many, so with sad hearts and appropriate ceremony, we began a new seige of slaughter. Peter went first, gallantly, then one by one, the original, now two-year-old hens. (I can't divulge much about the process. Mike performs that deadly task, up to the point when each carcass is quite anonymously defeathered and plucked. I know it's a cop out, but I can't bring myself to eat a known friend.)

**T**hat second Summer, I decided to try to hatch out my own chicks. One of my young hens, Pinky, who had turned out to have some banty in her, obliged first, producing seven bright chicks. In July, Blondie came up with five, Pretty with a puny but welcome three. In August, Dicey settled onto a nest. And sat. And sat. In mid-





September she was still setting. The three mothers paraded their broods by her triumphantly. Dicey clucked and minded her business. Finally one early Fall morning, I heard a single cheep under Dicey's feathers. She winked and looked at me proudly. Unable to find a proper chick waterer right away, I grabbed a pan and filled it, stuck it and a handful of mash in her quarters, and ran up the hill to tell Mike the news. An hour later, I returned for a nursery visit. One new grey chick floated in the water-brimming pan, dead to all worlds. Dicey seemed not even to notice. If Mike hadn't appeared at that moment, I think I might have joined my lifeless charge in suicide, I felt so stupid, so guilty. Another lesson, too sadly impressed: never leave a chick near open water.

This year I again let my hens hatch out their own chicks. But their stars must have been crossed, or the cold summer not to their liking, for only faithful Pinky and one friend produced a family. A few hens brooded like mad, some even nursed their eggs for an age past 21 days. This year's two roosters didn't lack for fertilizing activity. But either the eggs simply didn't hatch, or a potential mother changed nests mid-setting. Worse yet, I discovered one hen methodically pecking at the clutch she sat on until not one was left whole. (She was quickly transformed to stew.) With the number of my egg customers growing, I've determined not to leave so much to chance in the future. The minute good Pinky hunkers down, I'll send off my first order for chicks. Once I have two dozen bought and tucked under feathers, the dear creatures can practice their maternal arts as they wish.

**I**n my four years of hendom I've lost only two chickens to disease, both of those to internal water cysts. Actually, we didn't lose even them; they simply grew weak and huddled in a corner until Mike put them out of their misery. (The cats loved their remains; nothing goes wasted on this farm.) Visitors remark on how healthy my chickens appear, and, as I mentioned, my egg customers burgeon. I can only thank my stars and my four years of affectionate learning. I think the affection part makes half the success, for I truly believe you have to care about your animals' health, comfort, even, yes, happiness, to raise them properly, to deserve their bounty.

I'd like to share here a few of my means to success:

1. Clean quarters. Not spit and polish, of course, for chickens, for all their endearing qualities, do have messy habits. But their food and water *must* be fresh and clean, and their quarters relatively free of flies and permeating smells. I clean the coop each spring from stem to stern, shovel out the litter (great stuff, tilled into the garden), remove the windows, wire-brush the boards and roosts. I then lay down 6 inches of fresh litter (wood chips work best, for they stay dry and areated) and sprinkle it with super-phosphate. Once a month I clean the

laying nests and sprinkle their new hay with super-phosphate, scattering a bit more over the whole coop for good measure.

2. Wholesome food. First of all, I wouldn't raise chickens if I hadn't a large space for them to run free. Mine have an orchard, meadow, and pine-topped hillside, and after harvest, the remains of the crop garden. Though they never range out of sight, they do delight in roaming to search out the banquet of bugs and greens the earth sets out. Before we got a dog, they were, I admit, pests on the porch and impolite with their droppings. But that's dog's territory now, and many a feather has flown upon its invasion.

Footnote: I've found a dollop of vinegar (cider) in the chickens' water keeps them bright-eyed and beautiful. And to save on oyster shell, I return all their remnant shells to them, dried and crushed, whenever we've an accumulation. Since chickens must have fresh water available always, it must be heated in deep winter to keep from freezing. I manage this by taking them a pan of warm water three or four times a sub-zero day.

3. Eggs. Gather twice a day in hot weather. For keeping, always package them with the narrow end down. Clean dirty shells by rubbing lightly with sandpaper, never water. If I've a surplus and have to keep them over a week, I rub the shells with mineral oil to seal them, and store them in the cool root cellar. Eggs can be kept almost just-laid fresh for at least six months this way. If eggshells seem thin or crack too easily, increase the chickens' oyster shell ration. Chickens who eat fresh greens daily produce deep golden yolks. A speck of blood in an egg does no harm; it usually just means the chicken has been bruised slightly . . . or had a difficult lay?

4. Attitude. Don't personalize your chickens by naming them or making them pets. I did and I do. And Pinky, Sister, Pretty, Pearly, Silky, Snow White, Nellie Gray will die of old age, properly mourned, drastically uneconomic. But then . . . that's half the joy of a farm, getting to know and cherish its creatures. And there's always that passel of look-alike red hens, destined through their anonymity to the stew pot.

If you cannot stand chickens (and I know of a few such crazies), buy your eggs from a neighbor who can. Like all living things, chickens will do as they're done to.

Too often scorned, made jokes of, given bad press, I'd like to elevate the status of chickens, and hereby nominate them as man's second best friend!





STATEMENT REQUIRED BY THE ACT OF AUGUST 12, 1970: SECTION 3685, TITLE 39, UNITED STATES CODE, SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION OF FARMSTEAD MAGAZINE, published bi-monthly by THE FARMSTEAD PRESS. The general business office of THE FARMSTEAD PRESS is at Box 111, Freedom, Maine 04941. Publisher and Editor, George Frangoulis, Box 111, Freedom, Maine 04941. Date of filing September 1, 1977.

Owner (if owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock) FARMSTEAD PRESS, Box 111, Freedom, Maine 04941. George Frangoulis, Box 111, Freedom, Maine 04941. Known Bondholders, Mortgagees, and other Security Holders Owning or Holding 1 percent or more of total amount of Bonds, Mortgages or other securities (if none, so state). None.

The average number of copies each issue during the preceding 12 months are:

A. Total number of copies printed	46,300
B. Paid circulation:	
Sales through dealers, counter sales, etc.	28,571
Mail Subscriptions	10,957
C. Total Paid Circulation	39,528
D. Free distribution by mail, carrier or other means	1,782
E. Total distribution	41,310
F. Copies not distributed: office use, left over, spoiled after printing, unaccounted	2,724
Returns from distributors	2,266
G. Total	46,300

The actual number of single issue published nearest to filing date are:

A. Total copies printed	83,500
B. Paid circulation:	
Sales through dealers, counter sales, etc.	60,849
Mail subscriptions	15,073
C. Total Paid Circulation	75,922
D. Free distribution by mail, carrier or other means	4,806
E. Total distribution	80,728
F. Copies not distributed: office use, left over, spoiled after printing, unaccounted	2,772
Returns from news agents	0
G. Total	83,500

I certify that the statements made by me above are correct and complete.

George Frangoulis,  
Publisher



## WOOD STOVES

Buy \* Sell \* Repair

Specializing in old Wood Kitchen  
Cookstoves, Parlor Heaters and Fireplaces

## BRYANT STEEL WORKS

Tele (207) 568-3530 - Thorndike, Me. 04986

## SHEEPSWOOL YARN

We feature the 97 Virgin Wool Yarns of the Christopher Sheep Farm of Bowdoinham, Maine. These yarns are available in 12 weights, ranging from sport to very bulky and 24 colors, including naturals, heathers and solids. The yarns are spun at Eastport, Maine and Harrisville, N.H. for both knitting and weaving uses.

We would like you to examine the wide range of finished products and the yarns themselves, or send for a swatch card, price list and yardage chart (50 cents) to:

 **The  
WOOL ROOTS**

446 Fore Street, Portland, Maine 04111



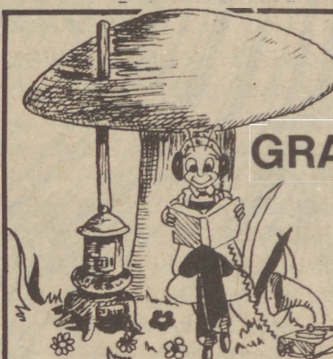
8 Silver St.  
Waterville,  
Maine

*Intriguing items from Maine*

*and around the world. . . .*

*Clothing, Jewelry, Pottery,*

*and more.*



## The GRASSHOPPER SHOP

79 High St. • 338-2744  
BELFAST, Me. 04519

21 Bay View St.  
CAMDEN, Me. 04843  
• 236 - 2084

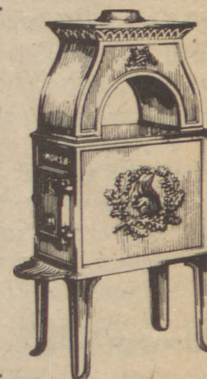
## MORSØ MODEL NO. 1B0 CAST IRON STOVE WITH HEAT EXCHANGER

Heating Capacity:

Approximately 9,000 Cu. Ft.

Granddaddy of all Scandinavian stoves. 353 lbs., airtight, full load lasts 12-16 hours. Available in matte black or glossy grey at no extra cost.

Save money, energy with the highly efficient and beautiful stove. We offer the full line of Morsø, Trolla, Reginald and General Engineering woodstoves at discounted prices.



Books, Records, Natural Cosmetics, Cards, Woodstoves, Craft Supplies, Clothes, Jewelry, and Paraphernalia





Houdan Male



by Jack C. Barnes

**T**he collecting of antiquities is currently in vogue all over the world. One can visit antique shops in almost any city, town, or hamlet throughout the United States. One can visit colorful bazaars in such picturesque cities as Peshawar near the Khyber Pass, Old Delhi, Kabul, Hong Kong, or Istanbul where antiques are being bought and sold by merchants who are often more fascinating than their merchandise. In America there are collectors of antique automobiles, bottles, guns and even barbed wire. Certainly there is little novelty in the formation of clubs dedicated to the collecting and preservation of antiquities. What may be surprising to many, however, is the existence in the United States of an organization dedicated to the preservation of rare breeds of poultry called the Society for the Preservation of Poultry Antiquities.

At a time when megalopolis and urban sprawl have become a part of our vocabulary, millions of people never see live poultry. They have only a casual awareness of the existence of poultry, mainly through the eggs and chickens which they consume. To most people the common term "chickens" is used to denote anything from a baby chick to a

field, Maine, the Northern New England Bird Fanciers' Association has been formed and once again Maine has its own poultry show. Perhaps some of the readers of this article had an opportunity to view the 1976 show held at the Lewiston Shopping Center where exhibitors from several states competed for various awards. Many varieties of standard fowl, bantams, pigeons, turkeys, ducks, geese, and guinea fowl were displayed for the thousands of shoppers to view, many of whom exclaimed with utter astonishment at some of the rare and exquisite breeds which formed a kaleidoscope of colors with their lovely plumage.

**A**lthough the term poultry covers everything from geese to guinea fowl, the remainder of this article will focus upon chickens, large fowl or standards as opposed to bantams. Since the poultry industry is now conducted primarily in the form of large corporations, a constant effort is being made to produce so-called sex-linked birds that will shell out eggs at a rate that would shock the farmer of yesterday who earned a good living from keeping a few hundred Rhode Island Reds, White Plymouth Rocks, Barred Rocks, or White Leghorns to name some of the more popular breeds of twen-

## Take Antique Chickens Off The Shelf

mature fowl. In an era when agriculture is big business, the poultry industry is no exception; the family-run poultry farms here in Maine, for example, are a thing of the not too distant past. Astronomical grain prices have discouraged most individuals from keeping a small flock in their backyards, providing, of course, there are no public ordinances preventing them from otherwise doing so. The country fairs are certainly still flourishing in Maine; in fact, they seem to be increasing after suffering a decline in popularity. There are exhibitors of cattle, sheep, and sundry other exhibits, but no poultry. One by one the fairs here in Maine have discontinued poultry exhibits even though there are enough poultry fanciers in Maine alone to fill an exhibition hall with exotic and rare breeds such as would astound most viewers. For the first time most would realize that a "chicken is not just a chicken!" A number of the New Hampshire fairs have excellent poultry shows and the exhibition of poultry is on the increase in that state. There were actually a few years in the late 1960's and early 1970's when there was not a single poultry show in Maine. Thanks to a small group of dedicated poultry enthusiasts such as C.R. Woodman of Read-

ty-five to fifty years ago. It used to be that when hens ceased to lay and began to molt or shed their feathers, one could be assured of delicious chicken dinners if he did not wish to keep his laying hens over until such time as they would begin laying again. Today hens bred for egg production are not worth dressing off. Every ounce of energy and goodness in the bird has been expended in the production of eggs; there is nothing left worth salvaging when the hens stop laying. This is fine; this is big business. However, one might ponder upon the origin of these sex-linked birds. From where do the bloodlines originate? All commercial breeds today were developed from older breeds of poultry, most of which are listed and described in a book called the *American Standard of Perfection*. It is the concern of poultry fanciers and poultry geneticists in the United States, Canada, and other nations in the world that unless efforts are made to preserve the old breeds, there will come a time when it will be impossible for geneticists at agricultural research laboratories to develop and improve upon the commercial strains, a necessity if the commercial poultry industry is to remain alive. There are, of course, less pragmatic reasons for the concern about the preservation of antique breeds of poultry. These reasons are similar to those which have generated herculean efforts on the part of conservationists to protect and perpetuate the whooping crane, the silver-tipped grizzly, the eagle,

---

*Jack Barnes, author of "Rural Poland — A Glimpse of Our Past" which appeared in the Summer issue of Farmstead, lives in Hiram, Maine.*

---



or the redwood. It is deplorable and disconcerting to many whenever any species becomes extinct. There is a long list of standard breeds that are on the endangered list, and each year the list seems to grow longer. Some of these breeds are seldom seen even in the largest poultry shows in the United States and Canada. How many have ever heard of, let alone seen, such breeds as the Dominique, La Fleche, Dorkings, Buff Catalans and Whitefaced Black Spanish to name but just a few? As the years pass, the endangered list becomes longer and longer. The Mottled Houdan, Speckled Sussex, Lamona, and even the New Hampshire Red have been added to the more recent list. It is not just the members of the Society for the Preservation of Poultry Antiquities who are striving to keep these breeds from dying out. There are hundreds of other clubs and thousands of exhibitors and nonexhibitors, who belong to no special organization, who are helping to preserve our old and lovely breeds. The problem is that some breeds such as the La Fleche have become so scarce that it is difficult for one to acquire the breed and even more difficult to add new blood lines to one's breeding stock. One of the services that the Society for the Preservation of Poultry Antiquities provides is a directory of all its members and the breeds and variety of breeds which each has. However, even when one locates a breeder of one of the rare breeds for which he has been searching, the breeder may not have extras to spare. If he does, the cost of shipping live birds is outrageously costly and the purchaser must bear the cost which very often is much higher than the cost of the breeding stock. Few breeders will ship chicks as they do not usually hatch on a large scale. Many will ship eggs, but it is always a gamble that they will arrive in good order and the hatchability of shipped eggs is very often low or nil.

o one who has never attended a large poultry show and who is unfamiliar with all but a few more common breeds, it may come as startling news that there are around 120 different varieties and breeds that have been admitted to the **Standard of Perfection**. There are many other breeds and varieties that hopefully can be preserved and admitted in the future. To be accepted to the **Standard of Perfection**, a breed or variety of that breed must be identifiable by certain characteristics such as color pattern, type of comb, size, and shape. All breeds in the **Standard of Perfection** have been divided into classes. There are at present nine classes: the American, English, French, Mediterranean, Asian, Hamburg, Continental, Polish, and Old English and Modern Games. Almost every breed has more than one variety. The familiar White Leghorn is but one of twelve varieties belonging to the Leghorn breed. To cite a few examples of what constitutes variety, there are Single-Comb Dark Brown Leghorns, Rose-Comb Dark Brown Leghorns, and Single-Comb Black, Buff, Silver, Red, Black-Tailed Red, and Columbian Leghorns. There are fowl with

single combs, rose combs, forked combs, pea combs; there are breeds with crests, beards, muffs, and feathered legs; there are those with five toes; there is one breed with white faces; the Araucanas lay blue, pink and green eggs (the low-cholesterol content often attributed to their eggs is fallacious); and, of course, there are breeds and varieties with every color pattern imaginable, including blue. The many color patterns and varieties of combs make raising fancy poultry challenging and exciting. Poultry enthusiasts can only be stereotyped in as much as they share a common interest in raising poultry for aesthetic reasons. Doctors, lawyers, teachers, men and women from all occupations, youth and the aged can all be found at a major

White-faced

Black Spanish



poultry show sharing their experiences, their successes, and failures. The winners are usually magnanimous in offering helpful tips to the losers, and a convivial atmosphere intermingles with a cacophony of sounds characteristic of the poultry world.

One of the goals that most poultry hobbyists have is to encourage others to take up the hobby. The more poultry enthusiasts there are over the country, the better the chances our rare breeds will have to survive and to perpetuate themselves; the more people involved with poultry, the more clubs and consequently more shows will spring up over



the country. It is a healthy and wholesome hobby. All shows attempt to offer incentives to young people to exhibit birds. I am in the field of education, and each year I realize great satisfaction from taking some of my own birds to my high school and giving lectures on poultry genetics to the biology classes. Having live birds in the biology lecture room always generates a great interest among the students. For most, it is the first time that they have viewed anything but the more common breeds, and they are amazed at the variations of traits in different breeds. A show and tell lecture with poultry is a guarantee of a successful day in the classroom. Like any other hobby, raising a small flock of poultry is therapeutic. Perhaps it is

or some poultry hobbyists, tracing the origin of their breed or breeds can be fascinating.

The classes of most breeds denote the area of their origin. However, tracing the origin of breeds of poultry can be as complicated as attempting to trace the origin of races, providing, of course, one recognizes that there are distinct races. To be more succinct, Orpingtons are a breed that belongs to the English class since some of its varieties were first developed in England. However, the Orpington was developed in part from Asiatic and Mediterranean breeds. Since facets of my work involve rather extensive travel, I frequently have the opportunity to observe small flocks of poultry running about in the streets and yards of villages around the world. What I am always looking for but seldom see is a flock of one of our standard breeds. Usually the flocks are typical barnyard flocks that have been crossed and recrossed. Surprising, perhaps, are the obvious traits of our American breeds that frequently predominate in the flocks I observe. I specialize in English and French breeds. Along the Champs Elysees, the most fashionable promenade in Paris, there is a section where there are a number of pet shops clustered together. In addition to vampire bats and assorted snakes, there are the more mundane pets including cages of poultry. Each time I pass the shops, I look in vain for Crevecœurs, Houdans, La Fleche, or Faverolles. Instead I see Rhode Island Reds, White Rocks, Leghorns, and Asiatic breeds. The French breeds are named after the towns or villages where they were first developed. For example, the Mottled Houdan (one of my favorites) was, according to the records, developed in Houdan, a town of 2,100 people located about forty miles from Paris. I once motored out there to see the place of origin of one of my breeds. The fertile green fields and the white-washed houses are still there, but the Houdan has all but vanished from the place of its origin. There are times, however, when my vigil and perseverance are rewarded. For example, one day while hiking along the country roads in Flanders, Belgium, I observed the finest flock of Salmon Faverolles I have ever seen. Although it was not in France that I observed them, the village and setting were somewhat similar to Faverolle, the place of their origin.

One thing I have observed from traveling and breeding poultry is that there seems to be a remarkable likeness between the temperament of the breeds and the indigenous population where the breeds originated. For example, Mediterranean breeds are usually more excitable than English breeds, and the Asiatic breeds such as the Brahmas and Cochins maintain, with few exceptions, a perpetual Asiatic calm.

**F**ew poultry enthusiasts realize a profit from their hobby unless they are able to sell many of their superfluous stock at a good price, but raising poultry does offer some monetary returns directly or indirectly. Many rare breeds are good layers, and most originally were bred for



Female La Fleche

more so than many hobbies because it is more demanding. Poultry should be fed and watered twice a day. Usually when I return to my home in the afternoon, I am carrying an attache case filled with work that must be completed before the following day. Having to care for the poultry gives me a respite from mental pressures. I enjoy feeding and watering the birds, gathering the eggs, checking out the feathering of one of my choice birds, or working with them so that they will not become nervous when they are handled by judges during a show. My birds have compelled me to take that break from my regular work; I feel more relaxed and ready to cope with the evening's work.





Male Dominique

utilitarian purposes. This means that they are useful for both meat and eggs. One can enjoy his own fresh eggs, sell the surplus to help pay for the grain, and savor fresh chicken when it comes time to cull out the flock. Frequently there are opportunities for one to sell hatching eggs, baby chicks, and breeding stock within the area or across the nation if one wishes to advertise, especially in *The Poultry Press*, the only publication completely devoted to the needs and interests of the poultry fancier and the preservation of all breeds of poultry. If one takes pride in possessing a beautiful flock, he should also take pride in keeping his pens clean and the floor covered with fresh shavings or some other kind of clean litter. Usually if one keeps poultry, he also maintains a garden. There is no better fertilizer available than poultry manure, providing it is used with some discretion, to make vegetable and flower gardens, lawns, and fields productive. If one cleans out his pens frequently, there will be little odor from the soiled litter; yet, it will contain enough nitrogen to induce almost anything to grow more luxuriantly.

**F**inally, for those who are contemplating raising a small flock, the following tidbits of information may prove helpful. The selection of a breed or breeds is always a problem. There are a few hatcheries in the United States that specialize in hatching rare breeds. Murray McMurray of Webster City, Iowa, advertises sixty-seven varieties. They publish a beautiful and colorful catalogue, free upon request, which is extremely helpful to the novice as almost every breed and variety is pictured, most of them in color. There are rare breed specials where one may acquire a rainbow of chicks at very moderate prices. This is tempting and is a quick way of sampling a number of breeds. It can be exciting as chicks change in appearance from day to day, and soon one finds himself with a mosaic of rapidly maturing pullets and cockerels. In many cases one could end up with

perhaps only one of certain breeds. For those who are more serious about becoming successful as exhibitors it is better to focus upon as few breeds as possible. If one is confronted with a problem of lack of space, it is more feasible to limit himself to one or two breeds. The more birds of a single variety, the better the odds that there will be a few which will somewhat approach the approximate standards set for that particular breed or variety. If one wishes to hatch his own chickens from his own breeding stock, it is advisable to have more than a single pen of breeders. One must consider the mortality rate even among healthy flocks. There is always an element of risk in showing birds because they are vulnerable to a number of diseases, especially forms of respiratory diseases. It is often tempting to purchase a large number of chicks, especially at bargain prices. Remember that the price of grain is very high, and growing chicks have prodigious appetites.

One may soon lament the fact that he yielded to the temptation to purchase too many. Twenty-five to fifty chicks is what I personally recommend. As far as breeds are concerned, that is a matter upon which only the individual can decide. It may take several years of experimenting before one can settle upon one or more breeds which he really feels are his favorites. Hopefully raising and perhaps exhibiting poultry will become a family hobby, not just a hobby for an individual member of the family. There is a dire need for more family oriented hobbies at a time when families seem to find little time to share experiences. Over the years that I have been attending shows throughout New England, I have observed that some of the most successful exhibitors are those who make up a family team. Last of all, if one wishes to exhibit or just learn more about raising poultry, he should join a poultry association. It is only through the strength of hundreds of clubs and associations throughout the United States and other nations of the world that many of the rare and exotic breeds will be saved from extinction.



