

# FARMSTEAD MAGAZINE

Home Gardening & Small Farming



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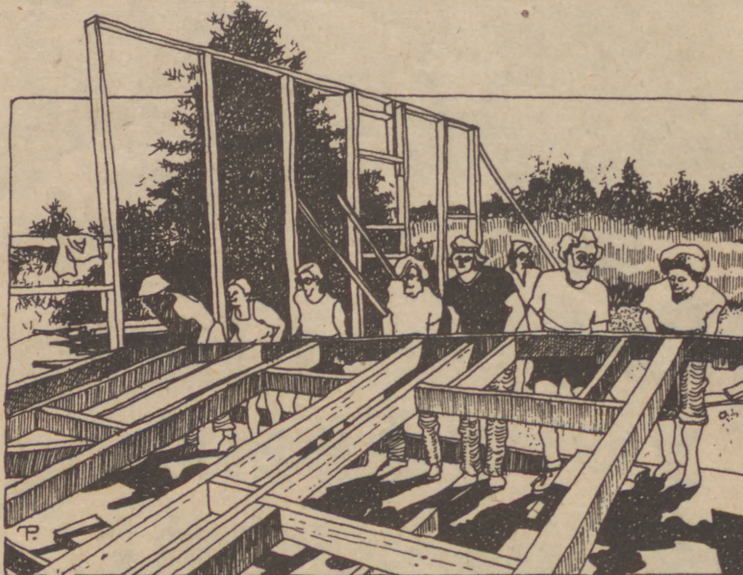


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## STAFF

**Charlie Wing** is a former Bowdoin College physics professor, co-author of the book, *From the Ground Up*, and is the director and teacher at Cornerstones.

**Tony Jackson** is a registered architect with a strong belief in people doing more for themselves. Tony is teaching and conducting the design workshop.

**John Crowley** has designed and built several passive solar homes. John will be teaching and is the director of the Hands-On Program.

**Susan Black Wing** is the general coordinator. Susan has been involved in the construction and retrofitting of several houses.

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# FARMSTEAD

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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.

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## Letters

Dear FARMSTEAD:

I'm now in the Air Force for a 4-year tour but am planning to return to Maine and homestead. I have lived in Unity, Me., on a farm, attended Colby College '75 grad. and plan to return to central Maine area. I have seen your magazine and really enjoy it. Very informative and interesting. I'd really like to see some articles on owner-built houses/homesteads in Maine, their difficulties, etc. I want to build my own homestead and am working on several designs now. Sincerely,

Joe Alex  
Craig AFB

Dear FARMSTEAD:

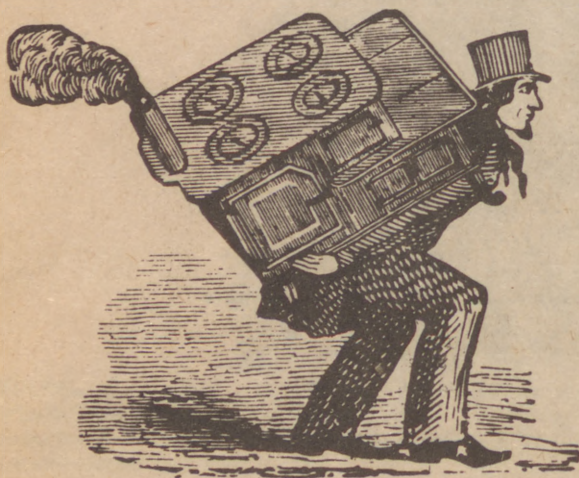
Here are some remarks:

In your fall issue I enjoyed especially the article on "Old Time Apples"; I am, for the last two years, a customer of Henry Leuthardt, Inc., and am very pleased with the trees they are shipping. I also was interested in your table of Disease Resistant Fruit Trees, page 13 of the annual issue. However, I nearly lost a Golden Delicious, grafted on wild stock in our fields a few years ago, to scab; I thought the tree dead, however, this spring it came up again.

Your article on "Chimneys", also in the Fall issue, seemed to be very well done; Hopefully, I will not be faced with chimney problems for the foreseeable future.

When I intended to write this letter, I especially wanted to make a suggestion for your annual report . . . now it comes a little late:

Once and again, more and more, we read about which crops should/should not follow each other, or which ones might be even planted together. Why not set up a cross reference table, with both lines and columns for all sorts of crops. Put a symbol like "x" in any intersection when the crop in the line may well be followed by the crop in the column. A symbol "o" might indicate the opposite, and a symbol "." that there is no significance whether crop "b", in the column, is following crop "a", in the line. For instance, the intersection between line "potato" and column "strawberry" should have the symbol "o": strawberries, supposedly, should not be planted where potatoes



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had been grown (I did it last fall, anyhow!) And I learned that tomatoes are doing very well when they are planted in the same place every year. So we might find an "x" in the intersection of the line "tomato" with the column "tomato."

Another observation: We always like to grow dill. However, in our separate patch for dill, it did rather poorly, got very fast into seeds, and the plants did not look too healthy. Now I found a new way: We grow it now in our row of asparagus, and we are getting big, healthy plants which last through most of the summer. Most of them come up by themselves. But I also save some of the seeds to be put between the asparagus during early summer to have fresh dill throughout the summer.

With my congratulations to your success, so far, and wishing you more of it for the coming year, sincerely yours,

Wolfgang Harries  
Lamoine, ME

Dear FARMSTEAD:

I wasn't planning on renewing my subscription to Farmstead Magazine at the time of the last renewal notice. However, the last two issues of Farmstead changed my mind. I really didn't want to hear about some city folks' newly acquired experiences in the back hills of Maine. I wanted to learn about something new that I could use. Your articles on making charcoal and smoking bantams is what changed my mind; and with my renewed faith, I'll renew my subscription. Sincerely,

Ken Krantz

Dear FARMSTEAD:

I had to spend most of '76 being sick, and recovering after a trip to the hospital. However, I'm "up 'n' at it" again, and Spring '77 will find me "good 's new"! There's a lot of work to catch up, and with the worsening economy, I'm changing a lot of my plans, for I think that despite all of the hollering we're hearing these days — it's heading right into a full-scale depression — somewhat like that of the '30's. This time, it'll be worse because there's so much more that is involved, than back then.

I'm lucky — very lucky — and grateful — to have with me a husky young partner, and though I haven't the full vigor of youth myself, I do have a lot of know-how, and experience in homesteading, for I know it'll work, and don't have to wonder if it will work! So — everything is basically set up as it was when I homesteaded through the '30's and the WWII years when — though there were jobs again, it did little good because the pay didn't buy needed items. They'd "gone to war", or to foreign black-markets, or were on the Unavailable List anyway, — while profiteers became millionaires! Unavailable, or "inflated", or "Energy Crisis problems", — "the same difference" — for we'll have to provide for ourselves just the same, — and we'd better buckle down to work and "setting up", for as much self-sufficiency as each household finds itself able to achieve!

We bought a milk-goat recently, and next week will take delivery of a nice Toggenburg doe due to freshen late in May. There's a "pig deal" on. We'll buy one, and raise two more for someone else who has agreed to supply all of the grain for the care of their two. This

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# 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.*

"I have an abundant supply of horse manure from my neighbors. I've heard that it was harmful to apply fresh horse manure to garden soil before planting. Since it is spring already and I haven't time to let the manure decompose, what should I do?"

Assuming that the horse manure is well-mixed with straw (it would make a difference whether it were or not), it shouldn't hurt to apply some manure to the soil before planting, as long as it's tilled into the soil well and two to four weeks are allowed before planting. If your supply is unlimited, till some of it into your soil now and leave some to decompose (not rot) to apply later.

Actually, manure handling is a very complex subject and the objective should be to preserve as many of its nutrients as possible. The main problems are in the volatilization of nitrogen and leaching of potassium. You can control the leaching of potassium by keeping manure out of the rain or getting it onto the soil rapidly so the leaching



is into the soil where you want it. It is much more difficult to control the loss of nitrogen. Most nitrogen in fresh manure is in the form of urea. Urea is rapidly transformed into ammonium,  $\text{NH}_3$ , by micro-organisms in the manure and bedding. Ammonium combines with dissolved carbon dioxide and forms ammonium carbonate. Nitrogen can stay in this state as long as conditions are moist, but on drying, ammonium gas is released. This is what happens when fresh manure is spread and allowed to dry on the surface of the soil (a good reason for tilling it in immediately).

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Another process that fixes nitrogen is nitrification, which converts nitrogen into non-volatile nitrate. This happens to ammonium under aerobic conditions (during composting) but often the reaction is not rapid enough to completely prevent the volatilization of some ammonium and loss of some nitrogen. When composting manure under even ideal conditions you do lose some nitrogen this way, but after composting is completed, the nitrogen is stable. Nitrate is soluble and finished compost must be kept out of the rain.

The amount of nitrogen lost is somewhat related to the percentage of nitrogen in the raw material composted and you don't want more than 1.5% nitrogen in the material when you begin. This is the reason for adding a lot of carbonaceous material to manure before composting.