Male Salmon  
Favorelle



# Juniper & Bayberry

by Darrell A. Rolerson

Probably no two shrubs are more characteristic of the landscape in Maine than juniper and bayberry. They can be seen in stoney pastures everywhere, and flourishing by the sea — straight out to the cliff's edge. Their homliness and their charm have established them even in the literature of this land. Sarah Orne Jewett, describing a Maine pasture in *Country of the Pointed Firs* said that "I could see the rich green of

flavor gin, and I have read that the English sometimes put the berries in their cider. Cooks sometimes use them as a condiment with game, also. The flavor of venison and pheasant and wild rabbit especially is enhanced by a couple of juniper berries ground through a pepper mill. A couple of these berries also can be planted whole in the stuffing of a wild duck. Or try a few in a crock of sauerkraut.



Juniper

bayberry bushes here and there, where the rocks made room. The air was very sweet . . ." And travelling "upcountry" she speaks pleasantly of shady roads where the woods stood close on the right . . . "on the left were narrow fields and pastures where there were as many acres of spruces and pines as there were of bay and juniper and bunchberry." Edna St. Vincent Millet, also, in her poem entitled *Journey* praises the "dim, shady woods redolent of fern and bayberry." And more than once she talks of the smell of "bayberry hot in the sun."

While every farmer and every fisherman throughout the state is familiar with juniper and bayberry, and everyone appreciates these shrubs to some degree, few people know their full value. The most common use of juniper berries, of course, is to

Beyond its culinary use juniper is one of the more important medicinal plants — taken generally in a tea made by steeping a few tablespoonsful of the berries in a pint of boiling water. A cup of this can be sipped through the day to stimulate the appetite and aid digestion, and to help eliminate mucous due to colds. The tea is also an excellent wash for mosquito bites and bee stings, and due to its antiseptic qualities it is an excellent spray to disinfect a room in which a patient with a contagious disease has been kept. In days of plague the sickroom attendants used to chew these berries, which work like a charm for immunity. They purify the breath better than anything I know, so long as you don't get accused of nipping off the gin bottle.

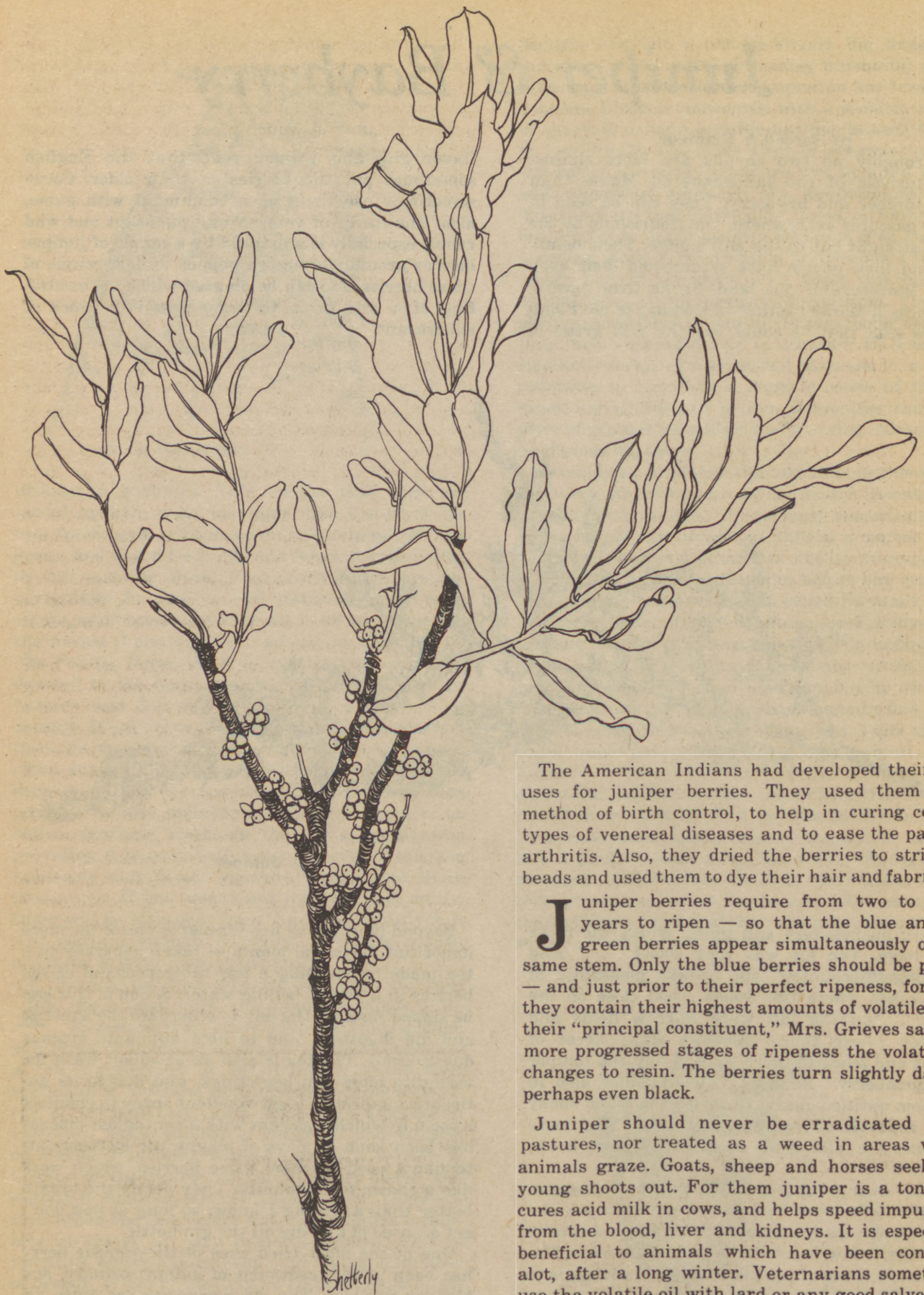
One of the most tried uses of the juniper berry has been in the treatment of kidney, urinary, and bladder troubles. The old herbalists are quite explicit about this. Joseph Meyer in *The Herbalist* says that juniper berries "impart to the urine the smell of violets."

---

*Darrell Rolerson, writer and herbalist, lives in Islesboro, Maine.*

---





Bayberry

The American Indians had developed their own uses for juniper berries. They used them as a method of birth control, to help in curing certain types of venereal diseases and to ease the pains of arthritis. Also, they dried the berries to string as beads and used them to dye their hair and fabric.

**J**uniper berries require from two to three years to ripen — so that the blue and the green berries appear simultaneously on the same stem. Only the blue berries should be picked — and just prior to their perfect ripeness, for then they contain their highest amounts of volatile oil — their “principal constituent,” Mrs. Grieves says. In more progressed stages of ripeness the volatile oil changes to resin. The berries turn slightly darker, perhaps even black.

Juniper should never be eradicated from pastures, nor treated as a weed in areas where animals graze. Goats, sheep and horses seek the young shoots out. For them juniper is a tonic. It cures acid milk in cows, and helps speed impurities from the blood, liver and kidneys. It is especially beneficial to animals which have been confined alot, after a long winter. Veternarians sometimes use the volatile oil with lard or any good salve base (vasaline is great) over exposed sores to help heal while it repels flies.

It is interesting to note that on the island of



Monhegan, about twenty miles off the coast of Maine, juniper is called "trailing yew"; it is the custom of the natives there to include it with bay and other sweet-scented "posies" in old-fashioned nosegays — which they give to especially favored guests from "Away".

**T**he bayberry bush is most commonly known as sweet gale, though candleberry and wax myrtle are a couple of its names, also — both indicating its utilitarian value. Like juniper, bayberry's most popular use seems to be as a flavoring for alcohol (I think probably this has been one of the most popular uses at one time or another for just about every herb). Mrs. Grieves in her *Modern Herbal* says that "its branches have been used as a substitute for hops in Yorkshire, and put into a beer called there 'Gale Beer.'" You can take Mrs. Grieves' word that "it is extremely good to allay thirst."

Jethro Kloss in *Back to Eden* calls bayberry "one of the most valuable and useful herbs." It is an old-fashioned American folk remedy of real distinction — the bark and leaves and the flowers, all three, being the parts used. A combination of the three, I have found, works best. The flowers and the leaves are gathered at the same time, early in the spring. As it is true with all herbs whose flowers are used these will be most potent just as the plant begins to bloom. Bouquets can be hung to dry in any warm attic where the air circulates freely, or in a haymow, or under the hot roof of a shed — as long as they are in the shade. The best time to dig the roots of bay is in the late fall when the bush is dormant, when all the plant's powers are accumulated most intensely underground. To cure the roots, wash them first; then spread them to dry in a barely warm oven for a day — in a wood-oven, perhaps, with the door slightly ajar. When they are thoroughly dry — meaning brittle — grind them with a mortar and pestal and store them in dark containers, having combined them with the dried leaves and flowers of the herb. The container should be well-sealed.

This combination is aromatic, astringent, tonic and stimulant. Steep a tablespoon of it in a pint of boiling water for half an hour. Add a little honey if you like, and drink it freely. Women find it helps to

check profuse menstruation (Kloss calls it an "unfailing remedy" for this when combined with capsicum). Gargle with this tea for bleeding gums and cankers. It also promotes perspiration and improves circulation, which makes it especially good for colds — combined with yarrow, catnip, sage or peppermint, or the needles from white pine (the five-needled pine).

**I**f this mixture of bayleaves, flowers, and root is ground *extremely* fine it can be "snorted" up the nose a pinch at a time for ailing adenoids and to cut mucous — though I prefer personally to snort the lukewarm *tea* from the palm of my hand, up one nostril at a time. In yoga terminology this is known as a "kriya" — or cleansing process, and is not at all an unpleasant thing to do. People who have been swimming in the sea and snorted salt water accidentally up their nose may make an unpleasant association between these two experiences, while really there is no comparison. People with a "stuff-dup-doze" will be glad to breathe again.

As for the ground mixture, I prefer to take it in capsules — which usually can be purchased empty from a drug store. Taken this way the bayleaves, flowers, and root help to clean the stomach. Even without the capsules this powder can be applied to infected sores. Documented cases exist in which it has healed gangrene.


The wax used in making bay candles comes from the berries. These can be found clustered along their stem like the eggs which hold to the tail of a seed lobster. To obtain their wax boil the berries in water. The wax will float to the surface, to be removed when it has become cold and hardened. A pure bayberry candle, considering the number of berries it takes to yield that amount of wax, is worth its weight in gold. Though far be it from me to discourage anyone from undertaking the job. The value of some things can't be measured in time nor effort nor the money it takes to acquire them. A pure bay candle burns with a radiant light: a true dispeller of darkness, lasting much longer than a paraffin candle. And talk about a pure fragrance! The smell of a bay candle burning will elevate a person into a sublime state even when nothing else will.

*The*  
**Lobster Pound**  
*Restaurant*

WHERE LOBSTERS ARE CAUGHT,  
COOKED AND EATEN

DINNER  
11:30 a. m. - 8:00 p. m.  
Tel. 789 - 5550

LINCOLNVILLE BEACH, MAINE



## Farnham's Equipment

Castine Rd. Tel. 326-8264 Penobscot

SNAPPER — BOLENS — YARDMAN

Lawn and Garden Power Equipment and

Snow Throwers - McCulloch Generators

Weed Eater — The Green Machine

SALES      **SERVICE**      ACCESSORIES

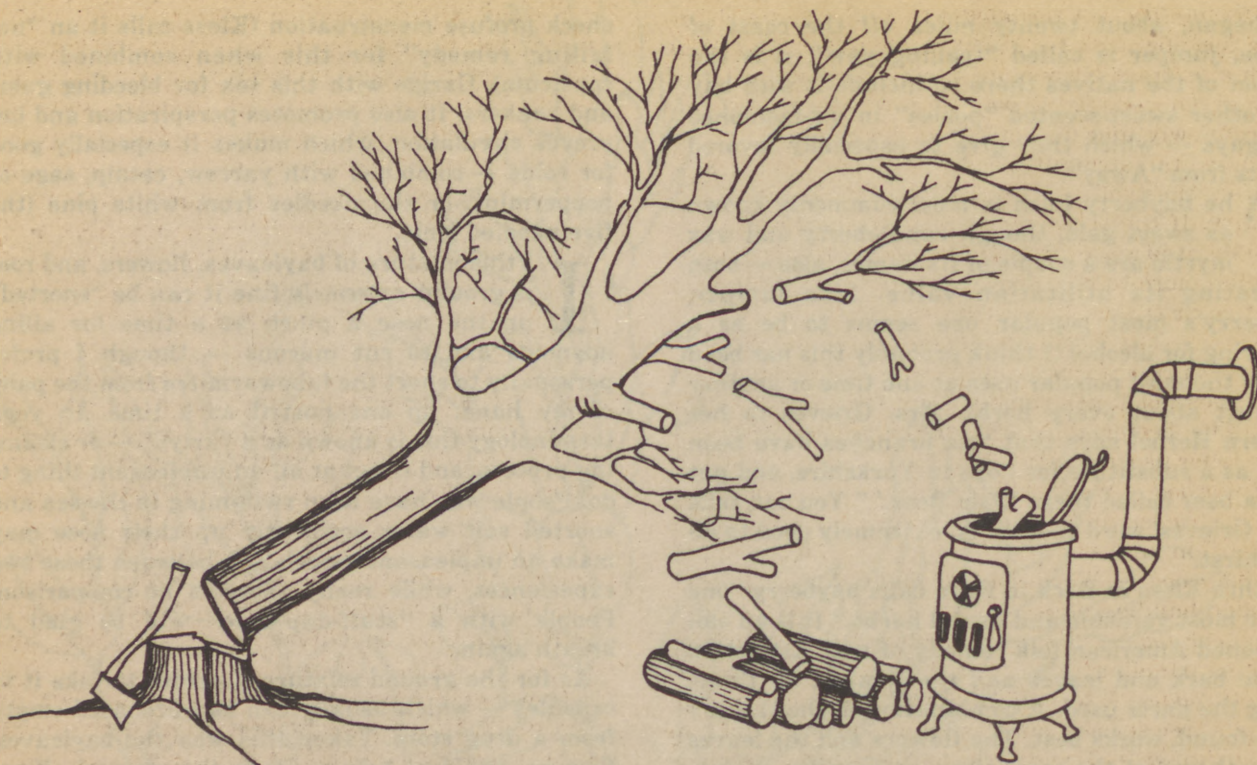
SKILSAW

PARTNER

JONSEREDS

CHAIN SAWS





# From Stump to Stove

by Jack Bulger

**W**ood is one of the best alternatives to oil heat in the Northeast. An added advantage is that firewood harvest can actually be used to improve forest stands and greatly increase the value of forests to the landowner. Poorer quality trees can be thinned from the stand for firewood, leaving the better quality trees to grow for valuable wood products. By proper forest management, we can have our cake and eat it too.

In the broken farmland of the Northeast, most every farm has its woodlot. By not practicing sound forest management, farmsteads are missing an important potential source of farm income. The purpose of this article is to help farmsteads harvest firewood while improving their forest stands. If you are fortunate enough to own or have access to a woodlot, pull up a chair, put your feet up on your now cold stove, and read on.

Firewood cutting can improve forest stands by thinning, releasing and properly spacing the best quality trees for other valuable uses. This is possible because any species of any size and form can be used for firewood.

Furthermore, no small benefit will be realized in savings and satisfaction by using firewood one has cut and "fitted" from the woodlot. Not only real

benefits are resultant, but that special something that defies identification will embrace the firewood user. There is something about the heat from a wood stove that penetrates chilled bones and envelops the user in a warm, stimulating blanket that could never be duplicated by any central heating system. By now, you must be able to feel this warmth, so, on to specifics.

Before going further, I should define and explain several terms used in forest management and firewood use, in order to avoid any confusion among the readers.

**Cord** — A stack of wood four feet x eight feet x four feet. In some areas cord wood is usually cut into four foot lengths, and a pile four feet high by eight feet wide equals a cord. In other areas, cord wood is cut in eight foot lengths and thus the pile needs to be only four feet high and four feet wide. A smaller cord measure used in some areas is a face cord, which is a pile four feet high by eight feet wide. A face cord is always smaller than a regular cord.

**BTU (British Thermal Unit)** — The amount of heat required to raise one pound of water one degree Fahrenheit.

**Stand** — A forest stand is simply any definable area which is relatively uniform and composed of the same mixture of species throughout.

**Forest Type** — A forest type is a larger area with similar species and soil conditions throughout. You may have several stands on your property of the same forest type.

---

*Jack Bulger, author of "Plague and Pestilence in Your Woodlot" which appeared in the Summer 1975 issue of Farmstead, is a District Service Forester for the Bureau of Forestry, State of Maine. Illustrations are by Liz Buell.*

---



*Site quality* — A term used to delineate the value of a specific area for growing trees. On a good or high site, trees grow more rapidly and are taller at any given age. On a poor or low site, trees grow more slowly and do not get as tall. Usually, if an area has tall straight trees that do not taper rapidly from the trunk on up the stem, it is of good site quality. If the trees are relatively short and taper rapidly, it is a poor site. Diameter growth is usually related more to tree spacing and the history of the particular stand, than it is to site quality.

*Form* — The form of a tree relates to its shape. A tree with good form is one that is tall and straight and does not taper rapidly from the bottom to the top. The better the form, the more valuable the tree is for use as saw timber.

*Pulpwood* — Wood sold to make pulp and paper.

*Saw timber and saw logs* — Wood sold to make dimension lumber.

*Bolt wood* — Wood sold to make dowels, spools, wooden handles, etc.

*Veneer logs* — Usually hardwood logs used for making paneling.

*Softwood* — A term used for all evergreen or coniferous tree species, such as pines, spruces, and firs.

*Hardwood* — Deciduous species that lose their leaves each year.

Forest types are sometimes confusing and there are several systems of classification. Basically, however, forest types may be broken down to softwood, mixed wood, and hardwood. But in reality, this is too general a classification to be of great help in choosing fuelwood harvest areas. I feel it is important to separate these three basic types into upland areas and wetland areas, because the species composition and management practices vary so much.

Let's talk about upland hardwoods, wetland hardwoods, upland mixed wood, and wetland mixed wood for a start, because these are the areas that may be most suitable for firewood management. The forest types I will describe are representative of Northern New England, the northern Great Lakes area, and Eastern Canada. All of these types do not occur outside this area, but it should be possible for the reader to interpolate to his own situation.

Upland hardwoods may consist of the following species: sugar maple, red maple, American beech; white, gray, and yellow birch, all commonly associated with hemlock; elm, basswood, white pine and some white spruce. The beech, birch, and maples are the most abundant.

Wetland hardwoods will consist in the majority of red maple, black ash, small amounts of white ash, American beech, basswood, and American elm, along with scattered balsam fir and Eastern larch.

Upland mixed wood will include white and red pine, associated with Northern red oak, white spruce, balsam fir, American beech, Eastern hemlock, sugar maple (few) together with a small component of white ash, bigtooth and trembling aspen, white birch and gray birch.

Wetland mixed wood consists predominantly of red maple, Eastern larch, balsam fir and hornbeam (few), along with a minority component of gray birch and an occasional white pine. Generally, these are grassy, wet areas varying in size from small pockets to large swamps.

The softwood types, both upland and wetland, are often not suited for management for firewood. They usually contain only a small component of hardwood species, but where there are hardwoods, these types too can be improved by cutting firewood.

The first step in managing your forest for firewood is to identify these types and determine approximately how much of each type you have. Then you should determine the best stands in which to concentrate your firewood harvesting efforts.

There are a number of criteria you should consider when selecting your best stands. Access, site quality, equipment available for use, species present, age, size, and density of trees, are among these criteria.

How much land will you need to produce your firewood? That's also an important early question in your forest management planning.

The growth rate is the most important factor in determining how much land you'll need for a perpetual harvest. In Northern New England the accepted growth rate is about a half cord per acre per year. This is for unmanaged stands, however, and with management, the growth rate can be increased substantially. Using the conservative figure, however, 10 acres would produce five cords of wood per year. If you are considering using thinnings, cull trees, and inferior species for firewood; while leaving the better quality trees of better species to grow for other wood products, it might take 20 acres to produce the five cords/year over the long run. At this moment in time, however, most forest lands in the Northeast in small private ownership are dense and in need of improvement cuttings. You could certainly consider taking half a cord per acre per year for some time, while still leaving the better trees to grow for future crops.

Access is another important consideration. Many farmsteads will have old skid or logging roads which were used in the past. These roads can be difficult to locate, as they may be grown over with new forest cover. Look for old wheel ruts, and start with openings which may appear more readily at field edges. Usually, these roads will require very little work to make them passable other than cutting small trees and down timber, and will also serve the areas of best timber growth. If no old roads can be located, you must choose a location to establish new roads.

Establishment of a road system will result in more than the benefit of access for fuelwood. These roads may be used for fire control, insect and disease control, and most certainly result in access for other benefits such as hunting and scenic trails for



the owner. Establishment of a new road system is time-consuming however, and will require much work. In most cases, wood removed during road building will be utilized for firewood or pulpwood. In choosing a road site, be aware of slopes, final distance from point of firewood use, and impassable areas such as streams and bogs. Stay away from steep slopes, try and follow the contour of the land, and most certainly, walk the entire proposed road before cutting any trees.

Your decision to build or utilize a wood road will also depend on the type of equipment you have available for use. Most farmsteads have some type of farm tractor, or wheeled vehicle for use around the farm. These vehicles will serve during winter to skid the harvested wood to where it may be utilized. I have talked with some owners who were skidding small trees with a snowsled, so if one should be available, make use of it.

Upland hardwoods will yield an abundance of firewood. An average cord of dried hardwood will produce the equivalent heat of 193 gallons of home heating oil. All species of wood produce almost an equal amount of heat per pound of wood, but the density of wood varies greatly. The species which produce the most heat per cord are hardwoods (Table 1) and this should be considered when selecting firewood.

TABLE 1  
HEATING VALUES OF DIFFERENT WOOD

SPECIES	HEATING VALUE (Millions of BTU's Per Cord, Air Dried)
Hickory	25.4
White oak	23.9
Beech	21.8
Sugar Maple	21.8
Red Oak	21.7
Yellow Birch	21.3
White ash	20.0
Red Maple	19.1
Tamarack	19.1
Black Cherry	18.5
White Birch	18.2
Red Pine	17.8
Elm	17.7
Gray Birch	17.5
Hemlock	15.0
Spruce	15.0
Aspen	14.1
Balsam Fir	13.5
White Pine	13.3
Basswood	12.6

The species to be found in Northern New England in upland hardwoods which will serve as good firewood are: Sugar maple, red maple, American beech, the birches, and a few elms. Criteria for selection to cut must be established because many of these species have higher value if utilized for other products. Initially, every tree considered for cutting should be examined on the following basis: form, size, health, and vigor.

Many species which may be utilized for higher value products, such as boltwood, sawlogs, and veneer logs, may be separated on the basis of form. If a tree has small diameter branches, a good straight bole or stem, and a small number of branches on the lower bole area, probably this tree should be left as a high value tree and not removed for firewood. If, on the other hand, a crooked stem, many large branches, and generally poor form are apparent, the tree may be put to better use as firewood.

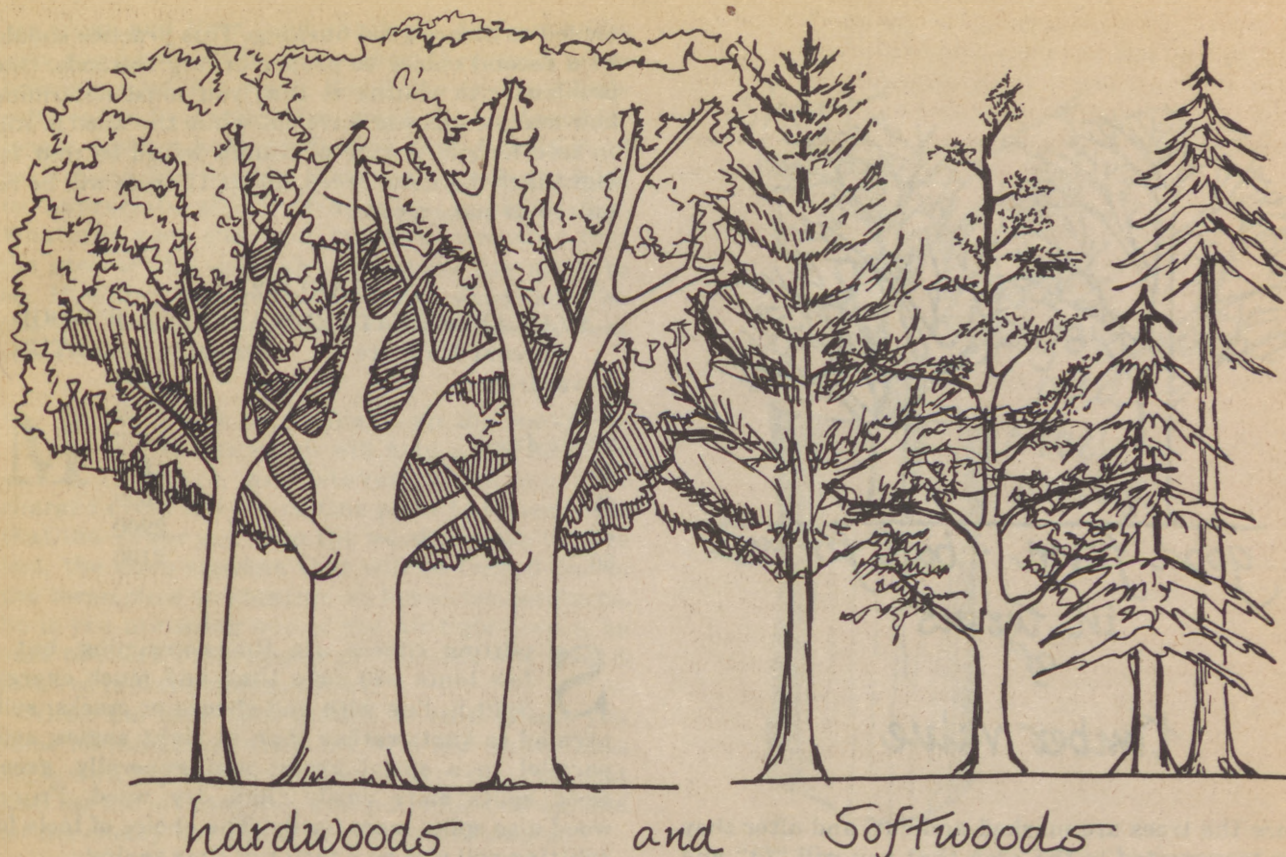
The size of the tree, or diameter of the bole at about four feet above ground, should also be taken into account. Timber stand improvement, which basically means an improvement in light, moisture, nutrients, room to grow, etc. as applied to the trees you will not cut, should be a consideration. The younger stems will respond to improvement work much better than the older veterans.

The best size of tree to leave in an improvement program would be demonstrated by leaving a good species of tree of about three to eight or nine inches in diameter at breast height. The larger veterans, from about 10 inches and up, may be removed to insure more light, moisture, and room to grow, for some of the smaller crop trees you plan to leave. Of course, some smaller trees of good species may be taken due to poor form, or disease, as ascertained by your first selection.

The first selection should also include an inspection for health and vigor. Many times what appears to be a good tree to leave will have some defect which will affect your selection. For example, trees with dead branches extending upward and which are located in the main lower bole will have a certain amount of decay inside. Also, some decay fungi will leave an apparent blemish on the stem. Damage from nature or by man's activities, which is located on the main stem, will also reduce the value of the tree. These trees should be selected for firewood if they suit your criteria for size in felling, bucking, and splitting. Vigor, or apparent aggressive competition with adjacent trees is also an important consideration. A tree of good form, with a large crown or leaf area in relation to its size, with good uniform green color and which shows dominance over its neighbor to some extent, is growing valuable wood for you, and, if of the proper species, should be left to compound its value over future years. Each of the foregoing criteria should be considered for each different area and for each different tree you plan to examine for firewood.

A word about site quality. Site quality is measured by the height of the dominant trees in relation to their age. Site quality can be estimated by visual examination of the existing dominant trees. If the dominant trees in a stand have exceptional height growth in relation to other trees of the same species you have noticed in other areas, the site quality is probably pretty good. A little practice in observation will aid the farmsteader in site determination. Site quality is an important criteria in choosing an area to harvest for firewood because if





you desire the added benefit of timber stand improvement, it is best to begin on the better sites.

**I**t would be impossible to tell you exactly which trees to save during timber stand improvement, because it would depend on your specific stand, local conditions, and local markets. A few examples, however, might illustrate how to select the valuable trees which should not be cut for firewood.

Local markets are important. The farmsteader interested in obtaining maximum value from his woods must investigate local markets and determine which forest products are most valuable. Select grade hardwoods; straight and with very few knots are often very valuable. If there is a veneer mill close, good quality sugar maple, yellow birch, large white birch, and elm can be worth \$200 or more per thousand board feet in the woods. Ash and oak are also valuable wood if the trees are straight, tall, and with few lower limbs. White birch bolt wood is much more valuable than firewood if there is a mill near that makes dowels and spools. Clear white pine sawlogs are becoming more valuable all the time, and good spruce logs are used mainly for construction timbers. Hardwood species that should be selected as firewood because they have little other value are red maple, beech, and gray birch. Other hardwoods should be selected on the basis of form.

Wetland hardwoods will serve for fuelwood harvest during winter months when the ground is frozen. Red maple, ash, beech, elm, and basswood can be selected for firewood in this type. All the

above-mentioned criteria for selection should be applied to each of the areas you intend to work in. Upland mixed wood produces oak, beech, maple, birch, and some ash. These are the species to prefer for firewood. Wetland mixed wood areas may be harvested for red maple, birch, and black ash. The majority of the hardwood species mentioned for each area will serve adequately for firewood because of the heat output, and if selected by the correct criteria, will result in improved woodland areas for future harvest of higher value products much earlier than if left alone.

There are often some hardwoods in the softwood forest types and softwood types can be improved by firewood cutting, but the amount of good firewood per acre is limited and it would be time-consuming to harvest it. The softwoods species can also be used for firewood, but conifer thinnings are probably more valuable as pulpwood if there is a good pulpwood market in the area. Tamarack has the same heating value as red maple and is the only softwood species which makes good firewood. At any rate, softwood types would have to be considered low priority areas for improvement with firewood cutting. If that's all you have to choose from, however, by all means use it.

**W**ith the preceding information in mind, the worst thing you can do is grab your saw and head out to cut some trees. Before any cutting, examine the areas on the ground and select the trees to remove beforehand and mark them. Nothing is more confusing than to try and select trees to cut during the process of harvest.





*good form · bad form*  
*in terms*  
*of*

*timber value*

Once the trees are marked and cut, and after they are transported to the area that you will "fit" and use them, the trees should be split to suit your stove and stacked for drying where the wind and sun can do their work.

Wood dries almost 100 percent from the cut ends rather than the side or bark area. Pile your wood so that the ends will be open to the wind and sun. Fuelwood should be dried for at least one year before burning. The amount of heat you receive from wood is greatly increased if the wood is dry. Also, much less creosote is produced by dry wood.

Time can be saved in drying wood by a process called "wilting." This is done by cutting the trees in June or early July after leaf growth has matured. The tree is left intact, and the leaves draw moisture from the stem. The trees are then cut up and split in the fall, and stored for use. Not as much moisture will be removed as in cutting, splitting, and drying, but a sufficient amount will be re-

moved to insure good burning. This practice should be a second choice to proper drying methods. One problem with wilting is that you must determine how many cords you have cut while the wood is still in tree length. A rule of thumb would be that for eight-inch diameter trees, about 12 trees will be required to make a cord.

TABLE 2  
AVAILABLE HEAT FROM A POUND OF WOOD

Percent Moisture	Available Heat BTU's
0 overdried	7100
10	6300
20 air-dried	5400
30	4500
40	3600
50	2900
60	2100

**S**plitting chores are time-consuming, but a few hints will save time and much energy. Split in line with end checks or cracks; split parallel to knots rather than at right angles; split parallel to a spiral grain; and generally, green wood splits more easily than dry wood. Frozen wood also splits more easily. The choice of tools for splitting will also be a factor of time saving.

If you rent a splitter, much wood may be split in a very short time, and may well be worth the expense. Splitting mauls, axes, and steel wedges may also be used. I find the easiest method for me is to use a steel wedge with a short-handled mason sledge hammer. Less effort is used with this method than with swinging a maul or an axe over long periods. Be sure to protect your eyes with safety glasses when using any method of splitting; you only have one pair, so be sure to keep them in good operation. Speaking of safety, always use caution when using all tools and equipment. Most of the equipment used in woods work is quite dangerous, and all safety precautions should be taken at all times.

Fall has come, there's a chill to the air, and you're ready to enjoy the fruits of your labor. Before loading the stove, be sure all pipes and flues



## The Farmstead Fireplace.

Farmstead families know the value of a fireplace. It's more than just cozy atmosphere. It's practical for cooking, heating and conserving energy resources.

At The Hearth & Cricket Shops we have a complete line of built-in fireplaces and wood & coal burning stoves.

Including Majestic, Jotul, Portland-Willamette Glassfyre Enclosures and all kinds of fireplace furnishings and gifts.

We're open 6 days a week. Evenings:  
Bangor, Tues. & Fri. till 9 P.M.;  
Turner, Tues. & Thurs. till 9 P.M.  
S. Portland, Mon. - Fri. till 9:30 P.M.

**The  
Hearth & Cricket  
Shops.**

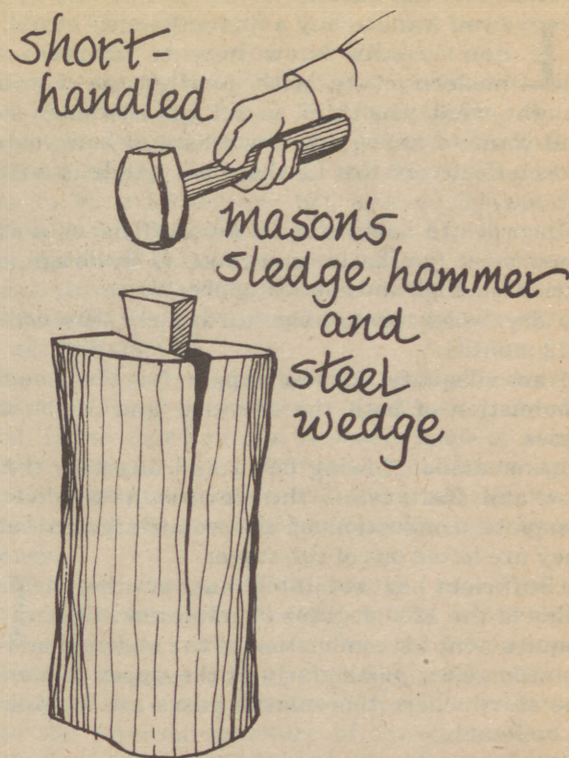
50 Maine Mall Rd. So. Portland, 774-0162  
Rt. 4, Turner 225-3844  
1000 State St. Bangor 942-3057



are clear and tight, and check all dampers to be sure you have control. Remember, there is an art to burning wood in a stove. Some like to mix a little softwood in for a quick fire, using the hardwood for longer lasting heat production and formation of coals. Some like to add a little apple, or cherry wood to appreciate the fragrance in an open fire. Whatever your choice or method, remember that the greener the wood, the hotter the fire needs to be. Moisture that remains in the wood must be changed to water vapor before you obtain any heat value from the wood.

**M**any stoves are available on the market today; stoves which will hold a fire for 10 to 12 hours, and stoves which must be charged every few hours. One point to remember is that the slower you burn the wood to make the fire last, the more creosote that will be formed due to the incomplete combustion at lower temperatures. So if you are using one of the air-tight stoves, be sure to check the chimney periodically and keep it clean to prevent chimney fires.

When the first light mantle of frost greets you some morning, and when the first few white flakes begin swirling 'round the leaden sky, cheer up, just load up the old cast-iron pot, put your feet up, and let the cheery warmth of your firewood sink in.



## L.O. BALLS WOOD SPLITTER

Announcing a NEW member of the family.

L.O. Balls, Jr. — our newest motorized log splitter is smaller, lighter and and more compact than our other fine models. Still rugged and dependable, it is designed with the homeowner in mind. 24" capacity; towing wheels. . . . . Only \$995.00

\*\*\*\*\*

We also have 26" or 48" models - tractor hydraulic powered or PTO pump powered or motorized. Also available for the "do-it-yourselfers" - kits, components, or plans. (\$5).

Dealer inquiries invited

Write or call for more information —  
ALBRIGHT CORP.

Jeffersonville, Vt. 05464  
802 - 644 - 2987

WE ARE THE ANSWER TO YOUR  
SPLITTIN' HEADACHE

## At the MAINE WOOD HEAT COMPANY

we have

H.S. Tarm Wood/Oil Combination Boiler Coop Orders

Wood Only Boilers

Wood & Wood/Oil Furnaces

High Efficiency Wood Stoves and Cook Stoves

(If we don't have what you want we'll get it.)

Black Cook Stoves &

European Masonry Stove Designs

Discount Prices On Prefab Chimney  
Stove Pipe Oven

Chimney Cleaning Brushes

FREE STOVE DELIVERY IN MAINE

FATHER RASLE MONUMENT ROAD  
NORRIDGEWOCK, ME. 04957  
696-5442 SEND STAMPS



by Albert A. Barden, III

If you want to buy a high efficiency stove, but don't really know how to compare one modern stove with another or if you've bought what you think is a high efficiency stove and want to know how it works and how you can most effectively fire it, then this guide is written for you.

In order to achieve maximum efficiency a stove must meet five basic requirements in design, construction, fuel, and operating practice:

- (1) dry wood (preferably hardwood) seasoned for 8-12 months.
- (2) an adequate oxygen supply for the complete combustion of both the charcoal and combustible gases.
- (3) a means of slowing down and directing the air flow and draft *within* the stove so as to allow for complete combustion of the volatile gases before they are lofted out of the stove.
- (4) Sufficient heat retaining mass or other means to achieve the 1200 degrees F. minimum temperature requirement for combustion of the charcoal and the volatile gases, particularly in the upper portions of the stove where the volatile gases are most likely to be found.
- (5) Safe, durable, high quality design and construction.

Why use dry wood? Wood that has been well-cured or seasoned is roughly 1/3 charcoal, 1/3 volatile gases and 1/3 water. Water does not burn in a stove. Charcoal and gases do. Wet wood has a higher water content than dry wood. Some green (wet) woods are more than 50% moisture. The water in well-cured or seasoned dry wood is chemically "locked-in" water and is not released until the wood itself is burned. The process of releasing water vapor and volatile gases from wood through the application of heat is called "destructive distillation".

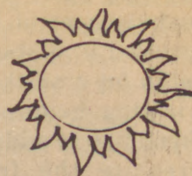
The temperature required to burn wood charcoal is the same as the temperature required to burn volatile gases released from the wood: 1200 degrees Fahrenheit. Large amounts of moisture in a firebox (via green wood) have the effect of absorbing heat and lowering the firebox temperature, especially in the "vapor" or upper zone of the firebox. Furthermore, water vapor has the tendency to encapsulate combustible particles and gases in the firebox and make them inaccessible to combustion.

Unburned gases will condense (the laws of physics) as soon as they enter a cool enough zone.

---

*Albie Barden owns the Maine Wood Heat Co., Norridgewock, Maine, which sells stoves, cookstoves, furnaces and boilers. This article is excerpted from a large and informative poster "A Wood Stove Buyer's Guide", available for \$3.50 by mail or \$3.00 at the store from Northeast Carry, 110 Water St., Hallowell, Me. 04347. Illustrations are by Margaret B. Campbell.*

---



## Woodburning Basics

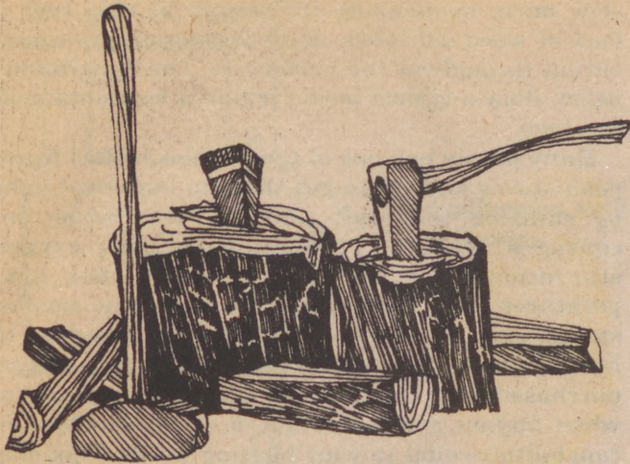
An exposed stove pipe cooled by convection currents or a fan or a cold chimney is easily cool enough to cause this condensation. The higher the moisture content of the wood, the less effective the combustion will be, thereby not only lowering heating efficiency but also increasing flammable deposits on the stove pipe and chimney interior.

Very few stoves achieve complete combustion. Complete combustion involves the burning of both the charcoal and the volatile gases. Compared to burning the gases, burning the charcoal is child's play. Proud owners of Ashleys will gladly proclaim the ability of their stoves to consume wet wood, rarely realizing that the stove is consuming almost none of the gases.

Until charcoal is reduced to a fine ash, it is quite willing to remain in one spot, but gases are totally uncooperative in this regard. Heated gases rapidly rise out of the 1200 degree F. primary fire zone at the charcoal level and become invulnerable to combustion. In order for the gases to be consumed, they must either be forced back through the primary combustion zone or travel through other parts of the stove that are maintained at a temperature greater than 1200 degrees F. More on this in a moment...

In addition to providing a space for wood fuel, stoves must also allow means for oxygen-carrying air to enter the stove and a means for spent gases to exit the stove. The purpose of the air is to provide the oxygen so critical to combustion. Choked of air, a fire will die just as surely as a car will stall. While air assists in combustion of the fuel, its entry into, and exit from, the firebox usually creates a movement of air up and through the firebox. This updraft effect has three primary negative effects: (1) In the case of a fireplace, often more heat can move from the room through the fireplace and up the chimney than the fireplace itself can radiate into the room. The rapid movement of air from the room and out the chimney literally vacuums the room of warm air in a surprisingly short time. Abhorring a vacuum, nature does its best to re-supply the room with air from the closest available source, the out-of-doors, sucked in through leaky foundations, window seals and cracks around doors.





One of the major efforts in the advancement of wood heating design has been to slow down this air movement through the firebox to a negligible point, so that the fire will receive adequate oxygen without the negative effects of a strong updraft and subsequent heat loss. An open fireplace or Franklin stove must have this flow of air, however, to avoid the consequences which anyone who has lit a fire in a fireplace with the damper closed can smokily attest to. If the smoke isn't sucked out (along with warm room air) or contained (as in a stove) it will consider the room itself its natural home. (2) Secondly, air movement through the stove has the effect of removing not only the warm room air, as in the case of a fireplace, but also the heated air produced within the stove itself. A rush of air through a firebox will have the effect of cooling the interior surface of the firebox through which the stove is intended to radiate heat to the room. Most older stoves improved greatly on the fireplace design by not creating a vacuum of the warmed room air quite so quickly, but they still lost a considerable amount of the heat they produced up the chimney. This strong warm chimney draft had one positive side effect: it created such heat and air movement in the chimney that condensation and creosote deposits were not as severe as they often are in modern stoves. (3) Point three is that the air flow carries the heated gases out of the fireplace before they are consumed and thereby eliminates their heat-gain potential to the room's heating needs.

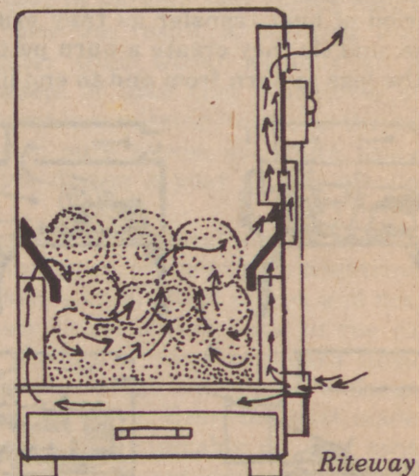
One attempt to solve the problem is to maximize control over both the amount of air introduced to the stove and the flow pattern of the air and gases within the stove, with the latter being easily as important as the first. A basic feature which all high efficiency stoves share is that they are "air-tight". This does not mean that the stove should be operated with no air allowed to enter. This will effectively put out the fire and produce tremendous amounts of creosote while the fire is dying. It does mean that all sides or sections of the stove are effectively sealed or welded so that the only air that enters the stove does so through carefully placed draft inlets. These air inlets, in turn, have a large degree of

either automatically or manually adjustable air-tightness. To clarify: realize that air is not generally blown through a stove, it is sucked through it by the natural convection currents created in the chimney and by the passage of warmed air through the chimney. If a stove has loose joints, air will enter the stove wherever there is a crack. This additional supply of oxygen to the fire will cause the fire to burn hotter but not necessarily heat the room better, because, as explained above, much of the heat will be lost up the chimney. People with older stoves would be wise to completely seal all joints with furnace cement to increase the efficiency of their stoves.

In newer stoves advertised as high efficiency units, the critical point for air tightness is the door seal. If the door and seal is poorly made or subject (as in the case of very thin steel stoves) to warpage under heat stress, then the stove will almost undoubtedly have great difficulty achieving high efficiency.