Actually, the best way to preserve nitrogen manure is by a process of fermentation. Conditions for fermentation are attained when manure is mixed with a lot of bedding, compacted, and left in a medium dry condition. This condition might be relatively difficult for a gardener to simulate, however, and you may decide the best option is to aerobically compost the manure after adding a lot of carbonaceous material.

This in no way covers all the complexities of manure handling and every situation probably dictates a different answer. Hopefully, these details will help you make the best decision for your situation. A very good article in *The Maine Organic Farmer and Gardener* by Will Brinton titled "Manure Management", Vol. III No. 6, Nov.-Dec. '76 might be of help to those further interested in the topic.



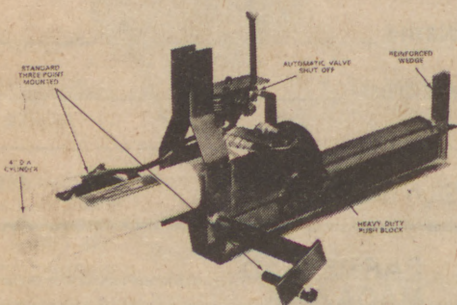
"Where can I find a source of *Acoros calamus*, also called sweet grass or sweetflag?"

Sweetflag is a tall (5 foot) plant found in wet areas throughout the U.S. Its leaves are yellow-green and sword shaped. The plants spread by underground rhizomes. These rhizomes were once used to make a spicy colonial candy. Euell Gibbons supplies a recipe for candied calamus root in *Stalking the Wild Asparagus* and also suggests using the young leaves and peeled stalks in salad. Conley's Garden Center, Boothbay Harbor, Me. 04538, offers calamus plants in their catalog.

"Where can I get red spring wheat seed, the bread type, for planting this year?"

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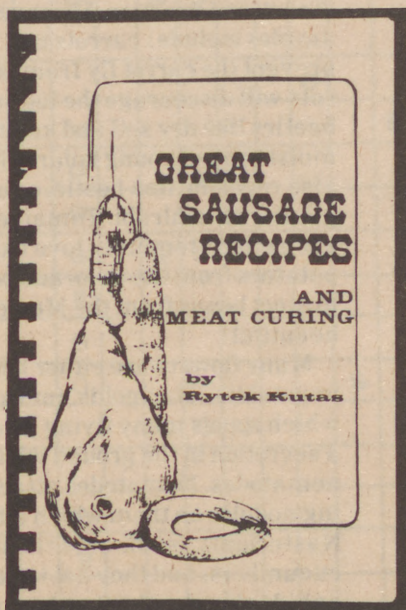
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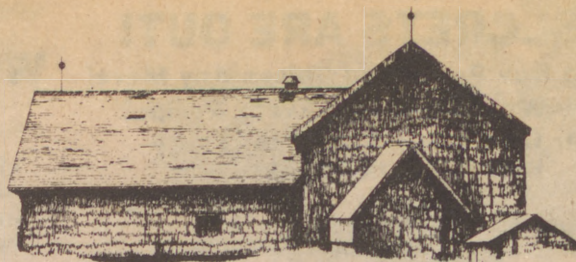
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# Looking East



by George Frangoulis

## Why Not Plant Companionably?

Warm weather is here at last, and I believe in earnest. Although night time temperatures have dipped down into the 30's, the days have been splendidly sunny and sultry. We patient Maine gardeners can now think seriously about planting peas, spinach and other hardy vegetables.

This year our garden presents an extra challenge — we've moved to Freedom and will be tilling new ground. During the past few weeks I have plotted and planned numerous gardens on paper. Each succeeding garden layout is better organized, more refined and BIGGER than the last. But one thing they all share is my plan to plant companionably.

Companion planting is a fascinating and, I'm convinced, little understood, science about the inter-relationship of plants. To appreciate and practice this method of gardening, one has to know how one plant assists another. Plants that help each other grow can provide nutrients, repel insects and other pests, provide a better physical environment, attract beneficial insects and birds, as well as provide natural disease resistance.

Of course, this sort of plant-to-plant dynamic action can operate in reverse. A vivid example of this occurred in my garden two years ago. Unknowingly, I planted a row of fennel next to a row of fava, or broad, beans. The herb thrived, but the bean plants were stunted in growth and failed to develop mature pods. Later research revealed fennel to be highly unfriendly to most other plants, especially beans.

With that unfortunate lesson learned, however, I am concentrating on growing plants that are friendly neighbors to each other. A classic example of successful companion planting is pumpkins with corn. In this case, the benefit of growing these two vegetables together is a better physical environment for both. A profuse growth of large pumpkin leaves provides a living mulch for the corn; while the mature corn gives the pumpkin plants partial shade from the wilting sun of mid-summer. I also believe that the large pumpkin leaves help keep raccoons from eating the corn. The reason is that raccoons are skittish and don't like underbrush they can't see trouble through.

Rabbits are supposed to be repelled by onions, so my advice is to plant onions in and around the lettuce. Dill attracts honey bees, while eggplant attracts the nasty Colorado beetle. Because potatoes are susceptible to the beetle, interplant eggplant with the potatoes, and you'll be able to harvest plenty of both. However, potato plants near apple trees

make potatoes susceptible to blight. Also, tomatoes and potatoes shouldn't be grown close together.

The possible combinations of plants that either like or dislike each other is extensive. A serious gardener should research the subject through both theory and practice. However, a few additional examples include: carrots and leeks — the leeks help prevent the carrot fly from laying eggs, and the carrots will discourage the leek moth as well. Flea beetles like dry soil and kohlrabi; keep the soil moist around young kohlrabi seedlings. Lettuce will also repel the flea beetle, so use it as a companion plant with kohlrabi. Tomatoes and asparagus love each other; tomatoes love basil, too. Beans protect potatoes from the Colorado beetle, and potatoes protect beans from the Mexican bean beetle . . . beautiful!

Many flowers are either friends or foes to garden vegetables. Marigolds, for example, give off a scent which repels many flying insects; and they also put a secretion in the ground which works against nematodes. Nematodes attack tomato roots, forming nodules on them which inhibit plant growth. Nasturiums, on the other hand, are good near cucumbers, and they act to gather destructive aphids abundantly. Sunflowers, however, have a bad effect upon anything planted nearby. Apparently, there is a chemical in the sunflower leaf which enters the soil whenever it rains. This is probably a protective device for the sunflower, but, alas, does not allow fellow plants to do well around it.

Finally, weeds needn't be considered all bad. The roots of many weeds penetrate deeply into the subsoil and bring up nutrients, which both we and the vegetables need. Pigweed and Lambs quarter bring up trace minerals, such as iron and potassium, depositing them in the topsoil where other plants, such as parsley, can pick them up. Weeds, such as plantain, capture minerals in great abundance from the topsoil and store them until released through decomposition. Lambs quarter and purslane, which are edible, bring up trace elements and also break up the soil to make it easy for root vegetables, like beets, to develop. One caution, however, don't allow weeds to go to seed in the garden. Pull them before they go to seed and put them in your compost pile where the heat will decompose the seeds.

All in all, this year's garden will be another "first year" garden, with all its special challenges and opportunities. Although it will require extra attention, I feel that companion planting will help our garden grow even better. Perhaps the chart on the facing page can help you plant companionably, too.