If you can establish that the stove you are considering is air-tight at the joints and at the door seal and can be expected to remain so under long-term firing conditions, then the next feature of air control to consider is the draft intake and the internal structure of the stove. In a relatively small stove of cast iron construction, air-tight joints and door seal (no more than a paper thickness gap) and well-machined draft controls may be all that is required to eliminate excessive movement or draft through the stove. In some of these smaller stoves, the firebox is so small that the temperature throughout the firebox is high enough to consume a significant proportion of the volatile gases. In lighter weight and/or larger stoves, however, either unique placement of the air intake and/or the presence of one or more baffles is necessary to slow down and divert the normal up-and-out movement of the volatile gases so that they can be subjected to a burn before escaping.

The first technique or device we can consider in this regard is something called a "vertical baffle design".



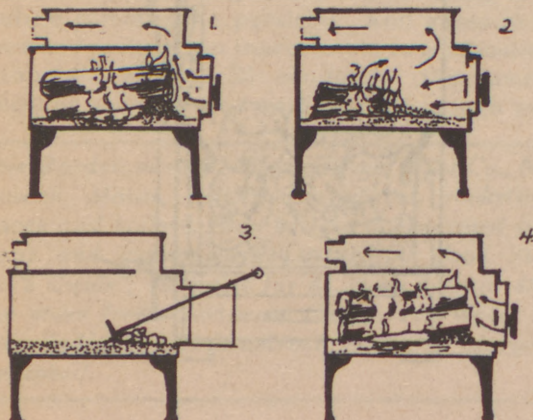




Vermont D.D.

Regardless of where the draft air is introduced, it will, when mixed with the heated gases, want to rise and escape. Instead of providing for a means of escape at the top or top rear of the stove, a vertical baffle can be inserted which forces the gases to flow back down through the combustion zone before they can depart. Allowance for the addition of preheated air on the other side of this baffle in what is called the "secondary combustion chamber" allows for combustion of the gases to continue throughout the time they remain in the stove. The only stoves readily available offering this kind of vertical baffle in combination with a secondary combustion chamber are the widely distributed Riteway heaters and the new less-known Vermont Downdrafter, so named because it draws the volatile gases not only into the fire zone as in the Riteway, but also through and below the stainless steel grates where secondary air is introduced for an additional burn. Various other features on the Downdrafter make it one of the most sophisticated high efficiency stoves on the market.

In addition to vertical baffle designs, there are also horizontal baffle designs. The Jotul stoves were the first stoves in this country to offer this feature common to many European imports. Horizontal baffles do at least three things contributing to high efficiency combustion: (1) they force the gases to remain closer to the intense heat of the charcoal zone for a longer period of time, (2) they force the gases to remain in the stove for a long period of heat transfer as they exit from the fire zone, and (3) they create a burn pattern which allows the logs to burn from end to end like a cigar,

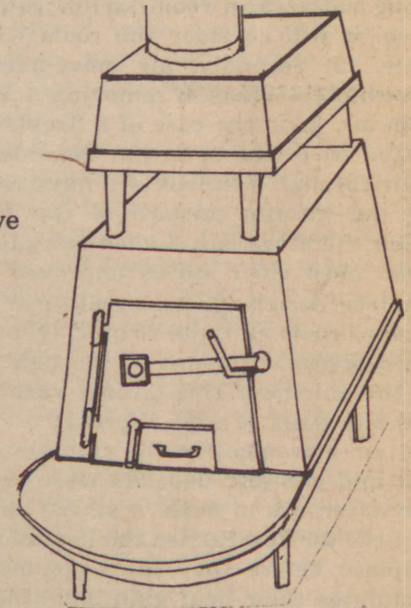


thereby minimizing creosote production during a slow burn, maximizing the length of time that a load of wood will burn and creating an even heat output throughout the burn cycle. The illustrations below show a typical burn cycle in a horizontal baffle stove.

Many people buy one of the smaller baffled European stoves and try to get them to burn overnight by shutting the draft controls. This action encourages creosote production through oxygen starvation, poor combustion, low firebox temperatures and rapid condensation. The smaller stoves, such as the Jotul 602, are not designed to hold a steady fire overnight and should not be purchased with that hope in mind. Be very careful when buying a stove to get a stove with design capabilities equal to your heating needs. This may not always mean you need a larger stove if you are willing to tend fires more frequently, or if you have heat retaining mass in your house. Use your common sense and do not try to operate a stove beyond its basic design capabilities.

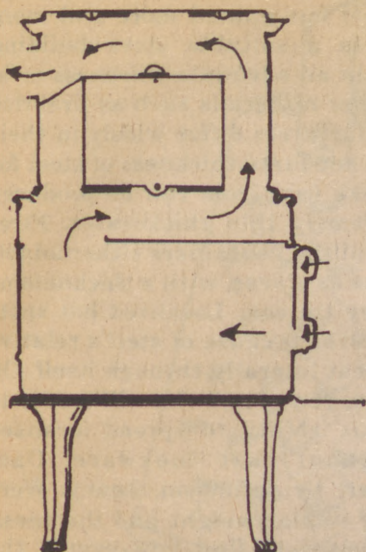
Some stoves, by adding an arch or other form of additional chamber atop the primary burning chamber, create more mass for heat transfer, slow down and make more efficient use of the escaping warm gases and air.

Shaker stove



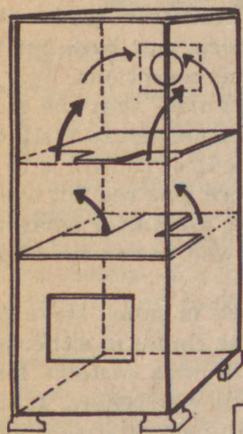
Early Shaker stoves sometimes had an additional chamber or super heater added to the top of the primary stove. The well-known do-it-yourself Alaskan Drum Stove made from 55 gallon drums features this dual chamber. Jotul, Lange and Morso all offer arch design models. The big Lange arch model has doors under the arch which allow the user to bake under the arch. In the case of the heavy, completely firebrick-lined Styria stoves from Austria, one or two chambers sit atop the basic firebox. The SEVCA stove, manufactured from discarded high pressure gas tanks, utilizes a combination of a horizontal baffle, a secondary heating chamber and a uniquely placed secondary air intake at the rear of the stove.



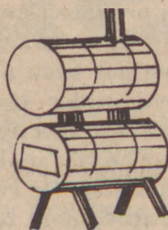


Scandinavian Arch Design

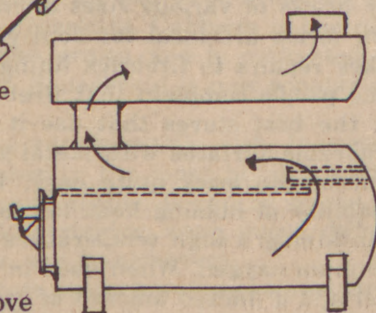
The problems of air flow, combustion rate and volatile gas combustion efficiency are tackled with the careful and unique placement of air intakes alone in the Tempwood stove (illus.). Air is introduced through two pipes in the top surface of the stove, supplying maximum oxygen to volatile gases and limiting oxygen for a slow burn to the charcoal zone. The air tubes also set up an air flow which counters the natural updraft of the heated air in the firebox.



Styria Stove



Alaskan Drum Stove

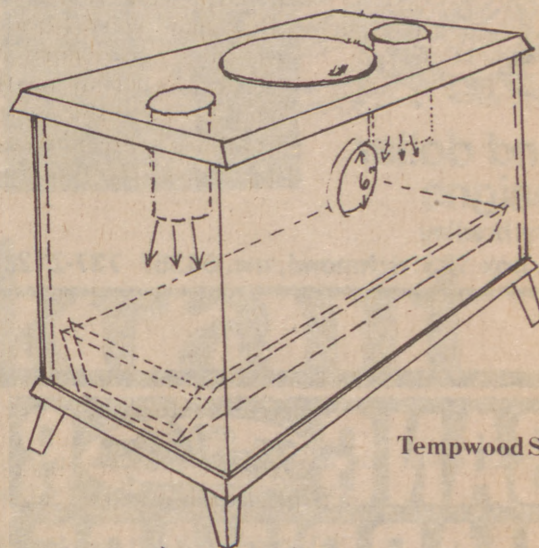


SEVCA Stove

**H**aving talked about the wisdom of using dry wood and the need for adequate oxygen and the desirability and means available for slowing down and altering the draft flow through a stove, we come now to a discussion of heat retaining materials and other materials used in stove construction.

The material traditionally associated with stove-making is cast iron. In recent years, costs for cast iron stoves have skyrocketed for several reasons

with higher wages, high raw materials costs, and stiffer environmental and worker safety standards among them. Cast iron stoves are cast as pieces from molten iron poured into molds. When cooled and removed from the molds, the pieces are cleaned and carefully machined to create the tight fit necessary for a quality stove. Joints are sealed with furnace cement and the various sections are bolted together. If the cast stoves you are looking at do not have carefully machined, well-matched parts; if they are very porous or badly pitted or show great variations of thickness; if they lack adequate furnace cement and are crudely bolted together (many American and Far Eastern cast stoves fall in this category); then they must be considered an inferior product. Door and stove lid seals should be tight.



Tempwood Stove

Fired under normal conditions, a well-made cast stove will not crack or warp. In the high efficiency stoves, the most vulnerable points for cracking seem to be where uniform thickness is difficult to achieve, such as along a high relief side panel. Don't be afraid to scrutinize very carefully all parts of even very well-known stoves before you purchase one and while you assemble it. Severe warpage that one sees in antique cast stoves may have frequently been the result of burning coal (which burns hotter than wood) without an adequate grate. Owners of used cast cookstoves should be warned to replace missing liners, as the castings of the ovens in such stoves are quite thin and can easily crack during a year or two of unprotected use.

Steel is another material now commonly used in stove manufacture. Stove buyers traditionally have looked askance on all steel stoves and not without some reason. Steel stoves have in the past often been the product of some backyard tinkerer who had not the knowledge or the tools to design a truly high efficiency stove. Even the best made of such stoves usually fail miserably on door construction techniques. Such stoves generally offer the user very little degree of control over the fire and its rate of burn.



Year-round hooded sweater. Hand cast pewter buttons. 100% natural Maine wool. Light grey, navy trim. Dark grey, light grey trim. Small, medium, lg. \$50 postpaid. Maine residents add 5%. Allow 3 weeks delivery.\*

\* No Christmas orders accepted after Nov. 15



**sand dollar designs**

gerry bradley

p.o. box 123, richmond, me. 04357 737-2128



More recently, steel has gained more and more legitimate respect as a suitable stove building material when used in an adequate thickness or in combination with other materials such as firebrick and cast iron. Manufacturers differ widely in their claims as to what an adequate thickness of steel for stoves is. Steel, unlike cast iron, can be produced and worked at extremely thin thicknesses. Fires can and have been built in containers either adapted or designed for use as stoves, with a thickness no greater than a heavy tin can. Localized hot spots can result in such stoves because of steel's relative inability to spread heat laterally through itself. On the other hand, cooks, young and old, will testify to cast iron's marvelous ability to spread localized heat even throughout cast cookware. Cast cookware is, however, by definition, heavy. Were cooks to use steel of similar weight and thickness, they might be surprised to find how evenly the material heated up.

Consider also that even the most careful wood burner may make a mistake and subject the stove (by leaving a draft wide open) to stress greater than that under which the stove is normally fired. Additional thickness of other built-in safety features may be an important consideration in this regard.

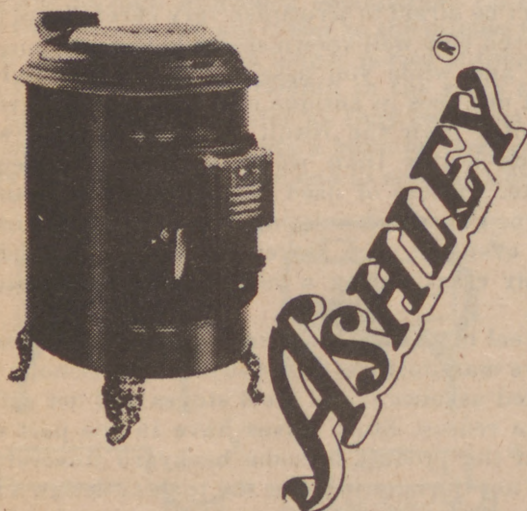
How thick is thick enough? Better 'n' Ben's which uses 11-gauge low-carbon steel in its construction has produced and sold several thousand units with little or no warpage. Their literature reads: "We have not been able to warp, crack or burn out the stove under the severest of conditions. We do, however, specify in our guarantee, that the stove must be run under control in order not to VOID the guarantee. To run the stove out of control is to let the stove heat to a point where it is red hot over a period of time. No wood stove, no matter what it is constructed of, should be allowed to run out of control."

Another basic material used in much stove construction is firebrick. Firebrick comes in either pre-cast bricks of various sizes or in a castable form. Both forms are ideal for do-it-yourselfers. It also makes repairs to firebrick linings relatively easy. Some people complain that firebrick is too brittle, but the best stoves that use it protect the most vulnerable surfaces with metal and make replacement of the brick quite easy. Firebrick has the capability of holding heat for some time, thereby maintaining a high temperature in a firebox with minimum oxygen. When used in combination with steel and a limited amount of cast iron, a firebrick-lined stove can prove to be a very fine product.

Stainless steel, though expensive, is very highly resistant to corrosion and is finding wider use as a suitable firebox liner. Stainless steel has already established itself in relation to wood heaters as a fine material for pre-fab chimney construction. It is worth remembering, however, that when copper and stainless steel and other metals begin to grow scarcer in the future, brick and clay tile will still be with us.

**BANG** *True Value* **R**  
HARDWARE  
STORES

21 Washington St./Penobscot Plaza / Bangor /  
Tel. 945-5542



Service, Warranty & Replacement Parts





# Sauerkraut

By Clarice L. Moon

**T**he Ancient Romans knew the principles for making sauerkraut. Finely shredded cabbage was placed in pots or vats and allowed to ferment, and acquired a slightly sour taste. This art seems to have disappeared from Europe with the fall of the Roman Empire.

The Asians who invaded Eastern Europe in the thirteenth and fourteenth centuries brought the art with them. In Asia, sauerkraut was said to originate in China. It came to America from Europe, with the colonists. Cabbage is one of the hardiest vegetables grown and is cultivated over most of the world. Sauerkraut is now popular everywhere.

Sauerkraut is a very versatile dish. It is served winter and summer in the most humble kitchens and in the best restaurants. It can be served with ham, bacon, pork, partridge, duck, goose, different kinds of sausages, and frankfurters.

For our ancestors, sauerkraut was an important winter source of Vitamin C, and was used to cure scurvy on sea voyages. Research on sauerkraut has found that the fermentation process causes little loss in the Vitamin C content of the kraut. Research has shown that sauerkraut has a high lactic acid

content which aids digestion and helps kill harmful bacteria in the digestive tract.

## Sauerkraut in a Stoneware Jar

Put a thick layer of fine-cut cabbage (five pounds) in a large earthenware jar, add 1/4 cup salt. Tamp down firmly with potato masher or heavy stick. The juice will begin to come out of the cabbage. Repeat this process until the jar is about four inches from the top. Tamp down well. Put a dry linen cloth over the top of a plate. Then invert the plate and cloth over the cabbage and weigh down with washed stones. Tie another cloth over the top of the jar. Let stand two weeks. Take off cloth and replace rinse, remove a little brine and replace cloth, plate, and weights. Let it stand again. This process requires six weeks. Sauerkraut can be used from the jar if it is kept in a cool room. If not, it can be canned in sterilized jars, and processed in a hot water bath for 15 minutes.

## Sauerkraut Made in Jars

Slice cabbage with a kraut cutter. Pack cabbage solidly in sterilized fruit jars with 1 teaspoon salt per jar. Fill jars with cold water. Put on cap, screwing band firmly tight. Put jars in container, as the jars will ferment three or four days and the juice will run over. It will be ready for use in four to six weeks, at which time the jars may be tightly sealed and processed in the hot water bath for 15 minutes.

---

*Clarice Moon, a frequent contributor to Farmstead, lives in Delavan, Wisconsin. Illustrations are by Liz Buell.*

---



## SAUERKRAUT STUFFING FOR GOOSE

- 2-1/2 pounds sauerkraut
- 1 grated potato
- 1 grated carrot
- 1 minced onion
- 1 cup salami or other smoked meat, cubed
- 1 cup dried bread crumbs
- 1 tablespoon goose or bacon fat

Mix together all the above ingredients. Stuff into goose prepared to roasting. Roast in 350 °F. oven for 2 hours or until done, uncovered. Pour off fat occasionally.

## PIGS' KNUCKLES, SAUERKRAUT AND DUMPLINGS

- 4 quarts sauerkraut
- 6 pigs' knuckles or 3 pounds country-style spare ribs

After washing pigs' knuckles or spare ribs, place in large saucepan with sauerkraut and cold water to cover. Boil until tender; about 1-1/2 hours. About 20 minutes before serving, mix up dumplings and drop by spoonfuls into the pot. Cover tightly and cook for 20 minutes.

## SAUERKRAUT DUMPLINGS

- 1 egg, beaten
- 1/8 teaspoon salt
- 1 tablespoon dill
- 1/2 teaspoon baking powder
- 1/2 cup flour

Make into paste, Drop into boiling kraut. Cook for 20 minutes in tightly covered pot. Serve with parsley potatoes.

## BEEF AND SAUERKRAUT

- 3 pounds brisket of beef or other beef roast
- 1 quart sauerkraut
- 2 tablespoons flour
- 1 teaspoon salt
- 1/2 teaspoon pepper
- 1 tablespoon brown sugar
- 1 tart apple, grated
- 1 small onion, minced

In large saucepan, put half the sauerkraut. Sprinkle with flour. Add meat, onion, apple, and sugar. Sprinkle with salt and pepper. Lay rest of sauerkraut on top. Cover with boiling water. Cover tightly and cook for 1-1/2 to 2 hours.



## SAUERKRAUT SALAD

- 1 large can sauerkraut with liquid
- 1 cup white sugar or substitute
- 1/2 cup vegetable oil
- 1 onion, cut fine
- 1/2 green pepper
- 1 red pimento, diced

Mix all ingredients and let stand overnight in refrigerator.

## SAUERKRAUT CASSEROLE

- 2 pounds sauerkraut
- 2 cups diced smoked ham
- 1/2 cup diced smoked sausage
- 1/2 cup diced bacon
- 1 large carrot, diced
- 1 onion, minced
- 1 large apple, diced
- 1 large potato, pared and grated
- 12 peppercorns
- 1 cup stock or water
- 1 cup dry white wine

Arrange all ingredients in layers in buttered casserole. Pour over all the stock and wine. Bake, closely covered, in a 350 ° F. oven for 1-1/2 to 2 hours, when it should be fairly dry.







## Herbs in the Fall Garden

by Madeleine H. Siegler

**H**erb gardens are at their best in early fall. Herbs seem to put forth their best efforts from mid-August until they are cut down by the first killing frost. They seem to know that their days are numbered. It is now or never.

In my herb garden, here at Monk's Hill, the crushed rock paths are half hidden under the heavy growth of lemon balm, parsley, salad burnet, lady's mantle, sage, lavender, and mint. It is time to make one final cutting and fill the shed and house with huge bouquets of fragrant foliage. All the herbs have been cut at least once, usually just before they come into flower. That harvest is the richest in aroma and flavor.

The lemon balm has long since flowered with the tiny, white-lipped blooms set close to the stem. Now it is rank and tall. We will cut it back one more time. The parsley has been snipped all summer, always taking the outer stalks, so that new growth will continue from the center of the plants. This

last harvest will be snipped finely with scissors and frozen for use all winter. Salad burnet was at its best in early spring when the tender leaves, with their faint hint of cucumber, flavor salads. During the summer, some of the older plants are allowed to blossom and then are consigned to the compost pile. Others are trimmed back and continue to send out new growth all summer.

Lady's mantle blossomed in late June. The chartreuse flowers are very effective in fresh flower arrangements; they also hold their color well for use as dried flowers. The leaves of this handsome herb are on stems that grow from the base of the plant. They are tightly pleated like a fan and gradually unfold to a nearly round four or five inch diameter. Rain and dewdrops linger on their surface all through a sunny day. I like to call them my diamonds shining in the sun.

### Sage and Lavender

All the sage plants have been cut back twice during the summer. This final cutting will be a light one. Sage is a hardy perennial herb. Older plants become small shrubs with gnarled, woody stems. A common mistake is to cut *all* the leaves from the

---

*Ms. Siegler owns and operates Monk's Hill Herbs in Winthrop, Maine. Photos are by George Frangoulis.*

---



plant in the fall, on the theory that the frost will kill them anyway. This guarantees the death of the plant. As one herbalist advises, "Send sage into winter with a full head of leaves." The plant needs them for its nourishment and survival.

The lavender border contains about seven full-grown plants. Each one spreads to a diameter of about eighteen inches. All the flowering stalks were cut in early July just before the flowers were completely open. Since these plants are crowded, and have suffered some browning near the base from lack of sufficient air circulation, I have already taken some divisions from the sides of the plants and rooted them. These side divisions can never be pruned to make as well-shaped a plant as one grown from seed or from top cuttings, but they are usually very strong plants and produce a lot of blossoms the following year. Any pruning needed for good shape on these large plants was done immediately after the flowers were cut in July so that none of the new growth which was developing next year's flowers was damaged. Any stray side shoots that overhang the path are cut in July also. These and earlier prunings I dry for the potpourri jar. While the flowers carry the strongest scent, the leaves are also fragrant.

Success in growing lavender seems to depend on a sunny well-drained location in light soil that has been well limed. If you scatter the ground with lime until it looks like a light snowfall — that is well limed. Many gardeners advise working old plaster rubble into the soil. This would be especially good if the soil is heavy; it would lighten as well as lime.

### Mints

After suffering for five years with a hodge-podge mint section in the herb garden, we have finally consigned the peppermint and spearmint to new beds of their own where they can run to their heart's content. Eventually the herb garden will contain only the tall woolly mint, which I call applemint, and the lovely orange mint which does not seem to be as aggressive as the others. Right now, the curly spearmint is still rambling about within the herb garden and completely hiding the path near it. The tall woolly mint stays only because it is the one variety that tolerates sun.

One would think that because it is such an aggressive plant, that mint was one of the easiest herbs to grow. In many respects it is, but it does have peculiarities. If the roots become too thickly bound together, the top growth will suffer. The plant becomes prone to fungus and to insect damage. For this reason, it is recommended that any mint bed be dug and reset every three years. This is especially true, if like me, you have started too many varieties too close together. Repeated advice in all herb books is never to use manure on mint. It carries the spores of a fungus that can destroy the crop. There is a fungicide that will control the damage, but why ask for trouble? Since mint is a heavy feeder, I fertilize with bone meal once a year.