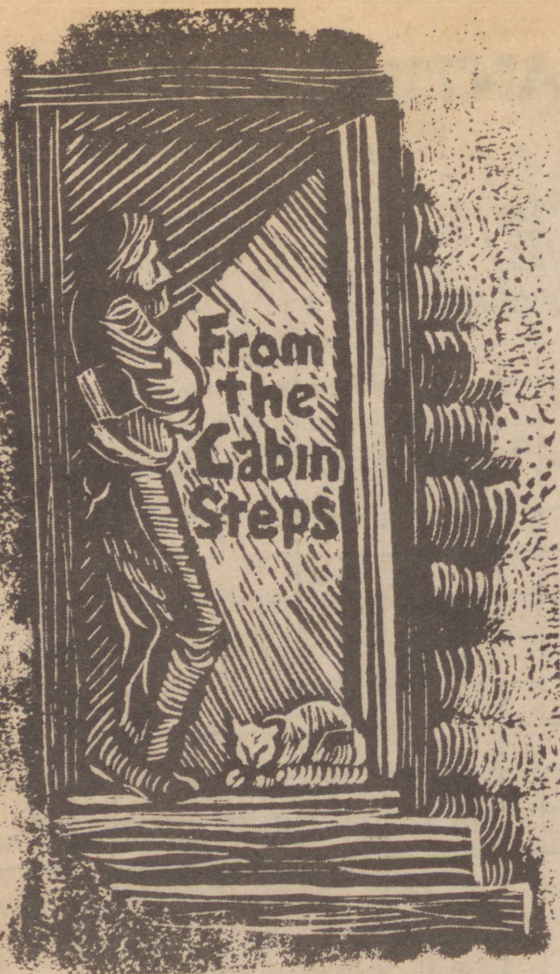


# COMPANION PLANTING CHART

LEGEND  
G = good  
B = bad

	ASPARAGUS	BEANS	BEETS	BROCCOLI	CABBAGE	CARROTS	CAULIFLOWER	CELERY	CORN	CUCUMBER	EGGPLANT	KOHLRABI	LEEKs	LETTUCE	MUSKMELONS	ONIONS	PEAS	PEPPERS	POTATOES	PUMPKINS	RADISHES	SQUASH	TOMATOES	WATERMELONS
ASPARAGUS																							G	
BASIL	G				G				B									G						
BEANS			G	B			G	G		G	B					B	G		G					
BEETS		G		G	G						G					G				G				
BROCCOLI																G								
CABBAGE							G									G								
CAMOMILE									B															
CARROTS		G										G	G				G			G				
CAULIFLOWER		G					G																	
CELERY		G		G	G	G						G												
CHIVES		B																						
CORN		G													G		G		G		G	B	G	
CUCUMBER		G						G									G		B	G				
DILL				G	G	G			B															
EGGPLANT																		G						
FENNEL		B																					B	
GARLIC		B														G	B							
HORSERADISH									B									G						
KOHLRABI			G										G										B	
LEEKs		B				G	G																	
LETTUCE						G					G					G				G				
MINT									B															
MUSKMELONS								G												G				
ONIONS		B	G	G	G	G	G				G	G	G				B							
OREGANO						G																		
PARSLEY	G																							
PARSNIPS																				G				
PEAS									G								B							
PIGWEEED										G													G	
POTATOES		G																					B	
PUMPKINS									G									B						
RADISHES										G				G	G		G				G			
SAGE						G					B													
SQUASH									G									B		G				
SUNFLOWER		B																						
TOMATOES	G				B	G	G				B					G		B						





# Tax Breaks for the Self-Sufficient

by Dennis King

Every year when I fill out my income tax forms, I count my blessings! You think I'm crazy? Well, you're not the first one who's thought so, but this time you're wrong. Tax time makes me realize how wonderful it is that the government has not yet figured out a way to tax the value of the things I do for myself. When I work for myself no cash changes hands, but I still receive value for my labor. The government only knows how to count transactions where cash changes hands. As long as no whiz-kid in the IRS comes up with a method to charge this, there will always be a *tax break for the self-sufficient*.

A tax-free income is not the only advantage. Have you ever stopped to figure out just how much you're worth when you work for yourself? Some people have, but most haven't. I suspect it's because of the meaning that the word "work" has taken on in the western world. To "work" you must be "employed". To work you must make money. The more money you make, the more successful you are. These are treasured beliefs in our market-oriented society, and they are drummed into us from birth. But there is more to our economy than just the market. There is also the collective economy (mostly government) and the household economy (the value of

labor and capital put to work for yourself or your family). Scott Burns has written a book, *The Household Economy*, Beacon Press, which eloquently and precisely points out the value of self-sufficient labor and capital. He says he has never taken any joy in being unconventional, but this book could well revolutionize some of our thinking.

Did you know that "the value of household labor amounts to nearly a third of the gross national product and about one-half of the disposable consumer income?" That's what Burns says and the data is presented in the book to prove it. What's equally shocking is that the household and collective economics are growing at a much faster rate than the market economy. "The power and dominance of the marketplace is receding as its share of national wealth diminishes."

These are pretty powerful words and I wonder if they're being heard on Madison Avenue. We've always been told that the only reason for doing things for yourself was if you couldn't make enough money to pay someone else to do it. After all, don't most successful people make a lot of money and hire servants to do their household work? We are supposed to be consumers and consume products of the market, not consume our own products. We aren't adding anything to the GNP when we consume our own products and labor, and after all, doesn't GNP



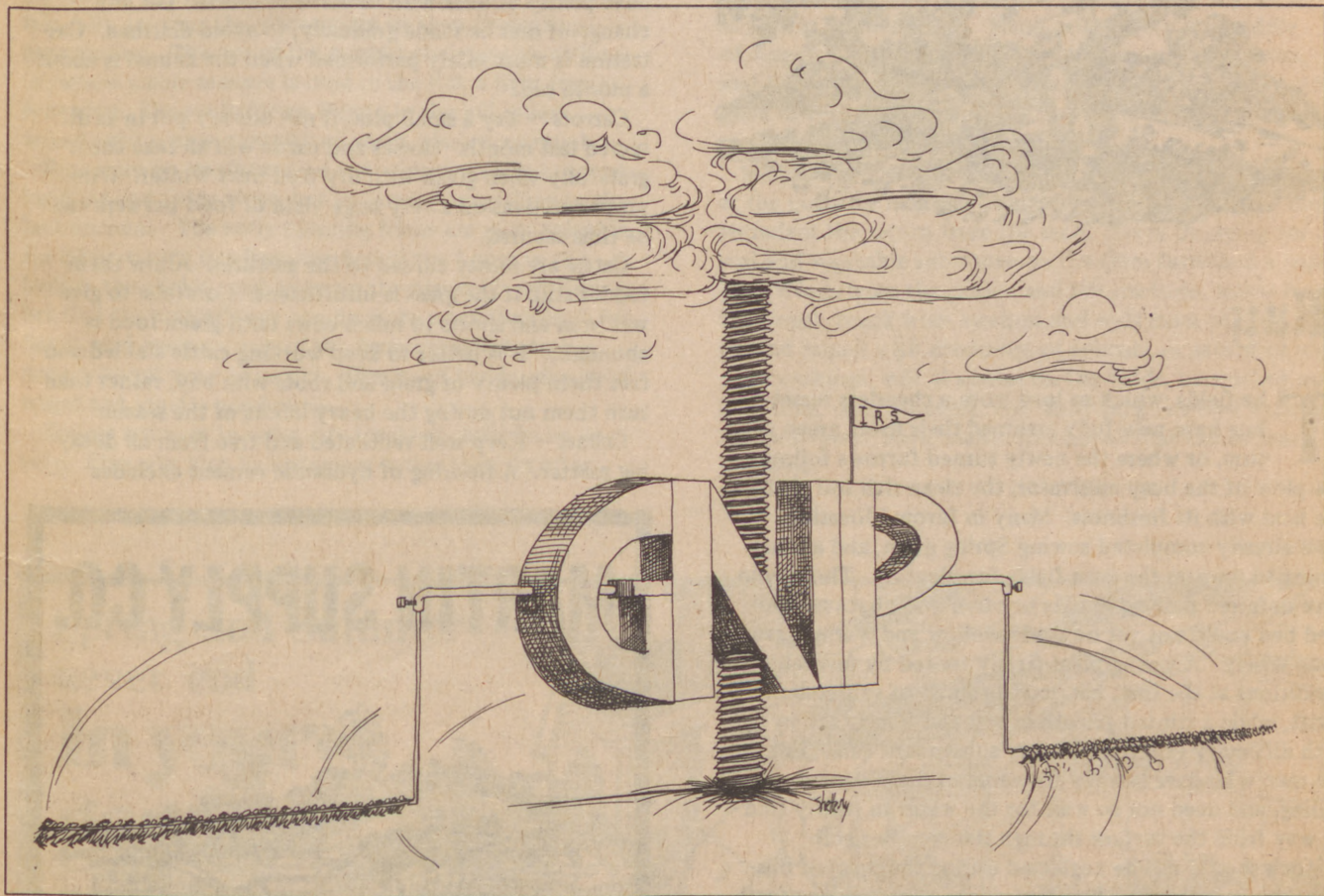
measure our "standard of living"? Madison Avenue would certainly like us to think so because another of Burns' interesting facts is that over \$20 billion, 2% of the GNP, is spent on advertising to convince us we should be passive consumers.

I've always liked to do things for myself and never used to think too much about it. But I never really liked being an auto mechanic. When I bought my first car, a '58 Rambler, I decided I'd better learn something about it. Luckily, I had a cousin who ran a service station and I took the car to him for service and always watched him, asking a lot of questions. I remember talking my father-in-law into helping me put on new brake shoes, also. As time went by I began doing more of the work myself and

values than money. I still like Thoreau's statement best; "the cost of a thing, is the amount of what I will call life, which is required to be exchanged for it, immediately or in the long run."

People who want to be self-sufficient are often accused of copping-out of our productive society. Remember production implies work for money. Self-sufficient people are no less productive than those entirely in the market economy. They have simply internalized production within their home or family unit. True, they may not be producing as much for the outside market, but they are also not putting as many demands on that market either.

I also suspect that producing for yourself consumes fewer resources per unit of production than the market econ-



was quite proud of the fact that I drove a '69 Ford almost 100,000 miles without it hardly seeing the inside of a gas station. I didn't do it because I liked being a mechanic, but I always figured I was making \$10/hour while working on my car, and I've never had a job that paid that much. In other words, I could get my car fixed in less time by doing it myself than I could by working in the market economy, and making enough money to pay someone else to fix it.