### Basil, Marjoram and Summer Savory

September is such a busy time, as we can and freeze the bounty of orchard and garden, that it is easy to forget the herb harvest. Perhaps you were new at herb growing and really do not know what to do with all that basil, marjoram and summer savory that grew from those tiny seeds you planted last spring. The first thing to do is get them picked while they still have some flavor. You will have a long house-bound winter in which to experiment with using them. Steal an hour on a warm, sunny day, and fill a basket with sweet odors. Since these three are annuals, you can cut the entire plant at the soil line. Rinse away the dirt in a pan of cool water, tie each variety in small bunches, and hang in a warm, dry area that is out of direct sun. Take time to tag each variety so there will be no confusion later.

### Lemon Balm and the Other Tall Herbs

The taller herbs, such as lemon balm, mint, sage, and catnip will not need washing if you time the cutting to follow a good rain. Wait until the sun has dried the surplus moisture, then cut, tie, and hang. Since these are perennial plants, a different technique is called for in the cutting. Take no more than two-thirds of the growth. Leave a good supply of heart leaves at the base to sustain life for next year. This rule applies to all herbs and is a good one to remember when snipping from the annual herbs during the summer.

### Fall Harvesting

I usually panic in mid-September when successive days of sunshine are followed by increasingly colder nights. I always forget the reality of Indian summer and harvest plants that could well stand another month of outdoor life. If they are not cut, they are dug and potted, ready for a winter inside the house. Here at Monk's Hill we may not get a hard frost until the middle of October. Long before that I have spent many a chilly early evening cutting armloads of all the herbs from tansy to silver king, from southernwood to pineapple sage. I do not need them today but with the specter of snow lurking not far away, I fill every corner of the house with great bunches of fragrant bounty. When the torrential fall rains come, and later the first of the many snowfalls, I am content to stay inside, snug by the fire, and sort and strip the still fragrant leaves from my summer's garden. Bundles of dried stems crackle in the fire and give a special aroma to the woodsmoke.

Rosemary, lemon verbena, and many of the before that, I have spent many a chilly early even-scented geraniums, are never cut in the fall. They skill as I can muster. Along with the two bay trees and the cardamon plant which summered outside in their tubs, these will soon be brought in for the winter. Room will be found somewhere for these tender herbs. The location may not be exactly what they would prefer, but in spite of the limitations, most of the plants will make it through the long winter.





There are at least two schools of thought on how best to transfer a plant from garden to house with no severe damage. One way is to bring it inside before the heating system starts its endless running. The other method is to pot the plants and leave them outside on a protected porch or close to the house for a few weeks. I have had good results with the latter method.

First I find pots that I think will be the right size. Clay pots are soaked for several hours in the rain barrel. This is essential, otherwise the plant is always thirsty, as most of the water you give it is absorbed by the dry pot. To digress for a bit, if you like the appearance of clay pots but have already discovered how often they need watering, you can coat the inside with melted paraffin. I cannot remember who shared this hint with me, but there it is. I have not tried it yet, but plan to this year.

Dig the plant carefully and shake all the soil from the roots. This gives you a chance to make sure no sowbugs or earthworms are going into the pot. Worms are invaluable in the garden and there is where they should stay. Your potting soil will not feed both them and your plant all winter. Steal some good rich soil from your best garden spot to fill your pots. I do not think it is necessary to sterilize it, nor do I bother with pre-packaged potting soil. Put a few stones or pieces of broken clay in the pot for drainage if you like. I don't think this makes much difference, although I've done it for years. Now put two inches of soil in the pot, and

position the root mass on it. Add soil carefully, making sure there are no air pockets among the roots. A sharp tonk of the pot will help settle the soil and sift it in among the roots. Try to end up with the plant at the same level that it was growing in the garden. If it appears that after all this the pot is too small or too large, take time to do it all over again. Your choice specimen is going to spend six months in that container, so do the best for it you can. Usually the right size pot is one that holds the root mass easily, with some space for new growth. Next, give it a good watering and let it rest in the shade for a few days. Always wash the foliage or spray with an insecticide before bringing them in to the house.

My plants are usually potted early enough so that they spend a few more weeks out in the fresh air recovering from the rude shock of being dug before they are subjected to the further indignity of being exposed to central heating. Although a humidifier helps us to overcome the effects of dry, heated air, most plants, especially the rosemaries, need frequent misting with room temperature water.

#### Herb Presents

What do we do with all that dried material once we have gathered it? The uses are limited only by our imaginations or our skill in copying ideas. Most of the products I make from my herbs take very little time and they all are used either to enhance our home or as gifts for others.



Take catnip, for example. If you planted this herb, you probably have quantities of it. You could make catnip mice and give them to all your friends' cats for Christmas. You really don't need a pattern. Cut a remnant of sturdy fabric to any shape that resembles a mouse, stitch, stuff, sew on a thick yarn tail, embroider an eye if you feel like it, and you have a mouse. If it doesn't look like a mouse, call it a catnip critter. The same dried catnip that is so exciting to the cat makes a fine cup of tea that I call one of nature's tranquilizers. Wouldn't a few people on your Christmas list like some of it?

Make closet bags of southernwood, wormwood, tansy, or woodruff. Add a few cloves to the herbs and you have a moth repellent as effective as moth balls and far more pleasant to smell.

Strip all the culinary herbs from their stems and store in opaque airtight containers to use for good cooking all winter long. If you have a surplus, fill empty vitamin bottles with them and give as gifts to your very best friends. You will be giving seasonings that are more fresh and pure than any that can be bought in stores at any price.

Fill a big wooden bowl with a fragrant mixture of lemon balm, sage, mint, comfrey, and a few lady's mantel leaves, for herb tea. Blend them all together and crush slightly with your hands. Whole leaf blends keep their aroma and flavor better than if they have been pulverized. If you have any dried calendulas or elder flowers, add them to the mixture for color and further good benefits. Package in any way you like, and you have another unique gift. All the above herbs make fine tea, either alone or in any combination. In making the blend, use

less sage, as it is a strong herb and can overpower the bouquet of the more delicate ones. Comfrey has very little flavor, so I add any of the mints to it.

Try a cup of your herb tea. Put a generous teaspoon for each cup of water into a teapot, add boiling water, let it steep for ten minutes, strain into cups, sweeten with a bit of honey and enjoy! Combine assorted bags of teas with a few small containers of cooking herbs, put them in an inexpensive bread basket, tie it all up with a ribbon, and you have made another unique gift.

Crush some heads of lavender flowers, add crushed lavender leaves and some orris root for a fixative, and you have a lavender sachet. Put some in a dainty satin bag edged with lace and gathered with ribbon to match, and you have produced the perfect gift for any woman on your list. If you have only a small amount of lavender, make tiny sachets of ribbon. A yard of two-inch width ribbon would make several.

After all the herbs are gathered and hung to dry, we relax a bit. There is still much to be done before the gardens are ready for winter, but with the precious crop safely inside, we do not worry about the heavy rains that are due, or the increasingly chilly nights that rob the herbs of aroma and flavor. We can almost accept with serenity the long winter that is close upon us. It will be a time of reinforcement; there will be time to read all the books we dutifully put aside for the summer, time to record successes and failures in our garden journal, time to sketch plans for new gardens, and most of all, time to enjoy with all our five senses the herbs we grew this year.

The author at work  
in her garden.







## A WOK FULL OF BOK CHOY

by Lynda Diane Gutowski

**S**tir-frying, which is a basic technique of Chinese cooking, consists of sauteing chunks of vegetables (with or without meat or fish) very briefly in oil, then steaming them for just a few minutes until they are tender but still crisp. It is an excellent way to prepare virtually all vegetables commonly grown in New England gardens — the short cooking time does not destroy either their flavor or their nutritional value. A stir-

fried vegetable dish, served with rice, makes a delicious and filling meal; stir-fries also make excellent accompaniments for plain meat, poultry, or fish.

Once you master the basic stir-frying technique, infinite variations are possible both in the combinations of vegetables used and in the sauces and condiments (domestic and Chinese) which you can add. Special cooking utensils are not necessary: while it





is fun to prepare the vegetables in a wok (a Chinese cooker which resembles a hubcap in shape), any heavy skillet with a tight-fitting lid will do just as well.

For the purpose of stir-frying, all vegetables are divided into two categories: those which contain a lot of water and therefore may be cooked with little or no added liquid, and those which are drier and require the addition of at least one-half cup of water or stock per pound. To ensure even cooking, both types should be cut in small, uniform pieces — sliced, diced or shredded, depending on the nature of the plant.

High moisture vegetables include the following: kale, cabbage, lettuce, spinach, Swiss chard, and other leafy greens; Chinese cabbage, cucumbers and onions. To use tomatoes, select those which are ripe but firm and cut into wedges. Those vegetables which must be cooked with added liquid include asparagus, broccoli, cauliflower, brussels sprouts, celery, eggplant, green and red peppers, kohlrabi, turnips, and rutabaga. Others in the low-moisture group are lima and fava beans, green beans, peas, snow or edible-podded peas, white and sweet potatoes, carrots, radishes, okra, and both winter and summer squash (stir-frying in various sauces is an excellent way to avoid monotony in serving that never-ending supply of zucchini).

**T**he basic recipe for stir-fried vegetables starts with one pound of any vegetable, peeled and cut as needed, or any combination of prepared vegetables. When using a combination, try to select vegetables with similar cooking times as well as those whose flavor, color and textures make an attractive and tasty mixture — leaf vegetables, for instance, will be overcooked long before potatoes, winter squash or carrots will become tender. If you wish to combine fast-cooking vegetables with slow ones, parboil the slow-cookers before stir-frying or add the quick-cooking ones after the slowpokes have steamed a few minutes. Frozen vegetables may be used instead of the fresh — thaw them first, and steam them for a shorter time.

Assemble the following ingredients:

2 tbsp, vegetable oil (*not* olive) or chicken or bacon fat

1 or 2 garlic cloves (optional)

2 one-inch slices of fresh ginger root (optional)\*

1/2 tsp. salt

dash of pepper (optional)

One pound any one vegetable, prepared as directed above, or a combination of prepared vegetables

1/2 c. or more stock, bouillon, or water (use less or none with high-moisture vegetables, unless you want a lot of sauce)

1-2 tbsp. soy sauce

1/2 tsp. sugar

Binding mixture: combine 1 tbsp. cornstarch

1/4 c. water

1 tbsp. rice wine or dry sherry (optional)

*\*Fresh ginger root is available in the produce departments of many larger supermarkets — if you*

*don't see it, ask for it. If you must substitute ground ginger, use it sparingly — 1/4 tsp. is quite sufficient for one pound of vegetables.*

In a skillet or wok, heat the oil or fat over medium-high heat. Add the garlic, ginger, salt and pepper. Stir-fry the seasonings — using a fork or large spoon, toss them quickly until all the surfaces are coated with oil — for a few seconds, then remove ginger and garlic. If you prefer a stronger flavor, the ginger and garlic may be minced, instead of using larger pieces, and allowed to remain in the skillet.

Add the prepared vegetable(s) and stir-fry until they are well-coated with oil — about ten more seconds. Lower the heat to medium and add the liquid, sugar, and soy sauce. Cover, and steam until the vegetables are tender but still crisp — the cooking time will vary according to the type of vegetables used, the quantity, and how they are cut: greens and tomatoes may require only one or two minutes after coming to a boil, while firmer vegetables often require five minutes or longer.

Do not overcook: what you want are tender but clearly-defined chunks of individual vegetables, not a soggy, indistinguishable mass. As soon as the vegetables are cooked but still crisp, add the binding mixture. Stir for a few seconds until the sauce is thick, translucent and glossy. Remove from the heat and serve immediately — if you wish, sprinkle the stir-fries with toasted sesame seeds, nuts, or chopped chives or scallions.

**Y**ou have now mastered the technique of preparing stir-fried dishes using common garden vegetables and other ingredients readily available in supermarkets. If you are adventurous, you may want to go on to more exotic recipes which require the addition of special Chinese ingredients. Some of these you could try growing in your own garden; others are most easily obtained by visiting an Oriental grocery in Boston or New York (a trip to Chinatown can be a highlight of any visit to either city). They can occasionally be found in gourmet sections of department or grocery stores, or in some health food stores; they may also be ordered by mail. Stores which ship some Oriental items include the following:

Aphrodisia, 28 Carmine Street, New York, NY 10014 (Send \$1.00 for catalog)

The Delicacies Shop, Bloomingdale's, Lexington Ave. and 59th Street, New York, NY 10022 (Has no catalog but will ship available items on request)

Wing Fat Company, 35 Mott Street, New York, NY 10013 (Send for catalog)

Some ingredients which will add a special Chinese touch to your stir-fries are described below. Listed first are a few fresh, canned and dried Oriental vegetables which may be stir-fried instead of or as an addition to your own produce. These are followed by Chinese sauces and condiments which can be used to make delicious variations on the basic stir-fry recipe.



## Vegetables

**Bamboo Shoots** — Available in cans in the Chinese foods section of almost all supermarkets, these are already sliced into thin pieces. Drained and used with any vegetable combination for stir-frying, they add a special taste and a crunchy texture. The liquid they are packed in may be reserved and used along with or instead of the stock or water.

**Bok Choy** (Chinese chard cabbage) — A leafy dark green vegetable with a white stem, bok choy is excellent in stir-fries by itself or with other produce — prepare it like Swiss chard, which it resembles in appearance but not in taste. It is only available fresh in Chinese markets and thus cannot be shipped. It will keep about one week under refrigeration. Seeds are available for growing your own bok choy.

**Chinese Mustard Greens** (Kai Choy) — Another fresh green leafy vegetable, good alone or in combination stir-fries. Prepare and store like bok choy.

**Cloud Ears** (Wood Ears) — A dried fungus which makes a tasty and nutritious addition to stir-fries. Soaked first in warm water for about one-half hour, it will expand to many times its original size and assume a fluffy cloud shape. Slice the soaked fungus into thin strips and stir-fry with other vegetables. Available only from Oriental markets, cloud ears will keep indefinitely without refrigeration. Tree ears are similar but smaller and thinner.

**Dried Forest Mushrooms** — Delicious, meaty-tasting mushrooms which also add a great deal of flavor to stir-fried dishes. Soak them in hot water until soft — about fifteen minutes. Discard the tough stems and cut into thick strips. Occasionally dried European mushrooms may be found in supermarkets; they make an excellent substitute.

**Golden Needles** (Lily Buds) — These dried buds from the lotus flower are another unusual vegetable to add to your stir-fries, and are often used in combination with cloud ears. Soak them in cool water for about ten minutes before using. Like all dried foods, they will keep indefinitely without refrigeration.

**Glutinous Rice** — A short-grained white rice also known as sweet or sticky rice, it is very rich in B vitamins and makes an excellent accompaniment to

stir-fried vegetable dishes. To prepare, soak the rice in cold water for at least two hours, then drain. Cover with fresh water in a pot with a tight-fitting lid, and bring to a boil; lower the heat and steam until soft, adding extra water if necessary.

**Water Chestnuts** — Like bamboo shoots, these are available canned in the Chinese foods section of most supermarkets. They should be drained and thinly-sliced before using in a stir-fry to add a delicious, sweet, nut-like crunchiness. Their liquid may be reserved and used like that of bamboo shoots. Water chestnuts may also be bought in dried form in Chinese groceries — soak the slices in hot water for several hours before using. Dried water chestnuts will keep indefinitely without refrigeration if stored in a moisture-proof container. Some people use Jerusalem artichokes in place of water chestnuts.

## Sauces and Condiments

**Fermented Black Beans** — These small, very pungent black beans are preserved in salt. They are soaked in warm water for a few minutes, drained, and then mashed thoroughly before being used in a sauce. They can be bought in plastic bags at Oriental markets and stored without refrigeration. Canned black bean sauce — the beans are already mashed — is also available but more difficult to find.

**Brown Bean Sauce** — Available in cans from Chinese markets, this thick fermented sauce is also known as yellow bean or ground bean sauce. It resembles soy sauce in flavor, only stronger and saltier; hence, it is never used with salt, and soy sauce is used very sparingly. It should be removed from the can and refrigerated in a tightly-sealed container.

**Hoisin Sauce** — A spicy, mildly sweet thick sauce which, used in moderation, gives a delicious exotic taste to some stir-fries. It is made of soybeans, sugar, and seasonings. Stored in a tightly-sealed container, it will keep indefinitely in the refrigerator.

**Oyster Sauce** — A thick, brown sauce made of oysters, clams, and soy sauce, it may be substituted for soy sauce in virtually all recipes, and can also be used as a dip or table condiment. It, too, will keep for a long time if refrigerated.

## HUNTS HEALTH FOODS

new location~

28 hammond ct., bangor



your complete  
health food store

fine selection of cheeses

163-165 main st. ellsworth, maine

bath road, brunswick

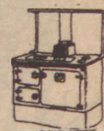
## MAKE COOKING WITH WOOD EFFICIENT

Two cast iron ranges from the Old World

The **LANGE** from Denmark The **STANLEY** from Ireland



- \* Large airtight 17½" firebox with removable grate.
- \* Will hold a fire overnight and heat the kitchen.
- \* In black or colorful enamels.



- \* Firebrick lined airtight construction holds fire 8-9 hrs.
- \* Precise temperature control system for large oven.
- \* Hot water heater attachment

Write, call or come see these and the other Lange Woodheaters. Shep Erhart, Shore Rd., Franklin, 04634. Tel. No. 565-2907.



**Sesame Oil** — A highly-flavored oil available in Oriental grocery stores, it is used only for seasoning dishes, never as a cooking oil. It is very strong and is used by the drop, not the spoonful — a little goes a very long way to impart a subtle flavor and aroma to stir-fried dishes. It is never cooked lest the fragrance boil off — it is used in salads and other cold dishes, and is added to hot ones after cooking, immediately before serving. Try adding a few drops to the basic stir-fry recipe. Buy a small bottle and refrigerate it.

The Chinese sauces and condiments described above can be used to make the following variations on the basic stir-fry recipe:

**Stir-fries with Black Bean Sauce** — Black beans are always used with ginger and garlic. To the basic ingredients add 2 tbsp. black beans and 1 tsp. dry sherry; omit the salt beans as previously directed, or use the already-prepared black bean sauce. Combine with the minced ginger and garlic (not optional here). Heat with oil in the skillet — add the bean mixture and stir-fry ten seconds. Add the vegetables (sweet or bland vegetables such as white or sweet potatoes and winter squash are particularly good with this pungent sauce) and stir-fry ten more seconds to coat with oil and beans. Add the soy, sherry, sugar and water and proceed according to the basic recipe; do not add sherry to the binding mixture.

**Stir-fries with Brown Bean Sauce** — To the basic recipe ingredients add 1 tbsp. brown bean sauce; omit the salt, and use only 2 tsp. soy sauce. Heat the oil

in the skillet and stir-fry the optional garlic, ginger and pepper for ten seconds (if used). Add first the brown beans and then the vegetables; stir-fry ten more seconds until the vegetables are well-coated with brown beans and oil. Add the soy, sugar and liquid and steam as directed until the vegetable is crispy-tender. Add the binder, cook until glossy, and then toss in a few drops of sesame oil — more or less to taste. Serve at once.

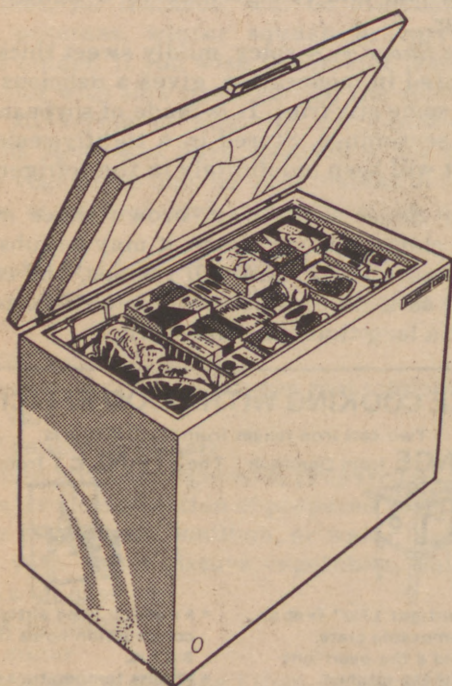
**Stir-fries with Hoisin Sauces** — Combine the following ingredients and set aside:

1 tbsp. soy sauce  
1 tbsp. hoisin sauce  
1/2 tsp. salt  
1/2 tsp. sugar  
1/2 C. water

Heat 2 tbsp. oil in skillet and add 1 lb. prepared vegetable (asparagus are especially good with this sauce). Stir-fry a few seconds. Add the sauce mixture; cover, and steam until the vegetables are crispy-tender. Add the binding mixture and cook until the sauce is thick and glossy. Serve at once, sprinkled with sesame seeds if desired.

**Stir-fries with Sweet and Sour Sauce** — Combine the following ingredients and set aside:

1/4 C. vinegar  
1/4 C. brown sugar  
1 tbsp. soy sauce  
2 tbsp. orange juice  
2 tbsp. pineapple juice  
2 tbsp. tomato paste



# Freezers Now In Stock

FROM 5 CUBIC FEET TO 25 CUBIC FEET



WE HAVE CHESTS AND UPRIGHTS IN STOCK



OUR SPECIAL FREIGHT CAR PURCHASE OF  
FREEZERS DIRECT FROM THE FACTORY  
MEANS YOU SAVE BIG!

*We also have a complete line of home furnishings.*

## FRANK POMERLEAU, INC.

43 Bridge St., Augusta 622-3765

"Just ask anyone in Augusta where we are"

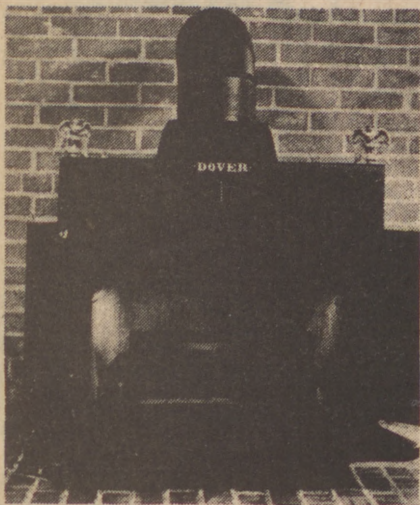


Heat 2 tbsp. oil in skillet and add 1 lb. prepared vegetable (peppers and carrots are particularly good with this sauce). Stir-fry a few seconds. Add the sauce mixture; cover, and steam until the vegetables are done. Add the binding mixture, and cook until the sauce is thick and glossy. Serve. Pineapple chunks may be combined with vegetables in sweet and sour sauce.

**S**till more variations may be created by adding meat or fish. Ground beef or pork may be put in the skillet at the beginning, with the salt, garlic and ginger, and the basic recipe followed from then on. Other meats, boneless poultry, or fish may be cut into small pieces (this is easiest to do when they are partially frozen), cooked with the seasonings until not quite done, removed from the skillet and then put back when the vegetables are nearly completed. Cooked, leftover meat, diced or thinly sliced, may also be used — add it to the skillet with the vegetables. Only a small quantity of meat is needed: about one cup to one pound of vegetables. The possibilities are endless — do not be afraid to experiment. Once you have tried stir-frying your harvest, Chinese style, you will never go back to soggy, overcooked vegetables again.