**I** use this as an example because there are even more advantages when doing things you like to do. I'd go out and grub in the garden if I thought it was worth a dollar an hour, or even less. I get recreational value as well as food out of it. But it doesn't matter what kind of work it is, it's the time that is of value. Our market orientation has created the phrase "time is money." I don't believe it. Time has value, but there are other

omy consumes. This is only logical since we can eliminate much of the transportation, overhead and so-called middleman costs and resources.

I'm not trying to discount work for money in the market economy. Even the best of us can probably only internalize 75% of our production and most of us will never go above 50%. There are many products probably best supplied by the market. The problem is that our system of accounting totally discounts work done for yourself; it is never added into any of our economic yardsticks. As a result, most people and institutions consider it of no value, or even as a negative value because it is not measured in the GNP. Self-sufficient work is, however, of value and most farmsteaders know it. Since the proportion of self-sufficient work to market-economy work is increasing in our total economy, self-sufficient people might even be considered leaders. That's a pleasant thought.



# The Wise and Useful Farm and Garden Guide



## May

**T**he fields, which so long wore a cheerless russet hue have now fully assumed their lively green vesture, or where the newly turned furrows follow the plow of the busy cultivator, the clean rich soil gladdens the heat with its freshness. Many in favored locations have already completed sowing Spring grain, and are hastening to prepare the corn fields for planting. Those who have deferred putting in oats or other grain because the seed bed could not yet be made mellow and warm, have done wisely. A young plant firmly rooted by favorable conditions at the first, has good promise of subsequent thrift, while a stunted growth in wet and lumpy soil is with difficulty improved by any subsequent care. Happy the men who have learned the value of draining and subsoiling, and need not to wait for the water to slowly find its way from the surface through the compact soil.

Stock should not be neglected during the press of business this month. The first few weeks after bringing forth their young is a trying season with them, and they should have corresponding care. In all cases it is easier to prevent their degenerating than to recruit them when low in flesh.

Beans are worthy of attention as a field crop. They derive a large portion of their nourishment from the air, and will produce well where corn would fail. Plant as soon as all danger from frosts is past — they are too tender to bear severe weather. Cultivate bush varieties in rows two and a half feet apart. Limas and others usually grown on poles may also be put in drills and supported on wire trellises. Some claim that they yield better when trained horizontally, on leaders not more than five or

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*The wisdom of our farming forefathers shouldn't be forgotten, and for this reason we present, herewith, these monthly helpful hints from the 1859 American Agriculturist.*

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six feet high. In planting, cover lightly, say one half to three fourths of an inch.

**Buildings** — If any are to be painted this season, it is better done now than during the Summer, when the hot sun dries it too rapidly. Fall painting is preferable where it can be done. In erecting new outbuildings, provide for the introduction of water under cover for stock, and ample accommodations for stabling, and for the manufacture and preservation of manure.

Calves kept for stock, will pay well for liberal feeding. Give plenty of milk with oatmeal or shorts. Let any change of diet be made gradually, to avoid diarrhea. Castration is most safely performed when the animal is about a month old.

**Carrots** — Try a small plot, if not already put in as directed last month. Horses and cattle will all take them gratefully when given with dry feed next Winter. With proper cultivation a very large yield of food per acre can be thus secured.

Cattle are mostly turned to the pastures. Allow them fodder still, if the grass is insufficient. Continue to give wet bran and shorts to milch cows until green food is abundant. It is better to keep working cattle stabled and feed them plenty of grain and roots with hay, rather than turn them out during the heavy labors of the season.

**Cellars** — Keep well ventilated and free from all decaying matter. A flooring of hydraulic cement excludes

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dampness from the ground, gives a level surface, is less infested by rats, and affords a cool place of deposit for butter, meat, etc., in Summer.

Corn gains nothing by haste in planting. Many cultivators turn over the sod early, and leave it until the grass roots have started; then, when the ground is warm and the weather settled, the field is well harrowed, which checks the growth of grass and weeds and renders the after cultivation easier. Marking out the rows should be done with a very light plow, or better, with a marker made of a strip of scantling with pins set at the right distance for the rows, and two handles like a plow to guide it. The whiffletree can be attached by two trace chains passing to staples near the ends of the scantling. Deep furrows to receive the seed remain wet a long time if much rain falls, injuring the young grain or even preventing germination. The use of the marker obviates this difficulty; where stable manure is used in the hill, a light furrow is needed. Use no Peruvian Guano in the hill unless mixed with a large quantity of earth, plaster, or muck.

Economy on the farm does not consist merely in spending little and living close, but in turning everything to the best account. The early morning hours are most valuable for labor — turn out from the bed in the house to the beds in the garden, and wake up the plants there. Remember that the master's eye can do more work than both his hands, and leave no part of the farm operations to be done without your oversight. Hire good hands, give good wages and require good work.

Fences not now in order, are teaching cattle to be unruly. Five rails high in Spring are better than six after

stock have learned to jump or throw down fences. Frequently take a survey of every part of the enclosures, that all may be kept safe. A little care in this particular may prevent the loss of a cow by breaking into a green clover field, or the rooting up of the garden by a drove of hogs.

Flax and Hemp should be sown.

Grain Fields — Allow no stock to enter upon those sown last month, or the Winter grain. Now is a favorable time to pull out dock, cockle, Canada thistles and other foul weeds that will injure the growth and depreciate the value of the grain. Choose a day immediately after a rain when they can be drawn out easily. Unless the ground is in good heart, sow on guano, lime, or wood ashes.

Grass Seed — Sow upon grain fields not already seeded. It is safer done in April. Many prefer from the middle of August to the last of September for seeding to grass, and find it pays to put on the seed alone, instead of with grain as is so generally done. To ensure a good catch, make the land rich.

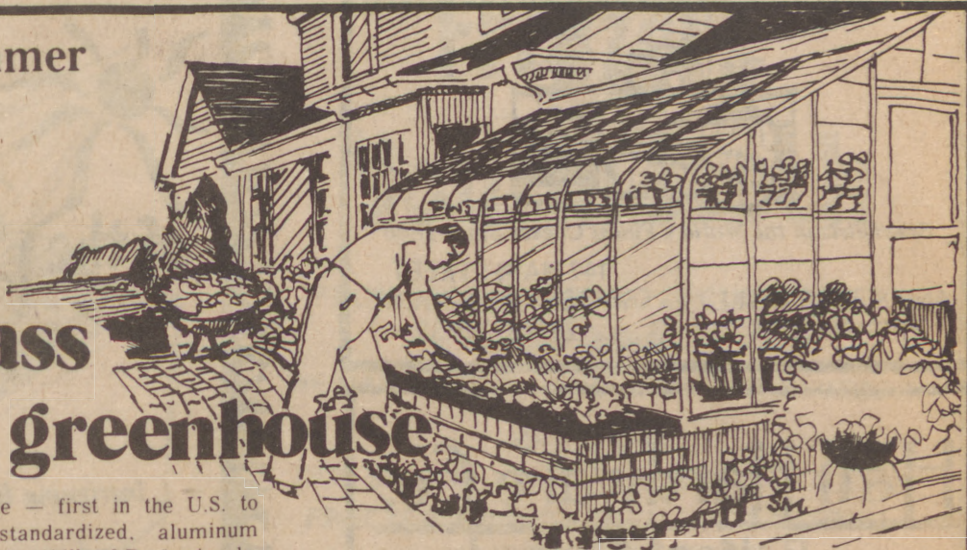
Manures properly prepared, are plant-food. The greater the quantity manufactured and properly used, the more abundant the return from the land. Every decaying animal and vegetable substance on the farm furnished a supply. Weeds from the garden and the roadside, leaves from the forest, muck from swamps and sods from plowed ground mixed with droppings of animals, or saturated with yard washings, will, if spread on the fields, be worked up into corn, oats, potatoes, etc. Enriching the land enriches the cultivator. Save, make, and use all that can be made available.

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## June

**T**he hoe and the cultivator would be appropriate emblems of the work for the farm this month. Vegetation now pushes forward with rapid growth. Not only are the staple crops taking firmer hold of the soil, and expanding with cheering promise, but ragweed, daisy, dock, thistles, and a numerous horde of foul weeds also feel the quickening sunshine, and send out their hardy roots to rob the field and vex the husbandman. These are to be subdued; and, scarcely less important, the soil needs frequent stirring, to keep it in right mechanical condition. The roots of plants require air and water. If the surface become crusted, evaporation is obstructed, the moisture from the deeper layer of the soil does not rise

freely, and the air and dews cannot readily enter from above. The organic matter decomposes but slowly under such circumstances, the plants are stunted for nourishment, and their growth is checked. Hoeing by hand or by horse power, is the remedy for weeds and for hide-bound soil. There may also yet be vacant spots to replant with corn, or to fill with other seasonable crops. He who has a mind to work, will now find enough to employ him.

Buckwheat yields a quick return, and is an available crop for lands too wet for Spring plowing. It may also replace corn destroyed by worms or other casualties. Make the soil fine and mellow, and use half a bushel to three pecks of seed per acre.

Haying should commence as soon as the seed begins to form on grass or clover, that is just as the bloom passes away. After this, part of the nourishing matters of the stalk change to woody fiber. Hay, especially clover, cured without much exposure to the sun, will be sweeter. Pout it up in narrow cocks, and provide hay caps for protection from rain. A farmer having much meadow, who has no mowing machine, is behind the times. The horse pitchfork will also expedite the work.

Manures — Roadside weeds, and sods from waste corners will add much to the manure heap, if properly prepared. Keep a supply in the pig pen, and also in the cow yard. They will absorb and save the liquid excrements. If an animal die, turn it to account, by covering with a mound of muck or loam.

Swine — Keep them out of the highway. Every farm should, if practicable, have an enclosure with running water, for their use. Allow them the range of the orchard to de-

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your grubs and fruit infested with worms. If kept confined, give them plenty of green food, with sods, muck, leaves, and straw, to amuse themselves in rooting and manufacturing manure. Have no more than can be kept growing. Mix ground feed with wash from the dairy, and allow it to ferment before using.

#### KITCHEN AND FRUIT GARDEN

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

**Asparagus** — Keep all weeds down, and the surface loosened by frequent hoeing. Do not continue the cutting later than the tenth of the month; late cropping injures the bed.

**Beans** — Train running varieties to poles or trellises. Do not hoe when wet, avoid throwing earth upon the leaves. Early Kidneys and Limas may still be planted.

**Cabbage and Cauliflower** — Sow seed for latest transplanting. Set out for Autumn and Winter use. Frequent and thorough hoeing will induce rapid growth. The cut worm and other insects must be watched and destroyed. Replace stunted plants, or those eaten off by vermin.

**Carrots** will succeed well if sown through last month was more favorable. Destroy weeds before they become troublesome. Thin early to six inches apart in the rows.

If left too long, they run up spindling, and fall and are checked in growth when thinned.

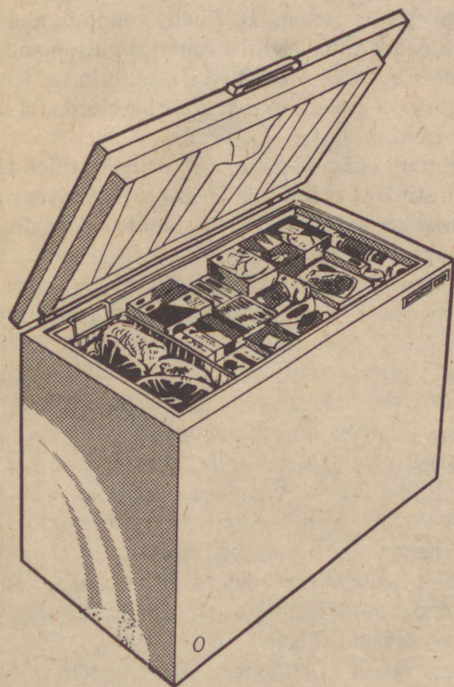
**Celery** — Set plants for the general crop, in trenches, watering and shading as long as needed to prevent wilting. Some gardeners prefer setting their celery plants upon the surface, in deep rich soil, leaving it to attain a large growth of leaf, and then hilling it high, to blanch the stalks.

**Corn** — Continue to plant at intervals of ten to twelve days, to prolong the season of supplies for the table. Vacant spots or plots from which early vegetables are ready to be gathered, may be planted, to be cultivated after the first growth is removed.

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

**Fruit** — Take off nearly or quite all from plants or trees set out the present season. The strength of the plant is needed to recover from the check caused by removing. Thin out clusters from over bearing trees or bushes. Protect from birds with netting. Bright pieces of tin suspended in trees or around the fruit plot, will frighten away many of the feathered plunderers.

**Grapes** — Do not allow the rapidly growing vines to become a tangled mat of foliage. Remove all shoots that interfere with proper training. Where several push out at a single joint, leave only one or two. If more than two bunches of fruit set on a single spur, thin them out, one bunch alone will yield finer fruit. Pinch off the ends of the bearing branches at two or three buds beyond the last cluster.



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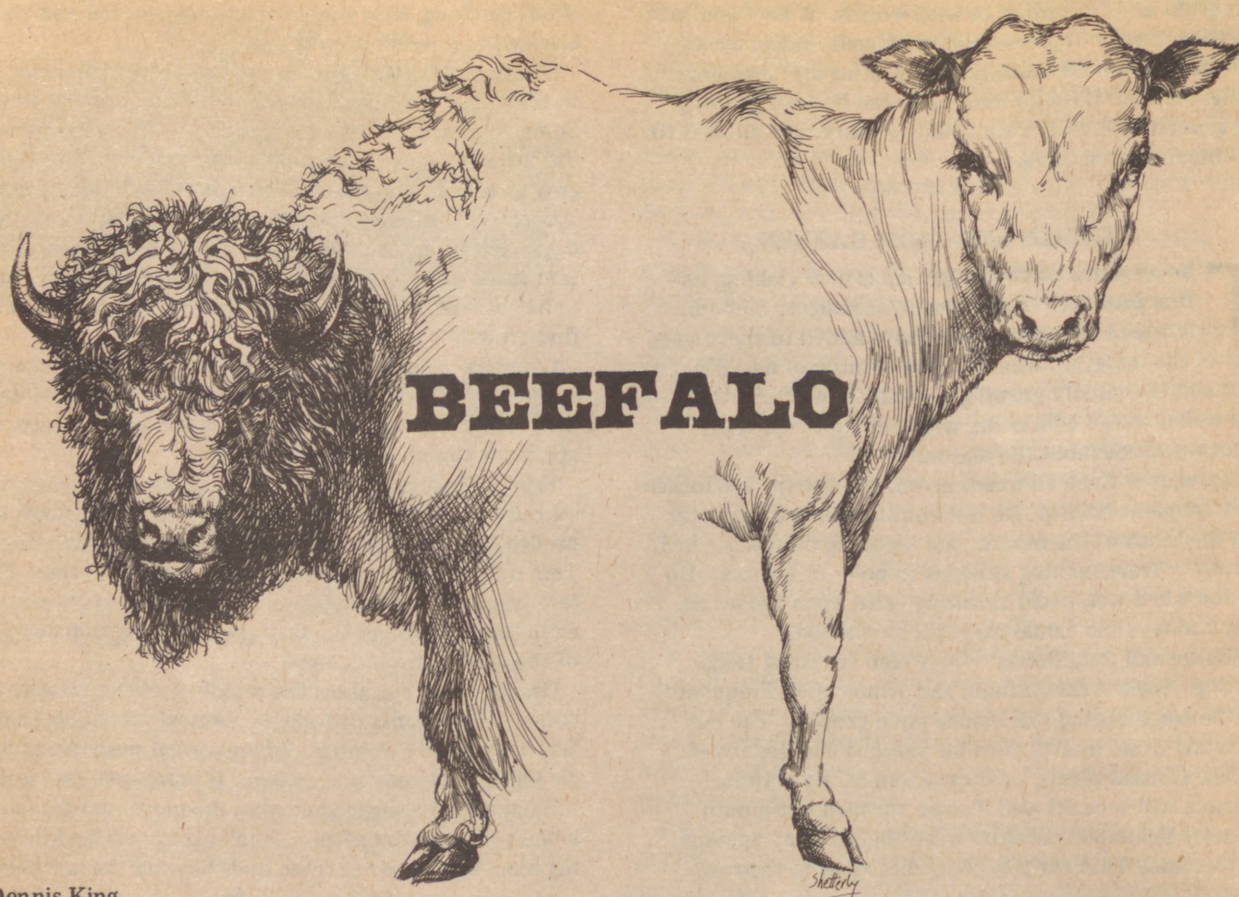
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by Dennis King

**B**eefalos are going to pay off for the backyard farmer. People will be able to raise their own beef, cheaply," says Mike Swain who operates "Mainly Beef" with his sister, Mary, in Litchfield, Maine. Mike got started with Beefalos a few years ago by breeding a few Holsteins with Beefalo semen at the large dairy farm where he works. Mary says her ultimate aim is to have fifteen producing purebred Beefalo cows on their 150 acre family farm. Mike and Mary want to produce inexpensive, quality beef and they believe Beefalos are the perfect breed for this. If they're right, they may do very well in the process, since they sold their first half-blood Beefalo cow with her three-quarter blood heifer calf for \$4,000 at a Beefalo production sale.

So what's all the hullabaloo about Beefalos? Is the promotional literature that's been flying around really true? Since the story came out a few years ago, I've always been of the opinion that it was too good to be true, but a recent visit with Mike and Mary Swain has at least changed me into a passive optimist about the future of this new breed, and with it the future of beef, forage-fed beef.