*Lynda Diane Gutowski, author of "Old Time Apples", which appeared in the Fall '76 issue of Farmstead, lives in Kennebunkport, Maine.*

## The Dover Stove



with built-in blower/heat exchanger

The Black Stove Shop  
Augusta, Maine

Titcomb's General Store  
Abbott, Maine

Rowell's Auto Sales  
Palmyra, Maine

Yankee Pinecraft  
Salisbury, N.H.

The Hearth & Cricket Shops  
Bangor, Turner and Portland, Maine



# The Clark Agency

Specializing in listings of  
Waldo County.

Realtors  
Belfast, Maine


**THE CLARK AGENCY**  
**89 High Street, Belfast, Maine 04915**  
**207 - 338 - 4610**  
*Sirs: Please send me Free mail outs  
of Penobscot Bay area real estate*

MR./ MRS. \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_ TEL. \_\_\_\_\_



# Lollypop

# Shoppe

Route 15  
Bucksport, Me. 04416

# Gifts,

# Fabrics,

# Yarn, &

# Novelties

# All Year 'Round

469 - 3021

CLOSED  
MONDAYS





## Professional Tree Care

### Wanning Tree Service

39 Main Street  
Blue Hill, Maine 04614  
207-374-2857

## RUFUS A. CANDAGE

REAL ESTATE BROKER

KNOWLEDGE GAINED  
FROM FIFTY-FOUR YEARS OF LIVING  
IN COASTAL MAINE —  
AT YOUR SERVICE

SPECIALIZING IN APPRAISALS

Telephone 207-374-5645

Woodstoves of uncompromising quality  
designed for maximum heating and cooking  
efficiency.

Largest cast iron air-tight  
box/cookstoves available.



American made • 100% cast iron •  
Intricately sculptured side panels •  
Air-tight construction • 2 sizes • Logs  
up to 19" or 27" • Holds fire up to  
14 hours or longer • Guaranteed.

Learn about the Cawley/LeMay Woodstoves.

For a 32 page, thoroughly illustrated, opera-  
tion manual/handbook please send \$1.00 and  
your name, address and zip code to:

**Cawley/LeMay Stove Company, Inc.**

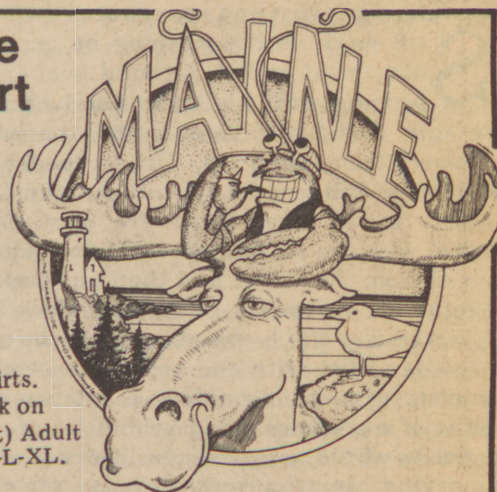
Box 431-1, RD1, Barto, Pennsylvania 19504  
215-845-7176

## MILLETT'S RESTAURANT

Route 1 Verona Island, Maine  
(by the bridge)  
**SEAFOOD OUR SPECIALTY**

## Maine T-Shirt

This very  
amooosing  
t-shirt  
designed  
by Tim  
Sample is  
hand-silk-  
screened  
on 100%  
cotton shirts.  
(Green ink on  
tan t-shirt) Adult  
sizes S-M-L-XL.



Short sleeve t-shirt — \$5.50 postpaid.

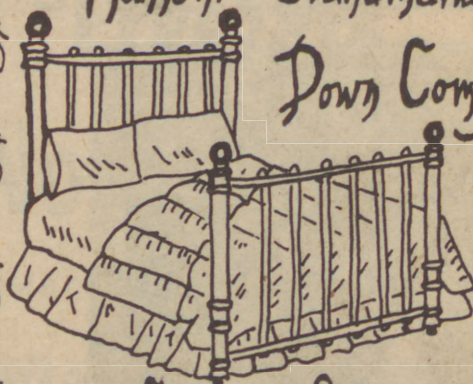
Long sleeve t-shirt — \$8.00 postpaid.

(Maine residents add 5% sales tax.)

## HARBORSIDE SHOP

Bay View Street, Camden, Maine 04843  
Open every day (207) 236-4567

## Authentic Scandinavian Down Comforters



Conserve Energy

Yours And The World's

For free brochure write:

**Cuddledown**

Dept F97

87 Pleasant St. Yarmouth, Me. 04096



# THE FARMSTEAD BOOKSTORE



NEW!

## The FARMSTEAD BOOKSTORE

Now, it's easy to shop by mail for those special interest books . . .

How-to do-it information on everything from wood heating to gardening to raising livestock . . .

Valuable, useful additions to your collection of data on living more self-sufficiently.

Check the FARMSTEAD BOOKSTORE in each issue for new listings.

## RAISING POULTRY THE MODERN WAY



Dr. Leonard S. Mercia  
The University of Vermont

### G-80 RAISING POULTRY THE MODERN WAY by Leonard Mercia--

Covers stock selection, feeding, brooding, rearing, management, current disease prevention, treatment for LAYING FLOCK, MEAT CHICKENS, TURKEYS, DUCKS, GEESE. Also housing plants, processing, preservation and more. 240 pp.

Quality paperback . . . . . \$5.95

**R-34 PEDAL POWER:** Edited by James C. McCullagh — **PEDAL POWER** examines the past, present, and future of the bicycle and other pedal and treadle machines. In clear, revealing prose, this unique new book explores the potential for pedal-driven devices in the workshop, kitchen, on the farm, and for transportation. **PEDAL POWER** is a new look at the future of the bicycle in appropriate technology. Around the workshop and homestead, pedal power can be applied to these machines: Wheel grinder, Stone polisher, Buffer drill, Jeweler's lathe, Wood carver, Potter's wheel, Battery charger, Hydraulic log splitter, Cider press, Air pump. 144 pp with 72 photographs, 65 illustrations.

Paperback . . . . . \$4.95

**R-32 WORKING WOOD:** A guide for the country carpenter by Nancy and Mike Bubel — **WORKING WOOD** offers an opportunity for the do-it-yourselfer to build anything from a sawhorse to a barn, using readily available secondhand materials. Through easily read text, photographs, and drawings, the Bubels share their rough-hewn brand of carpentry — revealing how to acquire and store building materials, listing the necessary tools, and giving tips on working with the tools and materials needed to solve anyone's building problems. 220 pp with 91 illustrations and 56 photos

Paperback . . . . . \$3.95

Hardcover . . . . . \$7.95

## Keeping the Harvest

HOME STORAGE OF  
VEGETABLES & FRUITS

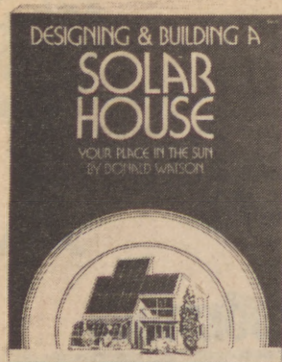


Nancy Thurber &  
Gretchen Mead

**GF-01 KEEPING THE HARVEST:** Home Storage of Vegetables and Fruits by Nancy Thurber and Gretchen Mead — Taking the mystery and awe out of home food processing is exactly what this book does. Practical information about storage of fruits and vegetables makes this a truly valuable source. Over 100 step-by-step photos for canning, freezing, brining, drying, pickling, making jams and jellies! It tells you how to avoid serious kitchen canning problems, as well as planning your garden for usable quantities, when you want them. A must book for today's farmsteader! 224 pp.

Oversized paperback . . . . . \$5.95





#### G-95 DESIGNING & BUILDING A SOLAR HOUSE by Donald Watson, AIA

— Here is the complete and practical book everyone has been waiting for on solar house construction. This lavishly illustrated book (over 400 illustrations) shows how the architect or the homeowner can design and build a solar-heated home — today. Watson discusses not only the historical “passive” uses of solar heating but also the application of “active” heating systems to modern buildings, including detailed information on the many commercial systems available and the efficiency calculations needed to choose the right system for your site. Climate design, site planning, and combinations of collector/storage/ and distribution systems are all considered, with illustrations of specific houses as solutions to specific problems. Watson’s book explains, among others, the following important elements:

- how solar heating works • passive systems: greenhouses, Drumwalls, roof ponds, reflectors, diode panels, Beadwall and other insulation methods • active systems: flat-plate collectors and focusing collectors • water, rock, and phase-changing storage systems • prototype solar houses with air systems, water-trickling systems, and liquid systems • solar-assisted heat pumps, solar-powered air conditioning • solar photovoltaic cells for direct electric conversion • ecodesign principles for different U.S. climates • designing for northern climates • how to choose the best solar system for cost payback • site planning, with a special planning checklist • four ways to reduce solar house costs. 288pp.

Paperback .....\$8.95  
Hardcover .....\$12.95

**G-94 TAN YOUR HIDE: Home-Tanning Furs & Leathers by Phyllis Hobson** — With a fair amount of time and effort, but almost no expense, you can make furs and leathers unequalled commercially, often using skins that would be wasted. And what tremendous satisfaction in your luxurious finished products. Phyllis Hobson discusses in a fully-illustrated step-by-step format working with skins and tanning furs and skins by nine different methods. She includes producing washable furs such as sheepskins along with methods for butter tanning, shortcut tanning, de-hairing for leathers, making sole leather, curing sheepskins, making buckskins by the Indian and modern methods, and even how to tan snakeskins. 112 pages with 25 illustrations.

Paperback .....\$4.95

**GF-06 HOMEMADE: 101 Things to Make Around the Home, Farm and Garden by Roger Griffith & Ken Braren** — This book provides useful information for the person interested in small scale functional building projects for the home, garden or farm. Nearly anyone can make any of the hundreds of items described and illustrated in **HOMEMADE** with the simple home tools they already have. Even if they are an unhandy person! This is a “how-to” book with all of the pitfalls eliminated — no half-finished projects due to lack of tools, materials or clear instructions. And none of these projects involve high costs — actually recycled easy-to-find materials are suggested to keep costs at a minimum. And these aren’t projects limited to the “back-to-the-landers.” Each project was chosen because of its wide-spread applicability — highly useful items that are easy to make yet unjustifiably expensive when storebought. 160 plus pages with over 150 illustrations.

Paperback .....\$6.95  
Hardcover .....\$8.95



#### G-96 GARDEN WAY'S PRACTICAL BEEKEEPING by the Garden Way Staff

— Here is the book we have been asked for, the practical, easy-to-understand approach to beekeeping, equally valuable for the beginner and the more experienced beekeeper.

##### FOR THE BEGINNER Answers to These Questions

Can I keep bees at home?  
How much honey can I expect?  
How do I start  
What should I buy?  
Are bees dangerous?  
What's inside that hive?

##### FOR THE VETERAN Good Explanations About

Dangers of Pesticides  
Nectar and pollen plants  
Genetics of bees  
Rearing Queen bees  
Processing honey  
Getting high honey yields

This is a book that we know from experience will work in the field, a book that we know from experience is necessary to fill the need for easily grasped, practical know-how in the ever-growing field of beekeeping. 224pp with 100 illustrations.

Paperback .....\$5.95



#### GF-07 SUCCESS WITH SMALL FOOD GARDENS: Using Special Intensive Methods by Louise Riotte

— This unique vegetable gardening book has been developed for everyone who has little land but would like to grow an abundance of vegetables. This book details the many techniques developed to insure bountiful crops in small spaces. Some techniques discussed: • interplanting • growing fences • tier plots • chatch cropping • hanging gardens • terrace gardens • succession plantings • raised beds • kitchen and herb beds • vertical gardening • pyramids • French intensive beds. Unique to this book is the concept of landscaping, wherein the entire home landscape is planned to accommodate food production attractively and effectively. Fence-row growing, border plantings, multiple-use trees and shrubs, and small decorative vegetable plots can be combined for a stunning landscape, while providing a luscious fresh fruit, vegetable and berry supply. 192 pp. with 70 illustrations.

Paperback .....\$4.95

#### GF-08 MAKING YOUR OWN ICE CREAM, ICES AND SHERBETS by Phyllis Hobson

— What could be more naturally delicious than country-style homemade ice cream topped with garden fresh strawberries? And that is just the beginning, for Phyllis Hobson has included over 100 unbeatable frozen desserts that are sure to brighten many a summer's day. With the recent promotion of electric ice cream freezers, homemade ice cream can be everyone's “country” treat. Included here is a complete discussion (along with manufacturer's directory) of electric ice cream freezers, crank type freezers, home-improvised freezers, freezer trays, and motorized refrigerator freezers. 64 pp with 35 illustrations.

Paperback .....\$2.95



#### G-93 BUILD YOUR OWN LOW-COST HOME by Roger Hard

— This book offers a viable alternative to expensive home construction; by describing in text and illustrations, the techniques used to build log homes either from “scratch” or using pre-cut log house kits. Over 100 detailed drawings, plus illustrative photographs take you step-by-step through the planning, site selection and preparation stages, the text always carrying parallel directions for kit construction or “from-the-tree” construction. Plus:

- site and cost considerations • log structure designs • hand tools required • heating/utility systems • power tools needed • general chain saw use • home-built saw mill • log home maintenance • landscaping/log furnishings • kit manufacturer directory. Here is a remarkably complete home construction book to fill a void in a field that is booming! 220 pp with 135 illustrations.

Paperback .....\$6.95  
Hardcover .....\$10.95





**R-22 STEP-BY-STEP TO ORGANIC VEGETABLE GROWING** by Samuel Ogden —

This well-known guide to raising vegetables without chemical fertilizers and insecticides is based on the author's 40 years of personal experience. Mr. Ogden's book represents a solid reference source for beginners who need the basic information on caring for the soil, organizing the garden plot, collecting the necessary tools, controlling pests, and growing two dozen of the more popular vegetables. 192 pp. 95 illustrations.

Paperback .....\$3.95  
Hardback .....\$7.95

**R-23 HOW TO GROW VEGETABLES AND FRUITS BY THE ORGANIC METHOD** by J.I. Rodale —

This hefty volume is actually seven books in one, covering general organic gardening techniques, vegetable growing, the home fruit garden and orchard, organic fruit culture, organic nut culture, herb gardening and growing unusual fruits. This remarkable book is the organic vegetable and fruit grower's bible. More than 600 charts, tables, how-to-illustrations and photos. 926 pp.

Hardback .....\$13.95



**R-27 THE HOMESTEADER'S HANDBOOK TO RAISING SMALL LIVESTOCK** by Jermone D. Belanger —

A most complete and informative book on raising goats, chickens, sheep, geese, rabbits, hogs, turkeys, and other small stock. The chapters cover diet, feeding, breeding, butchering, bedding, tanning hides, using manure, building housing and feeding equipment. 256 pp. 50 illustrations.

Paperback .....\$3.95  
Hardback .....\$8.50

**R-28 THE HERBAL HANDBOOK FOR FARM AND STABLE** by Juliette de Bairacli Levy —

This book brings information to farmers and owners of domesticated animals in treating their livestock without chemicals. Separate chapters on each animal include herbal care for diseases, delivering young, and keeping animals healthy. 320 pp.

Paperback .....\$3.95  
Hardback .....\$7.95

**Build It Better Yourself**



**Build It Better Yourself**

By the editors of  
*Organic Gardening  
and Farming*

From garden tools to livestock housing, from planters to lawn furniture, practical projects for the homestead, yard and garden.

**R-17 BUILD IT BETTER YOURSELF —**

Here's a building projects book especially for homesteaders and gardeners; self-sufficient cusses who do things for themselves. It's a big book with page after page on making practical items, from planting flats to greenhouses, from chicken feeders to small barns. Each project is carefully explained in text, photographs and illustrations. A detailed materials list shows what's necessary for

the project, and step-by-step instructions tell how to fabricate and assemble the item. Projects include: Plant Stands; Potting Benches; Window Greenhouses; Hand and Wheeled Garden Cultivators; Garden Carts; Bird Feeders; Cold Cellars; Smokehouses; Walls; Fences; Bridges; Barns; Beehives and many, many more! 640 pp. over 600 photographs and illustrations.

Hardback .....\$16.95

**R-14 THE SHEPHERD'S GUIDBOOK: Raising Sheep for Meat, Wool and Hides** by Margaret Bradbury —

For anyone contemplating raising sheep. The author discusses what to look for in buying a flock with emphasis on marketable production. She talks about breeds and even gives instructions for preparing wool for spinning, directions for tanning sheepskins, recipes for lamb, and some tips on butchering. 200 pp. with photographs.

Hardback .....\$7.95

**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 illustrations.

Hardback .....\$9.95



**R-29 GARDENING INDOORS WITH HOUSE PLANTS** by Raymond Poincelot —

Despite the recent wave of house plant books, this one proves to be unique. Included are how-to details for growing fruits, vegetables and herbs indoors as well as ornamental house plants. 280 pp. 100 illustrations.

Paperback .....\$4.95  
Hardback .....\$8.95





**G-44 MAKING BREAD WITH HOME GROWN YEAST & HOME GROWN GRAINS** by Phyllis Hobson — Includes growing, grinding grains, growing variety of everlasting yeasts, sponges and other "risings". Plus 30 special bread recipes. Hard-to-find information. 46pp.  
Quality paperback ..... \$2.95

**G-92 THE FAMILY COW** by Dirk van Loon — Perfect for the single-cow family or for semi-commercial needs. Highly informative, usable information on buying a cow, handling techniques, housing, feeds and feeding, milking, health care, breeding, calving, land use, all about hay and roots. Excellent illustrations. 200pp.  
Quality paperback ..... \$5.95

**G-3 COMPLETE BOOK OF HEATING WITH WOOD** by Larry Gay — Types of wood, stoves and fireplaces, conversion capabilities, economics of wood heat, environmental benefits and virtually every other aspect of using wood for heat. A must for every homeowner! 128pp.  
Quality paperback ..... \$3.95

**RAISING MILK GOATS THE MODERN WAY**

by Jerry Belanger



**G-43** Complete, up-to-date coverage by the leading authority. Illustrated chapters on selection, housing, fencing, breeding, kidding, chevon, goat milk products and more. Plenty of "how-to" diagrams and photos. Terrific insight! 150pp.  
Quality paperback ..... \$3.95

**G-37 LOW-COST POLE BUILDING CONSTRUCTION** by Merrilees and Loveday — Now with PLANS for small barn, garage, tool shed, year 'round homes! One-of-a-kind book will save you money, labor, time, materials. 60 drawings, all-inclusive details. Unbelievably clear, easy and economical! 115pp.

Oversized paperback ..... \$4.95

**G-40 HOW TO BUILD STONE WALLS** by John Vivian — All about sources of stone, equipment needed, laying out a wall, building techniques, drainage, retaining walls, wall maintenance. A practical, "how-to" book for great results! 85pp. Heavily illustrated, photos.

Quality paperback ..... \$2.95



**THE CANNING, FREEZING, CURING & SMOKING OF MEAT, FISH & GAME**

by Wilbur F. Eastman, Jr.

**G-47** Step-by-step instructions, methods, materials, costs. Covers beef, veal, lamb, poultry, game and fish. Loaded with old-time recipes for smoked hams and salmon, sausages, bolognas, bacons, venison mincemeat and more. Illustrations. Photos. Charts. 220pp.

Quality paperback ..... \$4.95

Hardback ..... \$8.95

**G-41 DOWN-TO-EARTH VEGETABLE GARDENING KNOW-HOW** by Dick Raymond — We honestly believe if you have a vegetable garden you ought to have this book! Absolutely unique, otherwise unavailable practical advice from a gardener of 40 years. Extending vegetable productivity, "wide-row" planting for triple yields, picking at peak flavor, saving and storing seeds. Heavily illustrated. Succession planting, in-depth information, excellent regional advice. Many gems of garden wisdom. 160pp. Large.  
Quality paperback ..... \$5.95

Sold Over  
100,000 Copies!

**YOUR ENERGY-EFFICIENT HOUSE**  
Building & Remodelling Ideas



by Anthony Adams

**G-79** Here is the homeowner's manual to drastically reducing fuel bills by not wasting "bought" energy, and by using FREE energy around you. Learn here the many small inexpensive steps to lock in the warmth, and to take advantage of nature's own heating and cooling systems. Why pay when you can cut fuel costs naturally and permanently?

- Energy-saving checklist for guaranteed savings
  - Working with the sun, wind, climate factors
  - Windbreak plantings
  - Shade plantings
  - Ventilating and insulating to best advantage
- Heavily illustrated. 120pp.

Large, quality paperback .... \$4.95

**G-39 LET IT ROT! The Home Gardener's Guide to Composting** by Stu Campbell — The compost heap brings the gardening experience full circle. And it's so beneficial to your soil, and so very easy to do if you know the basics. Stu Campbell has written a thorough, delightful, informative book to benefit all composters. In practical, "how-to" terms covers alternative methods. Illustrated guide to home-made equipment. Extensive composting material list, what to avoid, locations, activators, modern applications. Sure to add an important and satisfying dimension to your gardening! Illustrated. 152pp.