It all started about fifteen years ago when Bud Basolo, a California cattle breeder, was finally successful at producing a fertile hybrid between domestic cattle and American bison. Cattlemen had been trying this for years, but the hybrids were always infertile, as are mules (donkey-horse hybrids). Basolo's first breeding animal was a holstein-bison cross. I'm told it looked rather weird, but it

was fertile. That's all that mattered. From this original animal Basolo kept cross breeding and cross breeding until he came up with a combination of bison and beef cattle breeds that would breed true and be of uniform, beef cattle-like conformation. He finally found it, and the Beefalo breed is three-eighths American bison and five-eighths beef breeds. Almost all the bulls in service are three-eighths charolais, one-quarter hereford and three-eighths bison.

The primary characteristic of this breed which has created such a stir is that it needs no grain. It thrives on roughage, such as grass, hay and silage, alone. The calves will reach slaughter weight of 1,000 pounds at twelve to fourteen months of age, with absolutely no grain. It takes an intensive grain feeding program to get most cattle breeds to 1,000 pounds by fourteen months. Left on low-quality forage alone, most cattle would be at least two years old by the time they reached slaughter weight.

Mary says they won't even eat grain if they have the choice of grain or hay. "I've demonstrated this to people at fairs. I gave them hay and a handful of grain. They wouldn't eat the grain." And these were only half-breed Beefalo she was talking about. Most of the characteristics of the breed are carried by animals that are one-half Beefalo and one-half other cattle breeds, in other words, only three-sixteenths bison.

Mary has raised a half Angus, half Holstein calf together with a half Beefalo calf to compare some of the costs. She says the Angus-Holstein calf consumed \$350 worth of grain over thirteen months. The Beefalo consumed a ton of beet pulp (\$120) in the same period, but no grain.

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*Dennis King is an Associate Editor of Farmstead.*

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They both ate hay and the Beefalo undoubtedly ate more, but hay is a lot cheaper than grain.

Bud Basolo has been quoted as saying he didn't want to be known as a man who produced a new novelty breed but as the man who made "cheap beef" possible. It is estimated that Beefalo cuts will be 25 to 40% cheaper than the average choice beef. The Canadians must believe this because the only bull that Basolo has sold so far went to a Canadian syndicate for 2.5 million dollars.

"Beefalos are tremendous foragers. When the other cattle are in the pasture, the Beefalos often forage in the woods," says Mike Swain. That's one of the problems with modern cattle breeds. They've been bred for easy management in confinement and are often not good foragers on their own. One of the best studies which I've seen which explains why beefalos utilize low quality forage better than normal breeds of cattle came from Poland. Researchers compared the digestibility of nutrients in feed by European bison (closely related to American bison) and cattle. Bison digested protein, fat and lignin more efficiently than cattle. Cattle equal bison in cellulose digestion and the digestion of readily soluble carbohydrates. Lignin is a very indigestible component of low quality forages. The bison's ability to digest lignin, protein and fat more efficiently than cattle explains why they can utilize forage so well.

**A**s the cost of grain, energy and intensive management continues to increase, meat animals that can live on low quality foods and are good foragers will be looked at more favorably. Maybe the great Ameri-

can feedlot will go down in history as an archaic, inefficient method that provided rich folks with beefsteak in the twentieth century.

Another characteristic of the breed that makes them so rugged is their woolly bison undercoat. Again, even the half Beefalos have this characteristic. Beefalos have about three times as many hairs per square inch of hide as regular cattle breeds. "When you run your hand up the coat of a regular cow and part the hairs, you can see skin between the hairs. I can always tell a Beefalo because you can't see any skin," says Mike. Beefalos also have longer straight guard hairs which extend out beyond the woolly undercoat. This heavy winter coat makes Beefalos very tolerant to cold, windy weather. "Beefalos can stand the cold or heat. They slick right down in the summer and have a very short coat."

Besides the benefits which the animals receive from this woolly coat, the owners are receiving a considerably bonus too. Prime hides, from animals slaughtered in late fall and early winter, have sold for up to \$300 each. They've been made into buffalo robes, or rather, Beefalo robes.

Beefalos are gentle too, or as gentle as any other cattle. Bison are known for being good fence breakers. It's been attributed to their migratory habits. When a herd of them decides it's going to travel, they travel, paying little attention to fences. Bison bulls are known to be a bit nasty, too, but that's nothing new. Dairy breed bulls are undoubtedly the most dangerous animals in North America, in terms of the number of people they've killed. Mike



Photos by George Frangoulis

Mary Swain and Redneck



and Mary say there are no special handling problems with Beefalos. They are as gentle as their Herefords and Holsteins.

If this is the beef animal of the future, it has to be good to eat and produce the cuts and types of meat that people are used to eating. According to reports, the meat is excellent. It is high in protein, 19-22%, as compared to most beef which is only 10-12%. It also averages only 7% fat, lower than most beef. Half-blood Beefalos dress out at 62%, and they have more lean meat than regular cattle. The Texas A & M University grading service slaughtered a large sample of animals, and their results confirmed the promotional literature. Animals (half Beefalo) came from all parts of the country and averaged twelve months of age and 955 lbs. They dressed out to 62% and produced more lean cuts and more lean ground beef than regular cattle. The meat appears no different than regular beef with the exception that there is less exterior fat and less marbling with fat in the meat. Several cattlemen who raise Beefalos have been noted as saying that within ten years all slaughter cattle will have some bison blood. Scientists who evaluated the grading study from Texas A&M tended to agree with this.

**E**ven with all these impressive statistics, most livestock experts are still taking a wait-and-see attitude. As far as I know, however, none of them have any facts which refute the promotional literature put out by the Beefalo associations.

There are two Beefalo associations — one in the west and one in the east. Beefalo East has headquarters in Virginia and New York State, and registration in the east is by the American Beefalo Association, Louisville, Kentucky. If you are interested in breeding cattle, you must obtain semen from franchised dealers. Solo Beefalo, Inc., Ridge Road, Fairfield, ME 04937 has the franchise for the six New England states. The price is \$12 per ampule for up to nineteen ampules, with lower prices for larger orders. There are about thirty beefalo bulls in service now from which to select semen. There are three different families available and with careful family selection one can avoid inbreeding.

As for breeding difficulties, Mike Swain says there are none. Mike confirmed what the literature said; the con-



Fritz Swain and Redneck, a 6 month old Beefalo x Hereford bull.

ception rate from beefalo semen is comparable to other breeds. Mike is an experienced artificial inseminator, since he inseminates Holsteins at the large dairy farm where he works. Another good thing about beefalos is that their calves are small, only forty to sixty-five pounds, so cows have little calving difficulty. The promotional literature says "over 10,000 births — not one assisted." I can't quite believe that but at least there are no notable difficulties. Cattlemen are especially interested in ease of calving since it has been a problem in crossbreeding programs between European and English beef breeds. Certain crosses produce large calves and as many as ten or twenty percent of the calvings must be assisted.

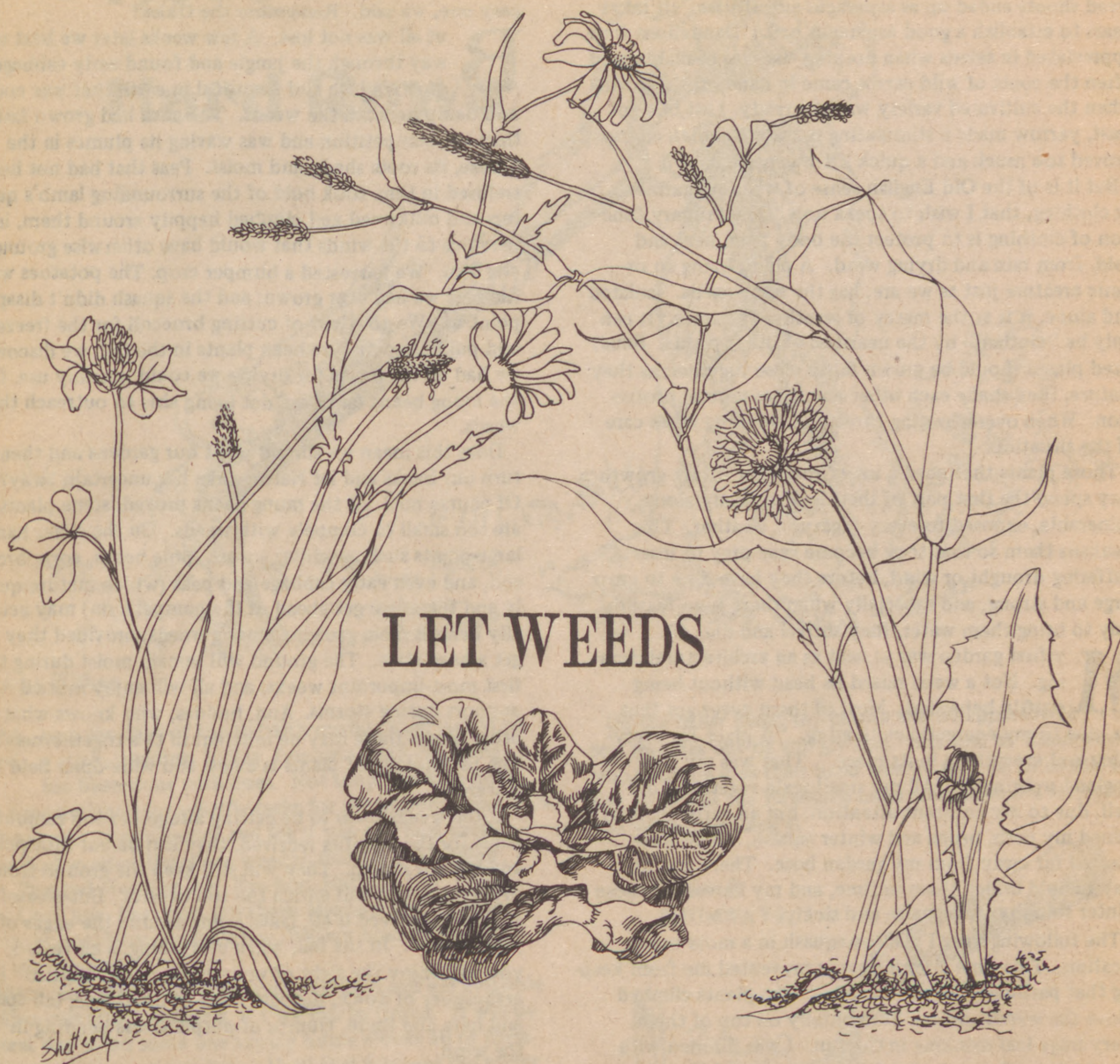
**I**t would be difficult for a person with one or only a few cows to breed his cows to Beefalo at present. The semen must be obtained and stored in a liquid nitrogen tank until needed. Most artificial insemination is done by technicians of the Eastern Artificial Insemination Association. Eastern AI will not allow its technicians to handle semen from bulls which are not within the association, with semen handled to their specifications. They have no Beefalo bulls at present. Mike's suggestion for the small farmer is to make a deal with the nearest large dairy farm which has a liquid nitrogen tank to store the semen. Then make arrangements with a vet or a local A.I. technician to do the breeding at the proper time. Hopefully this procedure will be simplified in the future because, as Mike pointed out, there might be a real future for the small farmer in raising Beefalos. Especially in New England, where hay is still abundant, but which is a long way from the nearest grain-growing region.

Right now Mike and Mary are breeding a small herd of hereford cows with Beefalo semen. They also have a half-Holstein/half-Beefalo heifer to breed. On 50 tillable acres they raise 35 acres of hay and 15 acres of corn silage. They make a cooperative deal with Alice Wheeler, Mike's boss, and allow her to put in the 15 acres of no-till corn silage, of which Mike and Mary get to keep a portion to feed their cattle. In return they are allowed to use Alice's equipment to make their hay. Mike feels that small farmers should look into this type of cooperative agreement with nearby large farmers who own equipment. Mary is obviously proud of the land improvements they've made by land leveling, drainage and reseeded under ASCS cost-share programs. With the dreamed-of herd of fifteen purebred Beefalos they'll have an impressive spread, and be able to provide people with inexpensive, forage-fed beef.



Mary and Peaches.





## PROTECT YOUR GARDEN

by Elizabeth B. Bates

*"Weed: 1. a valueless plant growing wild, especially one that grows on cultivated ground to the exclusion or injury of the desired crop. 2. any useless, troublesome or noxious plant, especially one that grows profusely. In Old English: a garment, or clothing." From the 1967 Unabridged Edition of the Random House Dictionary of the English Language.*

*Elizabeth Bates, author of "Consider the Lettuce" in the Spring '76 issue of Farmstead, lives in South Bristol, Me.*

Numerous articles have already been written in previous issues of this magazine about "weeds" like lamb's quarters, wild carrot (Queen Anne's Lace), yarrow, purslane, milkweed, and dandelions . . . All plants that one commonly finds growing, almost overnight, in the hallowed ground of the vegetable garden. Noxious? No! Troublesome? A matter of viewpoint. Valueless? Definitely not!

As foods, they equal or surpass the cultivated plants with which they share the good earth. Last year I threw



my aphid-infested spinach on the compost pile and harvested pounds of delicious lamb's quarters instead. The aphids preferred the spinach, but those that did make the lamb's quarters their home fell off easily when washed. (Those crinkly spinach leaves are hard to clean!) Milkweed shoots ended up as asparagus-substitutes. (It takes years to establish a good asparagus bed.) Dandelions were appreciated in salads when nothing else was available; and often the roots of wild carrot came in handy for flavoring when the cultivated variety was not ready. Last, but not least, yarrow made a stimulating tea when garden chores proved too much and a quick lift was needed.

But it is of the Old English sense of weeds as garments, or clothing, that I wish to speak now. The primary function of clothing is to protect the body from heat and cold, from rain and drying wind. A plant, being an organic creature just as we are, has the same needs. Isolated and alone, it is at the mercy of weather extremes. It can only be "clothed" by the nearness of other plants. Small-sized plants should be grown fairly close together; as they mature, they shade each other and share mutual protection. When overcrowding threatens, thinning takes care of the situation.

Those plants that need a lot of room for future growth may spend the first part of their lives virtually alone, vulnerable, exposed to every vagary of weather. This weakens them so that they become easy prey to insects. Suffering drought or wind, before they have time to grow large and strong, and especially when there is no feasible way to bring them water, they shrivel and die.

**M**y first garden was as neat as an architectural drawing. Not a weed raised its head without being swiftly beheaded. Most of them never got that far, due to my energetic cultivating. "A place for everything and everything in its place." That was my New England upbringing. All my small-scale vegetables did well, due to my constant attention; but an early drought ruined my corn, beans and winter squash, which were planted far away from my garden hose. There was no way I could mulch them in time, and my harvest of those winter standbys was sparse and sickly.

The following year I planted squash in a more moist location. This time circumstances prevented me from keeping that particular patch weeded . . . the plants climbed above the weeds and ran horizontally on top of them, every huge leaf drinking in the sun. I was flooded with six varieties of squash that fall. Interesting, I thought.

Last summer I planted several different kinds of beans (for drying), corn, peas, potatoes, winter squash, cabbage and broccoli in that far garden. Everything got off to a good start. We weeded once, and then we suffered a long spell of dry weather. Anxiously, we watched our healthy seedlings wilt, day after day, while the weeds took hold, growing slowly, but tenaciously. I made the decision not to touch the garden while the soil was so dry. Those roots barely clinging to life could not afford to be disturbed, I reasoned. Pulling up the weeds that surrounded them would open air channels which would release what little moisture was left, into the arid air. The competition from weeds was the lesser of the two evils . . . I hoped.

Then the rains arrived, and as usually happens, we had several days of wet weather when we could do nothing.

The seedlings revived, but so did the weeds. It seemed as if overnight they grew two feet tall. By the time we were able to do some weeding, the roots were so strong that pulling them up-rooted all the nearby vegetable plants. Discouraged, we gave it all up. A farmer's life is not an easy one, we said. Remember the Okies?

**B**ut all was not lost. A few weeks later we beat our way through the jungle and found early cabbages growing lush and beautiful in earth that was cool and damp beneath the weeds. The corn had grown faster than the competition and was waving its plumes in the breeze, its roots shady and moist. Peas that had not been trellised in time took hold of the surrounding lamb's quarters and milkweed and climbed happily around them, impervious to the winds that would have otherwise grounded them. We harvested a bumper crop. The potatoes were the best we had ever grown; and the squash didn't disappoint us. We got tired of cutting broccoli for the freezer; and pulling up mature bean plants in the fall, we discovered we had all the beans for drying we could possibly use. Only the mung beans failed us, not being able to outreach the weeds.

Does this mean we should plant our gardens and then turn our backs and let Nature take her uncertain way? Of course not! As the mung beans proved, some plants are too small to compete with weeds. On the other hand, large plants such as winter squash, pole beans, corn, broccoli, and even early cabbage and peas (which mature quickly and therefore get ahead of the competition) may actually benefit from growing among weeds, provided they get a head start. The ground will remain moist during the first most-important weeks, and all will enjoy mutual support during storms. And, besides, who knows what other pluses there may be inherent in this togetherness? The psychology of plants is a new and wide-open field for research!

If the weeds seem to be getting altogether too rambunctious for the benefits received, they can be cut (not pulled) and left for mulch. They will still keep the ground from drying out, and will enrich the soil besides. But please! If you must weed it all, leave a ring around the edges of your garden. In the fall, when everything is harvested, you will enjoy the sight of your garden still "clothed" in arabesques of down, delicate nests of dried lace, tall spires, and here and there, clumps of purple asters bending in the wind.



Purslane



# Hoes For Hard Rows



by John Withee

**F**rom the days of the Indian's quahog shell lashed to a stick, weeding, hilling, furrowing and chopping has been done with hoes. Not simply garden hoes, but hoes designed for specific tasks for professional gardeners.