Quality paperback ..... \$3.95







**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.  
Hardback ..... \$10.95

**GF-04 RAISING SHEEP THE MODERN WAY** by Paula Simmons — Modern sheepraising has shown a trend toward the small holder, with emphasis on profitable, self-sufficiency. This book provides the small flock owner with information on the fundamentals of sheep management. It stresses sheep health and preventive care, and of the latest in medical treatment, should that become necessary. 234 pp. with illustrations.  
Quality paperback ..... \$5.95



**R-13 RAISING THE HOMESTEAD PIG** by Jermone D. Belanger — Raise a pig in the backyard? Why not, challenges the author, as he explains that properly maintained pigs are not smelly or dirty. It covers the full range of hog raising including feeding, diseases and related management topics. 224 pp. 36 illustrations.  
Hardback ..... \$7.95

**R-31 COMPOSTING: A Study of the Process and Its Principles** by Clarence G. Golueke, Ph. D. — One of the nation's leading authorities covers in depth the processes, pitfalls and profits of making compost at home and large-scale composting as a solution to our solid waste problems. 128 pp.  
Paperback ..... \$3.95

**R-12 THE MANUAL OF PRACTICAL HOMESTEADING** by John Vivian — Following a calendar year, this book details when, why and how a homesteader performs his chores, such as handling crops, chickens, goats and pigs. It also tells how to supplement the family food supply from the wild. Thoughtfully written, it's the up-to-date book on homesteading. 352 pp. 180 descriptive illustrations and photos.  
Paperback ..... \$5.95  
Hardback ..... \$8.95



**R-11 THE GARDENER'S GUIDE TO BETTER SOIL** by Gene Logsdon — How to develop rich, fertile soil and keep it that way year after year. Every gardener, novice and veteran, can derive down-to-earth tips on ensuring bountiful harvests of tasty and nutritious fruits and vegetables, beautiful flowers and majestic trees. 260 pp. 33 illustrations.  
Paperback ..... \$4.95  
Hardback ..... \$7.95

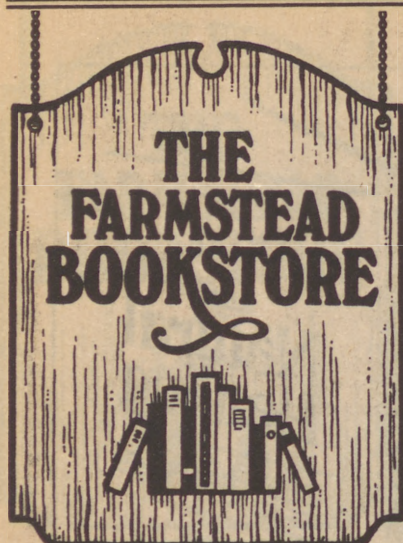


**R-18 THE PRACTICAL ENCYCLOPEDIA OF NATURAL HEALING** by Mark Bricklin — This book brings together the most popular natural healing techniques, from acupuncture to herbal medicine to yoga therapy. This complete, revealing book is filled with the discoveries and advice of medical specialists, herbal and folk remedies and anecdotes from doctors and lay-people on treating health problems without drugs or surgery. Natural healing is the approach to health care that takes maximum advantage of the human body's remarkable ability to defend itself against disease, pain and lasting injury. 608 pp. photos and drawings.  
Hardback ..... \$12.95

**R-35 THE DICTIONARY OF USEFUL PLANTS** by Nelson Coon — An incredible number of plants cover the earth and few there are that have not been put to some use by man. Until now, information on these plants and their uses could only be found in scattered and specialized books. But master horticultural writer Nelson Coon has culled his own experience and hundreds of volumes, spending years developing his most extensive work to date. **THE DICTIONARY OF USEFUL PLANTS.** Here at last is a useful reference on useful plants, created specifically for the layman. There is no book on the market to match it. 304 pp with 383 illustrations.  
Paperback ..... \$4.95

**R-36 SUCCESSFUL BERRY GROWING** — How to Plant, Prune, Pick, and Preserve Bush and Vine Fruits by Gene Logsdon — For berry lovers and growers everywhere this handy book gives important detail for raising and enjoying berries and grapes from the garden. From preparing the soil right on through to eating or marketing the berries, **SUCCESSFUL BERRY GROWING** covers it all. Among the many plants discussed are strawberries, raspberries (yellow, black, red, and purple), blackberries, blueberries, dewberries, elderberries, gooseberries, currants, grapes, and muscatines. The book also provides essential and fascinating information about wild berries, berries for birds only, berries for decoration, dyes, inks, and other non-edible uses. 208 pp with 12 illustrations.  
Paperback ..... \$3.95





**R-15 SMALL-SCALE GRAIN RAISING** by Gene Logsdon — For every gardener and homesteader who wants to increase both the quantity and quality of his homegrown food supply by growing and using whole grains. Individual chapters are devoted to corn, wheat, sorghum, oats, soybeans, rye and barley, buckwheat and millet, rice and their many varieties. Also included is a section on uncommon grains — wild rice, triticale, safflowers, and legumes. 320 pp. with illustrations.  
 Paperback .....\$4.95  
 Hardback .....\$8.95



**R-24 TREES FOR THE YARD, ORCHARD AND WOODLOT**, Edited by Roger B. Yepsen, Jr. — Both the homeowner and homesteader will find this guide helpful in the many areas of tree care and harvest. Chapters cover: Propagation; Pruning; Landscaping; Orchardling; Sugarling; Woodlot Management. The final chapter is an encyclopedic guide to 120 trees with illustrations of leaves, range maps and an account of the special uses for each. Illustrated with 320 pp.  
 Hardback .....\$8.95

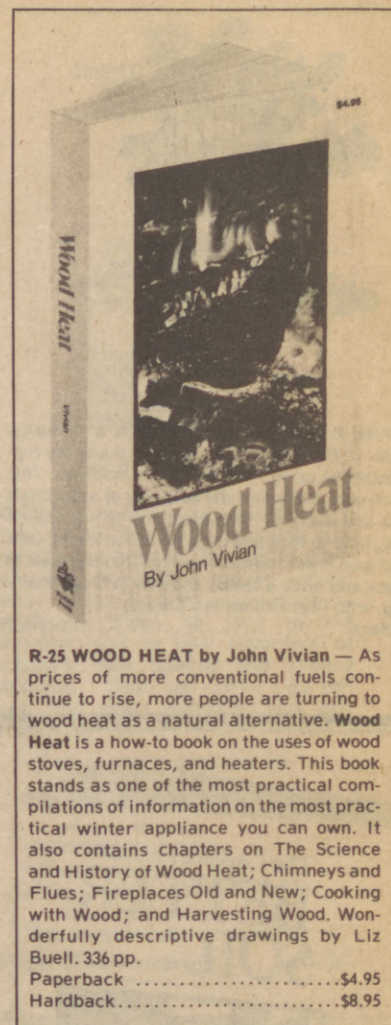
**R-21 ORGANIC PLANT PROTECTION**, Edited by Roger B. Yepsen, Jr. — Wilted squash vines, perforated cabbage leaves, wormy apples — to grow plants is to meet bugs and diseases head on. But **ORGANIC PLANT PROTECTION** can help you turn your garden "battle-ground" into a balanced environment. The book is arranged in two parts: Section One explains how to use the basic strategies of poison-free plant protection; Section Two is a book-length encyclopedia to more than a thousand bugs and diseases. 696 pp. Over 100 color photos and 100 line drawings.  
 Hardback .....\$12.95



**R-30 GETTING THE BUGS OUT OF ORGANIC GARDENING** — Experienced organic gardeners reveal their secrets for combating insects — naturally. Includes recipes for safe organic sprays plus a listing of insect-deterrent herbs and plants. 128 pp.  
 Paperback .....\$2.95

**R-19 LOW-COST ENERGY-EFFICIENT SHELTER** by Eugene Eccli — For the owner and builder, this book tells how to cut energy bills for heating, cooking, appliance use, lights and water. In addition to money-saving advice, it includes plans and specifications for 14 low-cost, energy-efficient homes with 150 detailed illustrations, understandable to the novice designers, builder and handyman. 416 pp.  
 Paperback .....\$5.95  
 Hardback .....\$10.95

**R-20 PRODUCING YOUR OWN POWER: How To Make Nature's Energy Sources Work For You**, Edited by Carol Stone — This book includes the advice and information from many experts on how to harness energy from the sun, wind, water, wood and organic wastes. Over 165 charts, tables, building plans and detailed instructions are included. 332 pp.  
 Hardback .....\$8.95



**R-25 WOOD HEAT** by John Vivian — As prices of more conventional fuels continue to rise, more people are turning to wood heat as a natural alternative. **Wood Heat** is a how-to book on the uses of wood stoves, furnaces, and heaters. This book stands as one of the most practical compilations of information on the most practical winter appliance you can own. It also contains chapters on The Science and History of Wood Heat; Chimneys and Flues; Fireplaces Old and New; Cooking with Wood; and Harvesting Wood. Wonderfully descriptive drawings by Liz Buell. 336 pp.  
 Paperback .....\$4.95  
 Hardback .....\$8.95

**R-33 GUIDE TO BEES AND HONEY** by Ted Hooper — This invaluable aid is not just a how-to about beekeeping, but a vital collection of information on how to work with bees. Author Ted Hooper describes important situations that take place in the hive and offers reasons and responses. It's all here — beekeeping tactics with recommendations on necessary tools, different styles of hives and different races of bees, advice on siting the apiary and a complete outline of the work involved in a year of beekeeping, including maintenance necessary for a healthy harvest. In addition, **GUIDE TO BEES AND HONEY** details the fine points of handling bees, controlling swarms, making increase, rearing queens, and coping with pests and diseases. A final section treats honey plants and the removal, composition, handling, and preparation for sale of honeybee products. 260 pp. with 120 black and white illustrations.  
 Hardcover .....\$7.95

**GF-05 PROFITABLE HERB GROWING AT HOME** by Betty E.M. Jacobs — The author of this book writes from experience, having run an herb farm in Canada for eight years. Here she shares knowledge on growing, harvesting and marketing herbs. The text is well-organized and the illustrations are delightful. 225 pp.  
 Quality paperback .....\$5.95



# START OR COMPLETE YOUR FARMSTEAD LIBRARY

We offer for sale a limited number of back issues of FARMSTEAD MAGAZINE. Each issue contains a wealth of information for gardeners and small farmers everywhere. You may use the coupon at right to send us your order. Back issues are \$1.25 each, ppd. Payment must be included with order.

## WINTER '75

The Maine Planting Calendar  
Food Storage on the Maine Farmstead  
Energy and the Small Maine Farm  
Sprouting  
Making Cider Wine  
The Early Settlers of Matinicus Island  
Be Your Own Woodland Manager  
Care and Use of Your Chainsaw

## SPRING '75

Growing Grains in Maine  
Goats on our Farmstead  
Care and Feeding of Young Goat Kids  
Income Tax Deductions For the Small Farmer  
Wild Apple Trees  
Onions From Seed to Storage  
Insurance And The Farmsteader  
Our First Garden in Maine  
Better Living Without Electricity  
Corn: Growing It in Maine

## SUMMER '75

Of Slugs and Suds  
Letter From Western Maine  
Ho, Sheep, Sheep!  
Plague and Pestilence in Your Woodlot  
How to Make Butter and Buttermilk  
The Great Purple Vegetable Patch  
A Successful Farmstand  
Lovely, Lowly Lambs Quarters  
The Great Horned Owl  
On Growing Red Tomatoes  
Canning Fruits and Vegetables

## FALL '75

Tricks For the Fall and Winter Garden  
Breed That Pig  
The Kitchen Garden  
The Wise and Useful Farm and Garden Guide  
Rabbits On Your Farmstead  
Tan Your Hide  
A Grove of Walnuts  
Making Jams and Jellies  
Storing Fruits and Vegetables  
Jerusalem Artichokes, Horse-radish and Squid

## WINTER '76

Maine Gardeners' Favorite Seed Varieties  
Growing Christmas Trees  
Workhorses on Your Farmstead  
How To Sell Your Crafts  
Starting Seedlings Indoors  
Fruit Leather  
Ravens In Maine  
Bee Keeping  
Ice Fishing  
Maine Climate and Weather  
Heating With Wood

## SPRING '76

Spring Pig Power!  
How To Work and Play With Squash  
How To Build a Fence  
Clearing Land Without Backache or Backhoe  
Raising Bees in Maine  
Tapping the Maine Sugar Bush  
Heirloom Beans  
Can You Afford Free Chicks?  
Planting By The Signs  
A Patch of Rhubarb Recipes

## SUMMER '76

The Grasses of Maine  
How to Buy a Horse  
Making Hay Despite the Weather  
Planting an Organic Orchard  
Some of my Best Friends are Bugs  
Enjoy Your Own Farm Pond  
Plants that Poison Livestock  
Growing Oriental Vegetables in Maine

## FALL '76

Old Time Apples  
A Guide to Raising Ducks  
Muscovies on a Maine Farm  
More about Muscovy Ducks  
On Augers, Froes and Crozes  
Ergot  
Forest Management  
Flight from Winter, Flight to Spring  
In Homage to Angelica

## WINTER '77

The Commonsense Gardener  
Farming With a Draft Horse  
How to Make a Barrel Stove  
Winter Deer Feeding  
Lambing Time  
Harvesting Salt Hay  
Wood Stove Cookery  
Wood Stove Safety  
John Vivian's Convenience Garden  
Saving Energy is Saving Money

## SPRING '77

Know Your Soil  
The Modular Cold Frame  
On Choosing Your Goose  
Making Maple Wine  
Smelting by Moonlight  
Digging Dandelions  
Starting Tomato Seedlings  
A Bee for The North

## EARLY SUMMER '77

Let Weeds Protect Your Garden  
Hoes for Hard Rows  
Understanding Passive Solar Heating Systems  
Home Childbirth  
Broad Beans  
Eat Violets  
Nutrition and the Vegetarian Diet  
Old Time Rhubarb Recipes  
Squash, Beans & Corn  
Woodsheds Are Beautiful  
Beefalo

## SUMMER '77

Getting A Line on Bees  
How to Hook a Hon'd Pout  
Cooking Carp and Other Rough Fish  
Making Low Sugar Jams & Jellies  
Tea Thyme  
Palate Pleasing Pickles  
To Husband A Goat: A Moral Tale  
Rural Poland - A Glimpse of Our Past  
Legumes - Selecting Seed Mixtures for the Small Farm

**USE HANDY COUPON  
TO ORDER**

Check contents sampler below for some of the topics covered in previous issues of FARMSTEAD.



## FARMSTEAD MAGAZINE

Box 111, Freedom, Me. 04941

Please send me the books and/or back issues of FARMSTEAD magazine as indicated below.

BOOK CODE NO.	HOW MANY	COST

Total Amount of Books \$

Maine Residents Add 5% Sales Tax

## FARMSTEAD BACK ISSUES \$1.25 ea. ppd.

ISSUE	HOW MANY	COST
Winter '75		
Spring '75		
Summer '75		
Fall '75		
Winter '76		
Spring '76		
Summer '76		
Fall '76		
Winter '77		
Spring '77		
Early Summer '77		
Summer '77		

Total Amount of Back Issues \$

Total Amount of Order \$

Orders under \$10 please add 60¢ for postage and handling

**NOTE:** Please allow 6-8 weeks for delivery. Any titles temporarily out of stock will be shipped when available. Due to book publishers' price increases, our prices are subject to change without notice.

Name .....

Address .....

Zip





## The Farmstead Reviewer

By Eleanor Thurston

**Backyard Gardener**, by *Maine Times* staff; illustrated by Margaret Campbell, Stroudwater Press, 176 pages, paperback \$5.95

**B**ackyard Gardener gets an A+ for charisma. In a moment, I'll get around to praising it from a scientific point of view for being such a complete, informative, localized book on gardening.

However, I was so impressed with its witty, good-humored writing style that I have to slip in a few words about that first. After all, who wants to read a dull, dried-out textbook on gardening, no matter how factually superior it is? In fact, what good is a factually superior gardening book if you can't wade your way through it?

**Backyard Gardener**, compiled by *Maine Times* staff members Peter Cox, Sandra Gregory, M.J. Parker, Lucy Martin, and Barbara Riegel, reads like a letter from a friend — a very imaginative friend. The descriptions are picturesque, to say the least.

Earwigs, for example, "lurk in damp, dark places and are triggered into rapid slitherings when garbage can lids or flower pots are lifted. They hide in cracks in foundations and in the damp garden foliage they probably gnawed the night before." (Shudder . . . I hope I never meet an earwig in a dark alley.)

The cutworm is "a stout, greasy looking hairless grub . . . soft bodied, dark brown to black backed, and up to two inches long, depending on maturity. His mouth is equipped for biting and chewing, and he has fleshy little legs on his pale abdomen."

These two evil characters come under the Foes section; the earthworm, of course, is described under Friends.

"Their shovel-like lip loosens the soil as the worms burrow along. The ingested soil, sucked into their mouths by muscular action, passes into their tough, thick-walled grinding gizzards . . . which pulverizes the food-containing soil as it is rubbed against sand particles swallowed with it."

See what I mean? These authors don't hold back on description.

Little jabs of wit pop up unexpectedly through the book — like in the Garden Schedule, which "even if you ignore it most of the time . . . is handy to have." Under January's list of things to do, you are reminded to order seed catalogues; in February, you are reminded to order seeds; in March, you are reminded to "do all the things you didn't do in January and February."

Did I mention that the book is well-illustrated and designed? Small aesthetic points, perhaps, but the little things add up. Both the photographs, by Tom Jones, and the drawings, by Margaret Campbell, are great — but I guess you'll have to see them for yourself, since I really can't reprint and re-draw them here for you.

The book design, by Meredith Herzog, is delightful. The print, you see, is fairly large and bold, and there are nice little breathing spaces of white between sections, sub-sections, and sub-sub-sections.

**B**ackyard Gardener is a much needed book, for it is custom-written for the cold Maine climate and is geared to Downeast weather patterns. It includes a map of local frost dates and a garden almanac from first planting to last frost, compiled by Peter Cox. "TUESDAY, JUNE 10; There was a frost last night. Some of the tomatoes had leaves killed, but everything survived. (This turned out to be the last frost.) Cutworms seem to be decreasing. Garden about a month behind on crops cutworms hit, due to replanting. But there will be peas by the Fourth of July."

The book covers all the topics that you'd expect, and some you wouldn't.

Most important, all this information came from the personal experiences of Maine gardeners, including the authors.

Yet, as the authors point out in the beginning, "There is no *one way* to plant, Gardeners tend to develop their pet methods of soil preparation and sowing, and of course, there are all kinds of variables in success and/or non-success: soil, weather and the greatest variable of all, personality. So the following guide is just that; a guide."

This is a book you'll enjoy being guided by.

By Madeleine H. Siegler

A new and very practical book for the vegetable gardener has just come to our attention. It is called **Vegetables Money Can't Buy But You Can Grow**, David Godine Press, Boston, \$4.95 and is written by



Nancy Bubel. The title is eye-catching and provocative, and Nancy Bubel is a plain dirt farmer whose name is familiar to many of us. She has written consistently sensible articles for *Organic Gardening* for as many years as I have read that magazine, and her name and authorship is one I have come to trust.

"When did you last see spaghetti squash for sale in your local market? How about sugar peas, burpless cucumbers . . . small crunchy kohlrabi, mild savoy cabbage . . . or plum tomatoes? I won't even ask whether you can buy leaf lettuce, salsify, leeks, or Oriental radishes." That is the opener in the preface. If you always thought prefaces were dull things you will change your mind when you pick up Mrs. Bubel's book. Read it and whimper a bit as you realize that everything she says about supermarket vegetables is true.

Granted, produce managers in every market have earned their ulcers, they handle highly perishable products displayed openly and at the mercy of every strong thumbbed shopper. Have you ever watched strong-minded shoppers try to shove their thumbs through every tomato or peach on the rack? We do the market managers an injustice to blame them for the plastic tomatoes or wooden carrots that are so often the best they can offer.

Celeriac, sorrel, New Zealand spinach, kale, and soybeans are a few of the exotics she tells us how to grow. Malabar spinach and tampala are two spinach-like vegetables that tolerate heat and sound like fine eating. Rooted parsley, also known as Hamburg parsley is another vegetable new to most of us.

The book not only describes the virtues of many different vegetables, it gives completely practical directions for growing them. The author gardens in Pennsylvania but makes her advice universal by suggesting that you plant "when the daffodils are blooming, or when the apple blossoms have just gone by." This surely beats the narrow view of the gardener who writes that "here we plant peas on March 20th." The Bubels have gardened organically for enough years to know the vices and virtues of this method. The reader can have confidence in taking any advice given.

Many tempting recipes are given using the new vegetables as well as some fine variations for cooking old standbys.

A detailed glossary tells the reader where hard-to-find seeds may be found. The text is brightened by the use of many original woodcuts from the pages of antique seed catalogs. The book is available in hard cover or in a well bound paperback edition.

Informative books on plants do not need to resemble textbooks. No book makes this point as plainly as a recent offering from The Yeoman Group in New York. Called **The Good Humoured Gardener** and written by two Dutch girls who possess both a wicked wit and uncommon good sense about plants, this book surely deserves attention. Treeske Blase and Anneke Hohmann first collaborated on this work as a comic strip which appeared in an Amsterdam newspaper. The strip was highly popular and was published in book form in Holland in 1970. Translated by Inge Bourke-Nieuwstraten and edited for American idiom by Elaine Mueller, it made its debut in this country in 1975.

Who could resist a book that manages to cover a variety of subjects from how to prune a rangy philodendron to how to have a perfect lawn and manages all this in a four frame comic strip? The piece on azaleas describes this greenhouse plant as captivating and capricious and is accompanied by a sketch of a female who is just that. The ladies advise that a man not give his love an azalea unless her thumbnail is a deep emerald green, time is no object with her, and her love of plants borders on mania. If she does not meet these requirements they suggest giving her jade or a jade plant. Then in the remaining sketches they give all the tips necessary to keep gift azaleas growing happily.

It is painful to criticize a book as cheerful and charismatic as this one, but the comic strip format produces a narrow book, 5 by 14 inches. This makes it unwieldy for bookcases but it will be a bright addition to any coffee table.

If you cannot find this delight at your favorite bookstore, why not ask for it? Most bookshop owners are delighted to order any book not in stock.

**Animal Husbandry and Veterinary Care**  
For Self-Sufficient Living

By Guy Lockwood, D.V.M.

**Just The Book for You! And, it makes a great gift!**

**Cattle, Horses, Goats, Sheep, Dogs, Poultry, Rabbits & Hogs**

- Concentrates on prevention, nursing care, and practical management.
- This book is unique in explaining the *principles* so that you can apply them to succeed in the selection, feeding, breeding, housing, and care of your animals.

If you care for animals, you can't afford to be without

**Animal Husbandry and Veterinary Care**

Softcover edition \$7.95 — Hardcover edition \$12.95

White Mountain Publishing Company  
13801 N. Cave Creek Road, Suite 22  
Phoenix, Arizona 85022

Arizona residents please include 5% sales tax.

You May Have Read "Living the Good Life"

**NOW READ**

Scott Nearing's Newest Book

**Civilization and Beyond:  
Learning from History**

A view of civilization from 92 years  
of living and studying

**\$3.00 Postpaid from:**

**Social Science Institute  
Dept. 116 Harborside, Maine 04642**





### storing seeds

A new way to store seeds has been developed at the University of California, Davis. Put seed packets in canning jars with two heaping tablespoons of fresh, powdered dry milk wrapped in four thicknesses of facial tissue and secured with a rubberband or tape. The tissues keep the milk from sifting out and prevent the seeds from touching the moist dessicant. Make sure there is an airtight seal on the jar and change the milk packet once or twice a year.

### petroprotein

One of America's newest natural foods is called Torutein, the trade name of a product made by Amoco Foods. Michael Harris, in an article in the August issue of *Mother Jones*, reports that it is a *Torula* yeast *Candida utilis* grown on hydrocarbons distilled from petroleum. It has been sold to U.S. food processors since 1975 and is used as an additive in meat products, baked goods, frozen foods, infant dinners, margarines, soups, gravies, tortilla chops, and pizzas.

Torutein is used primarily by producers of institutional food, and a high protein macaroni product has been accepted by the government for use in federally sponsored school lunch programs. You'll probably never know if it's in the food you eat because by FDA regulations, if it's used as a flavor enhancer, it can be indicated on the label as "natural flavorings." If it is used as a protein booster, it is described as "torula yeast." FDA approved the product "on the basis of existing FDA regulation", but admits it has done no tests to determine if the product is safe. The FDA file contains only one 13-week study of the petroprotein being added to the diet of test animals with no adverse effects. The study was conducted by Amoco.

On the other hand, Japanese studies of yeast cultures grown on petroleum have found cancer-causing benzopyrenes and related substances. Also, the heavy metals lead, mercury and arsenic were found in the yeast. Japanese companies discontinued their efforts to produce petroprotein, even for animal feed, in 1973.

British, Venezuelan, and Italian governments have also held up approval of petroproteins. An Amoco Vice President said, "We now have 112 food processors in the United States using our product."

### chimney fires

According to the Chimney Sweep Guild, there were 41,000 chimney fires last year, causing \$19 million in damages. Before you start up the wood stove, check the chimney.

### climate and coal

A recent report released by the National Academy of Sciences concluded "The climatic effects of carbon dioxide release may be the primary limiting factor on energy production from fossil fuels over the next few centuries." Since the beginning of the Industrial Revolution, a 13 per cent rise in the atmospheric concentration of CO<sub>2</sub> has taken place, including a 5 per cent rise in just the last 15 years. If present trends in energy use continue, and most of this energy comes from fossil fuel, the report predicts that CO<sub>2</sub> levels will double by 2050. Climatic modeling, though admittedly imperfect, predicts a 5 degree F rise in average temperatures with each doubling of atmospheric CO<sub>2</sub> concentration.



## **pollution impairs crop productivity**

According to a recent statement issued by EPA Administrator Douglas M. Costle, air pollution is costing the nation "millions of dollars a year in reduced agricultural productivity." Results of a study conducted by the Boyce Thompson Institute for Plant Research in New York, indicate that yields of alfalfa and sweetcorn were reduced by 15 percent when exposed to smog as compared with those crops protected from air pollution. Similar experiments demonstrate that bean production was reduced by 25 percent and tomato production by one-third when exposed to air pollution.

*Conservation News, June 15, 1977*

## **sea water irrigation**

Barley has been successfully grown on sea water-irrigated soils by Emanuel Epstein and J.D. Norlyn of the University of California at Davis. By vigorously selecting varieties that grew in saline conditions, the scientists have attained yields of up to 1,242 kg/ha on plots irrigated with pure sea water. Since many of the world's prime irrigated agricultural lands are suffering from increased salinization, this research might imply that at least some plants can be adapted to saline conditions through plant breeding.

*Science, July 15, 1977.*

## **farm bulletins**

Several new farm bulletins have been started this past year or two. **Maine-ly Agriculture** is a weekly market bulletin published by the Maine Department of Agriculture. **New Hampshire Market Bulletin** is a similar publication by New Hampshire's Department of Agriculture. **Massachusetts Farm Bulletin** is published every two weeks by the New England Farm and Home Association, Sudbury, Mass. **Rural Delivery** is published monthly by Dirk van Loon in Port Joli, Nova Scotia. All these publications feature classified ads and state and provincial news for small farmers. Classified ads are usually free to subscribers.

## **common ground country fair**

A Celebration of Rural Living will take place September 23-24-25 at the Litchfield Fairgrounds in Litchfield, Maine. Sponsored by the Maine Organic Farmers and Gardeners Association in cooperation with supporting groups, the event returns to Maine and New England the large old-fashioned country fair. An outgrowth of the popular rediscovery of rural lifestyles, Common Ground Country Fair will be a marriage of the best of New England agricultural traditions with the excitement of the new spirit of country living and local agriculture.

## **The Maine Textile Center, Inc.**

MAINE'S LARGEST SELECTION OF

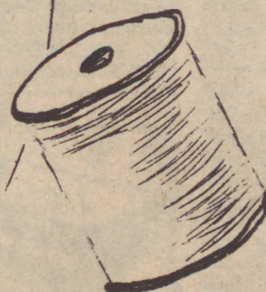
## **FABRICS**



BRIDAL, DRAPERY, UPHOLSTERY  
and CRAFT SUPPLIES

10-5:30 Weekdays &  
1-5:30 Sundays

U.S. Route 1 Tel. 338-3930  
Belfast, Maine



## *Skillin's Greenhouses*

89 FORESIDE RD., FALMOUTH  
781 - 3860

SKILLIN'S TOWN &  
COUNTRY STORE

BATH RD., BRUNSWICK  
422-8111

2 NEW LOCATIONS:

Maine Mall, South Portland  
Promenade Mall, Lewiston



ALL YOUR  
GARDENING NEEDS



FLORIST —  
GARDEN CENTER —  
HOUSE PLANTS —  
GIFTS  
LANDSCAPE  
PLANTING NEEDS



# The FARMSTEAD Peddler

**BEAUTIFUL ORIGINAL POEMS FOR ANY OCCASION, ANY SUBJECT** (in memoriam, love, humorous, etc.) Send \$8.00 and S.A.S.E. For Fast Service or Personalized, send \$10.00 cash or money order and S.A.S.E. to POEMS, R.R. 2, Box 27, Sparland, IL 61565 F1P

**HEIRLOOM VEGETABLE SOUP:** A recipe you will tell your heirs you created. Developed over 25 yrs. in my own kitchen. This is not a shortcut recipe. Send \$1.00 and S.A.S.E. to Heirloom, R.R. 2, Box 27, Sparland, IL 61565 F1P

**MAGAZINE FOR HOMESTEADERS.** \$3. ea. unclassified 5¢ a word. **FARMING UNCLE** — Old Monticello FM Rd. Liberty, N.Y. 12754 F1P

**OVER 100 Dwarf Fruit Tree Varieties.** Plant November or March. Free descriptive list. Baums Nursery, R.D. 2, New Fairfield, CT 06810 "Fruit tree culture, 400 descriptions, illustrations \$1.50" F1P

**FAMILY COWS** — available throughout the year. Own a registered Jersey. Springdale Farm, Colby Whitcomb, Rt. 2, Belfast, Me. 04915. (207) 342-5446. E4P

**GOULDSBORO** — Paradise found. 200 + acres with 1/2 mile frontage on West Bay Pond. At end of town road with electricity. Plenty of wood. 30 acres blueberry fields. Send for free listings of others. J.C. MILLIKEN AGENCY, INC., Lighthouse Road, Prospect Harbor, ME 04669. 207-963-7941. S4P

**PENOBSCOT** — 5 fertile acres. Farm pond. Two camps bring in nice income (mortgage payer). 5 room year round house. Keep the wood stove going and the furnace won't go. Workshop, sheds, much more. Oh yes! Horse drawn implements available. \$29,900. J.C. MILLIKEN AGENCY, INC. Lighthouse Road, Prospect Harbor, ME 04669. 207-963-7941. S4P

**LONESOME MEN AND WOMEN:** All Ages. Send for Free publication covering Matrimony and Pen Pals. Referrals Limited, 141 Buckpond Road, Westfield, Mass. 01085 F6P

**BEE-KEEPING SUPPLIES** — All basic items always in stock. Dealer: A.I. Root Co. "There is no substitute for quality." Free catalog and literature upon request. William B. Jordan, 672 Ocean Avenue, Portland, Maine 04103 Tel. (207) 774-2569 E6P

**SUCCESS BOOKS FAIL YOU?** Guaranteed answer. Complete report \$3.00. Success Development, Box 158, Alburtis, PA 18011. Su6P

**BUILD A PRE-CUT LOG HOME!** Kits from \$3900. Brochure \$3.50, Dealership information package \$5.00, WILDERNESS LOG HOMES; R.R. 2 FM-F, Plymouth, WI 53073 F1P

**TRUTH IN ASTROLOGY** A between the lines look at the astrological personality. Risque-Humorous-great for gifts. Send \$3.00 to Conrad Box 673 Barre, VT 05641 F4P

**GOULDSBORO** — Paradise found. 200+ acres with 1/2 mile frontage on West Bay Pond. At end of town road with electricity. Plenty of wood. 30 acres blueberry fields. Send for free listings of others. J.C. MILLIKEN AGENCY, INC., Lighthouse Road, Prospect Harbor, ME 04669. 207-963-7941. S4P



**A futuristic solution to today's heating problems.**

A highly efficient 64%-72% wood stove made from recycled materials. SEVCA wood stoves are now available on the open market. For brochure send name and address:

**SEVCA STOVE WORKS**  
Box 396  
Bellows Falls, Vt. 05101

**NEWSLETTER FOR DO-IT-YOURSELF HOMEBIRTH COUPLES.** Subscribe to discover why thousands are doing it, how they manage, etc. Quarterly. \$3.00/year. **The New Nativity**, 4010 W. 90 Street, Prairie Village, KS 66207 F1P

**SPLITTING UP A LARGE PARCEL** of cleared and wooded land in Maine at cost. And hoping a community will result that has some communal not competitive spirit. For more info write: Chris Greene, R.F.D. 1, Box 420-A, Center Harbor, NH 03226 F2P

**FARM HOME IN WELD, MAINE** with two car garage and ten acres of land including Brook, Spring, Farm Pond, and Woods. \$38,500 (207) 585-2207 F2P

**NICE 7/8 ARABIAN FILLY** 3 Years, light bay, with star. Trained, gentle and ready to go. (207) 585-2207 F2P

**SPINNING WHEELS** and related items. Send large stamped envelope for BROCHURE. OZARK OAKS FARM, Eldridge, MO 65463 F3P

**RAPID WOODCUTTER.** Cut firewood many times faster. Save time, energy, backache. Send \$1.95 for design. J. Turrell, Box 289, Sebago Lake, ME 04075 F2P

**CARETAKER NEEDED.** Dec. - Feb. for homestead goat dairy during dry period. Isolated Ozark location without electricity. Will provide small salary and wood for heat. Need vehicle, prefer knowledge of goats. Write: Thomas, Rt. 2, Box 96A, Leslie, AR 72645 F1P

**FINALLY! A FIELD GUIDE** to New England Apples — 21 Old Varieties technically described. \$2.50. Garret Press, South Barre, VT 05670 F1P

**GRANDMA'S DELIGHTS.** Recipes. 10 recipes/\$1.00. Toth, Plain Hill Road, Norwich, Conn. 06360 F2P

# The FARMSTEAD Peddler

Here's how to advertise in  
THE FARMSTEAD PEDDLER:

Your ad in this section costs only \$2.00 for the first 10 words (minimum) and 10 cents for each additional word. You get a 10% discount if you run the same ad in two or more consecutive issues. Closing dates are: Feb. 1st for Spring; Apr. 1st for Early Summer; June 1st for Summer; Aug. 1st for Fall; Oct. 1st for Holiday Issue; & Dec. 1st for Winter. You may use this coupon to submit your ad; however payment must be included.



Send to: FARMSTEAD MAGAZINE  
Box 111 Freedom, Maine 04941

Copy \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip \_\_\_\_\_

Number of words \_\_\_\_\_ Cost: \$ \_\_\_\_\_

For issue(s): ☐ Winter ☐ Spring ☐ Early Summer  
☐ Summer ☐ Fall ☐ Holiday



**SUPER LIVE CATCH TRAP.** Resets itself. Caught three (3) coon, five (5) opossums, two (2) mink and one damned house cat, in one night, one trap. Make from scrap. Simple to make. Results guaranteed. Drawing \$2. Jo Hammond, RR 5, Feiser Road, Covington, KY 41015. F1P

**KENTUCKY FARMS and Acreage Tracts,** \$100 to \$250 per acre. Free list. Estes Realty, Box 201U, Edmonton, Kentucky 42129. (502) 432-4555. F1P

**LOOKING FOR A FARM,** large or small; or maybe a piece of homesteading land? Intown homes and commercial property? How about a combination grocery and hardware store in a small town away from the hustling crowd. Call Marble Real Estate, Wilton, ME. 04294. Tel: 207 645-2501. F1P

**MOBILE HOME OWNERS:** Add that needed ROOM or ENTRANCE, not an unsightly leaky addition but our factory built ADD-A-ROOMS. Installed by our skilled crews in one day. Also end interior damages and leaks forever with our custom designed A-ROOF. Adds beauty and is maintenance free. 100% FINANCING on either. For FALL CATALOGS and prices call toll free 1-800-452-1940 8:00 A.M. to 11:00 P.M. or write Maine-Wide Enterprises, P.O. Box 2106, Augusta, Maine 04330. F1B

**ATTENTION:** Due to cancelled orders, Maine-Wide Enterprises offers greatly reduced prices on a few unclaimed prefabricated garage packages. Never erected, various sizes, small deposit will hold your selection. 100% FINANCING. Will deliver or erect with slab. For NEW FALL CATALOG, sizes and prices, call toll free 1-800-452-1940 8:00 A.M. to 11 P.M. or write FACTORY, P.O. Box 2106, Augusta, Maine 04330. F1B

**ITALIAN PEASANT COOKERY.** How to turn homegrown or inexpensive storebought foods into gourmet meals. Basic principles and recipes culled from families with a centuries-long tradition of eating well on little. Illustrated Booklet, \$2.00. Homestead Education Publications, Box 454, Dept. 40, Storrs, Ct. 06268. F2P

**CHILDREN'S QUILTS.** How to make simple, inexpensive crib and youth-bed quilts. Easy instructions, including patterns and full-scale designs for 17 easily embroidered squares. Specify theme: homestead, nursery rhymes, animals, Biblical. \$2.00 each, 4 for \$7.00. Homestead Education Publications, Box 454, Dept. 40, Storrs, Ct. 06268

**VEGETABLE AND HERB SEEDS — 25¢** For Catalog. Shades of Green, (FSM), 16 Summer, Ipswich, Ma. 01938. E6P

**CIDER PRESS PLANS —** (including grinder). For two press sizes, \$5 or send 50¢ for Information Packet about Hunger Mountain Crafts Cider Presses, RR4, Worcester, Vt. 05682. E4P

**DEALERS:** Wholesale prices on complete line of trapping supplies. Wholesale & Retail catalog 50¢. Proof of dealership required, letterhead, tax number, etc. Central Conn. Trappers Supply, Gerry Barcella, Dept. 1S, 61 York Rd. Kensington, CT 06037 F3P

**DELICIOUS CAPRINE GOAT RECIPES** 4/\$1.00 + 25¢ for handling. Please state one of these Categories: Beverages, Breads, Cheese, Cheese-Foreign, Chevon Main Dishes, Cookies, Candies, Desserts, Household Products, Soups, Salads, & Vegetables. G.R. Shunkwiler, P.O. Box 1552, Mason City, IA 50401 S6P



**WRITE or CALL**  
**NORTHEAST BEAD**  
**TRADING COMPANY**  
 Box FM  
 12 Depot Street  
 Kennebunk, Maine 04043  
 Telephone 207-985-3546

**free**  
**retail · wholesale**  
**catalog**



**BEADS OF ALL KINDS,** old & new — Complete illustrated price lists \$1.00 from Baker Valley Bead Works, Box 290, Rumney, NH 03266 Su2P

**PLANNING LOG CONSTRUCTION?** Angier's Log Building Book with 304 Pages and 180 Drawings Covers the entire field. \$5 Postpaid. Kiser Enterprises, Box 827-FA, Hopewell, Virginia 23860. Su3P

**LOG CABINS,** Cottages, Summer Homes, Basic Building Book. 166 Pages, 150 Detail Drawings. Deals at length with Log Construction. \$5 Postpaid. Kiser Enterprises, Box 827-FC, Hopewell Virginia 23860 Su3P

**PLAN REMOTE CONSTRUCTION?** Alaskan Chainsaw Mills cut Castles from Raw Forests. Mill Prices start under \$100. Complete, Powered Wilderness Construction outfits under \$500. Interested \$1.00's worth? Kiser Enterprises, Box 827-FM, Hopewell, Virginia 23860 Su3P

**MONK'S HILL HERBS**  
**Tel. 685-4051 & PERENNIALS**  
 Route 17 East Readfield  
**OPEN DAILY 9 to 4 pm**  
 We do not ship plants  
*For catalog of 76 herb varieties,*  
**CLOSED send 35¢ to us at RFD 2**  
**MONDAYS Winthrop, Maine 04364**

**STAMP COLLECTORS —** Want to swap your extras? Let's build our collections by barter. Dan Cambra, 26 Capt. Crocker Rd., So. Yarmouth, MA 02664. F1P

**MAPLE BROOK FARM —** Purebred & Grade, Registered Dairy Goats. Buck Service, R.F.D. 1, Box 143, Morrill, ME 04952, 342-5612 F2P

**WANTED —** Five or more acres Western Maine, secluded southern exposure. Box 205, Lynnfield, ME 01940 F1P

**HOMESTEAD/BUILDING DESIGN SERVICES** for N.E. Region. Living and outbuildings to your needs. Send S.A.S.E. and brief details about your homestead plans. R.S.G. Associates, 120 Deerfield Street, Greenfield, MA 01301 F1P

**DOES YOUR FARMSTEAD HAVE SHEEP, DUCKS, GOATS, CHICKENS, CALVES?** You may need a Great Pyrenees dog for predator control. Ideal farm dog. Perfect with children. Will ship anywhere. Free information on request. Write or call: Ron Hoxmeier, R.R. 2 Box 318B, Buffalo, MN 55313 (612) 963-5789 F1P

**ATTENTION TRAPPERS:** Increase this year's catch by using thick powerful & guaranteed central Connecticut Valley animal scents. If you aren't satisfied with the results of our lures, return the unused portions and we'll refund your money and pay the postage. Send for our new 1977-78 catalog containing much helpful trapline information and a complete line of trapping supplies. 50¢ — Order before Fall rush. Gerry Barcella, Dept. 1S, 61 York Rd., Kensington, CT 06037 Phone (203) 828-4994 F3P

**GOT A PROBLEM?** Send it to Rev. Champagne, Box 3, Gilmanton, NH 03237 Enclose a SASE. Su3P

**FOR SALE — CHEVIOT FLEECE** for handspinning. Sold by Fleece only. Price: \$1.50/lb plus shipping. 6 to 12 lbs. per Fleece. Ron King, Penobscot, ME 04476 Su2B

**KENTUCKY FARMS and Acreage Tracts,** \$100 to \$250 per acre. Free list. Estes Realty, Box 201F, Edmonton, Kentucky 42129. (502) 432-4555. Su2P

## WISH & WANT BOOK




**ALL NEW GOODS IN ENDLESS VARIETY FOR MAN & BEAST!**

Stoves, Barrels, Lamps, Churns, Books, Presses, Harness, Hardware, Tools, Mills, Buggies, Pumps, Baskets, Windmills, Water Rams, Horse Drawn-Plows, Livestock Needs, Dairy Supplies, Tubs, Pea Shellers, and much more!!

Send for big new illustrated catalogue.

**\$3.00**

**CUMBERLAND GENERAL STORE**  
 Dept. FP8 Rt. 3 Crossville, TN 38555



## Woods End Laboratory

*For farm & garden, a*

### Soil Audit

*with recommendations for achieving a soil balanced in organic content & minerals. Tests for humus analysis by chromatogram, organic matter, cation exchange capacity, pH & minerals. Contact:*

**Woods End Laboratory**  
**P.O. Box 50**  
**Ashville, Me. 04607**



*Present*

**FARMSTEAD**

*To*

*A Friend ...*

*With Greetings*



Christmas is coming, and now is the time to think about those many friends who would enjoy a subscription to FARMSTEAD MAGAZINE. For only \$6.00 your friend will receive the next six issues of FARMSTEAD, plus the ANNUAL PLANTING GUIDE. You may enroll additional friends at the special discount rate below. An attractive card announcing your gift will be sent to each friend. Simply fill in the coupons below and mail this page with your payment.

Donor's Name \_\_\_\_\_

Address \_\_\_\_\_

**FARMSTEAD  
MAGAZINE**

Box 111 Freedom, Maine 04941

**1st SUBSCRIPTION — \$6.00**

Please enroll the person listed below as a subscriber to FARMSTEAD. Enclosed is \$6.00 to cover the cost of six regular issues plus ANNUAL Planting Guide.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip

Sign card from:

**FARMSTEAD  
MAGAZINE**

Box 111 Freedom, Maine 04941

**2nd SUBSCRIPTION — \$5.00**

Please enroll the person listed below as a subscriber to FARMSTEAD. Enclosed is \$5.00 to cover the cost of six regular issues plus ANNUAL Planting Guide.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip

Sign card from:

**FARMSTEAD  
MAGAZINE**

Box 111 Freedom, Maine 04941

**3rd SUBSCRIPTION — \$4.00**

Please enroll the person listed below as a subscriber to FARMSTEAD. Enclosed is \$4.00 to cover the cost of six regular issues plus ANNUAL Planting Guide.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip

Sign card from:

**FARMSTEAD  
MAGAZINE**

Box 111 Freedom, Maine 04941

**4th SUBSCRIPTION — \$3.00**

Please enroll the person listed below as a subscriber to FARMSTEAD. Enclosed is \$3.00 to cover the cost of six regular issues plus ANNUAL Planting Guide.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Zip

Sign card from:



The "how to" magazine for gardeners and small farmers

## Invites New Subscribers at a Special Rate . . .

**\$6.00**

Includes

ONE YEAR'S SUBSCRIPTION  
(SEVEN ISSUES)

INCLUDING THE FARMSTEAD ANNUAL

### SUBSCRIBE NOW AND SAVE MONEY

FARMSTEAD is a unique, publication for gardeners and small growers everywhere. We offer authoritative and entertaining articles on all aspects of gardening and small farming — from herbs to greenhouses, from bees to workhorses. What's more, we give encouragement and advice for living self-sufficiently.

We'd like you to become a regular reader of FARMSTEAD, and invite you to subscribe. Enroll right now and receive the next seven issues including the FARMSTEAD ANNUAL for only \$6.00. That's right, we'll send you the next seven publications at a savings off the newsstand price.



### A FARMSTEAD SAMPLER

- Recipes & Preserving
- Ice Fishing
- Folklore
- Spring Pig Power
- Organic gardening tips
- You can raise turkeys
- Low-cost building techniques
- Woodlot cashcrop
- Alternative power sources
- Roadside selling
- How to grow grain
- Notes on goats
- Herb growing
- How to make soap
- Greenhorn tries workhorses
- Growing under glass
- Composting
- Helen Nearing and E.B. White
- Hardy vegetable varieties
- Co-op farming
- Restoring old apple orchards
- Wild edibles



## FARMSTEAD MAGAZINE

Box 111, Freedom, Maine 04941

Please enroll me as a subscriber to FARMSTEAD, I enclose ☐ check ☐ money order, for \$6.00. I understand this offer includes a year's subscription (seven issues) including FARMSTEAD ANNUAL.

NAME: .....

ADDRESS: .....

ZIP

MAIL COUPON TODAY !!





THE SEVEN GREENHOUSES OF

**m. a. clark**

FOR ALL YOUR

**gardening  
needs**

In the past few years there has been a marked increase in the number of people who garden. Some of this growth has been by its nature economic and some environmental. Whatever your persuasion M. A. CLARK has all the natural and synthetic materials and ingredients required for a healthy and bountiful garden.

BULK SEED

PERENNIALS

PLANT FOODS

FRUIT TREES

SOIL CONDITIONERS

PEST CONTROL AGENTS

SEEDLINGS

TOOLS

INSECT TRAPS

THE SEVEN GREENHOUSES OF

M. A. CLARK

46 MAIN ST.

ORONO

866-2100

52 PARK ST.

ELLSWORTH

667-2000