Shop your garden center and see if you can find these: Cape Cod weeder, Hazeltine weeder, Scuffle hoe, Onion hoe, Pronged Weeding hoe, Eye hoe, Mattock hoe, Field hoe, Corn hoe, Beet hoe, Southern Meadow hoe, Cotton Chopper hoe, Nurserymen's hoe, Warren hoe, Planter hoe and Garden hoe.

These, and more, are being manufactured and are available to discriminating gardeners, if they can be found. It will be a great day when some one supply house stocks all of them for comparison and purchase. Until that happens the buyer must search; a hard row to hoe!

Not so if one is looking for a small, hand weeder hoe. Probably the best known is the Cape Cod weeder (A), which, in my opinion, is an overrated, overpromoted, poorly designed toy, suited only for use in the right hand and on weeds on one side of the plants.

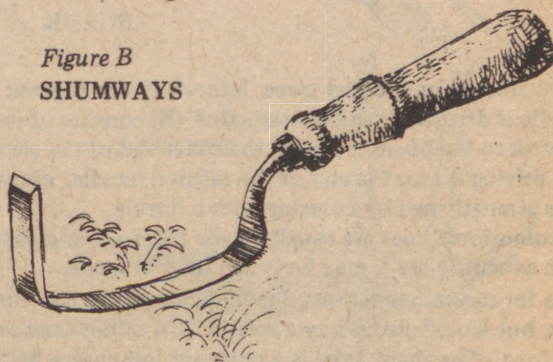


Figure A  
CAPE COD WEEDER

*John Withee lives in Lynnfield, Mass., and is a director of Wanigan Associates, which specializes in the preservation of antique bean varieties. Illustrations by Faith Rainbolt.*

On the other hand, my choice will be applauded by everyone who has one or will try one. It is sold by Shumways, who describe it as their hand weeder (B). In 1928 this tool was known as the Hazeltine hand weeder, and a very similar one was called Lang's.

Figure B  
SHUMWAYS



It is a gem, having 5 cutting edges, compared with one on the Cape Cod. Shumways' is made of tough spring steel, can easily be shifted hand to hand, or rotated in one hand to perform cutting or soil loosening tasks. Mine is over 30 years old and still perfect. One feature is its sharp tip blade, 1" wide, perfect for weeding between carrots or onions in the row.

In considering stand-up or long handled hoes, not only are there many blade types, such as scuffle, Warren and Southern, there are differences in construction. The Eye hoe is interesting (C). It is made by the oldest hoe manu-



facturer, Scovil, in Higganum, Conn. Their concept provides strength by "eyeing" the blades, eliminating any shank, sim-

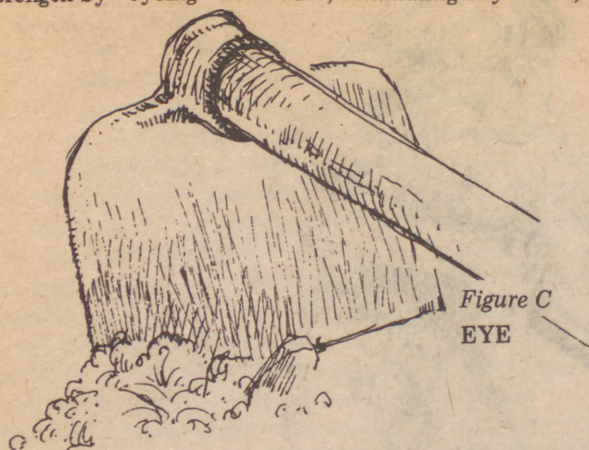


Figure C  
EYE

ilar to mattock hoes and axes. This permits a straight, non-tapering handle right up to the blade.

The socket type of construction (D) combines blade, shank

Figure D  
SOCKET

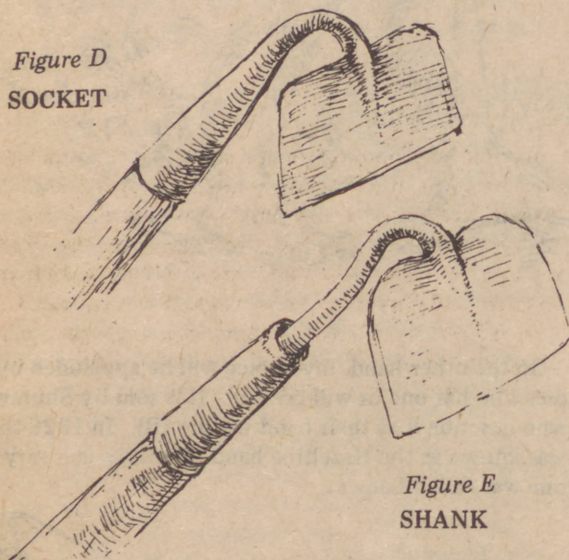


Figure E  
SHANK

and socket in one forged piece, into which the tapered handle is driven. Shank construction (E) consists of welding a shank to the blade, pointing the other end of the shank and driving it into the end of the tapered handle, which is then strengthened by covering with a ferrule.

Promotional hoes are usually made this way, and some, such as scuffle hoes, may be found only so made.

As for recommendations, I would choose the Eye construction, but would gladly buy a socket type rather than search too long. The shank type is a reluctant last choice because of difficult handle replacement.

**M**ention of the hot sun brings back a memory of 50 years ago, when I was a boy laborer in a Maine market garden. Weeding of small row crops, such as the 12" spacings of lettuce and spinach, was done with a scuffle hoe. This was a very special type of hoe that I would dearly love to find today. (F) The blade was flat, thin steel, about 1½" x 8". Attached to one flat side, about 5" apart, were two shanks which were curved and fitted to a standard long handle, permitting the blade to lie flat on the soil as one stood to "scuffle" it.

The beauty of it was in the fact that all four edges were

sharp, so the finest of forward, back or side scuffles caught weeds in close quarters. How many pleasant minutes were

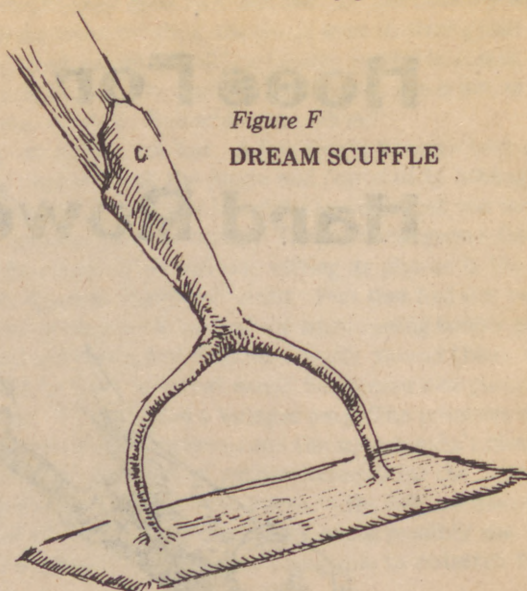
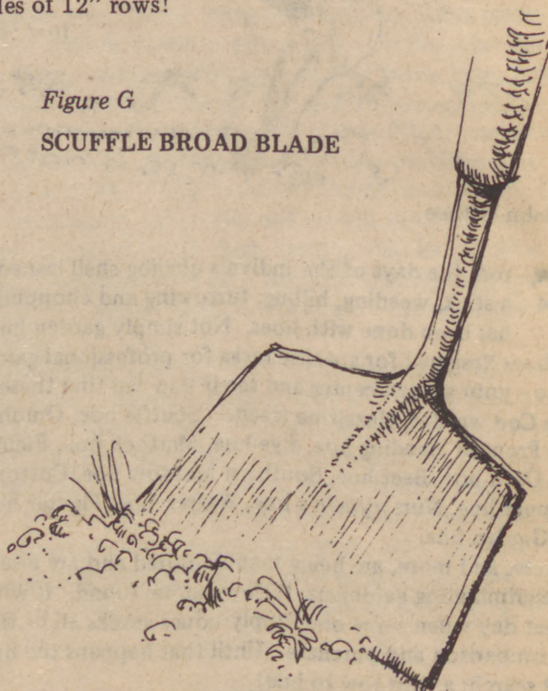


Figure F  
DREAM SCUFFLE

spent in carefully sharpening the blade with our pocket files, in the hot sun, among those millions of plants, in those miles of 12" rows!

Figure G  
SCUFFLE BROAD BLADE



Scuffle hoes on the market today have quite broad blades, (G) which, incidently, do not scuffle as easily as thin and narrow blades, and have only one sharp edge. Compare it with slicing cold cheese with a broad knife, as opposed to a wire cutter.

There is one model of scuffle hoe being sold today as an Action hoe, or wobble hoe (H). It is a good idea within limits. It has a good, thin, narrow blade, but there is too much to the hoe. The design is such that causes difficulty in getting under or close to plants like cabbage or lettuce, and it cannot flip over such weeds as the pesky pussley. Compared to my "dream scuffle" it is a loser.

**T**he ability to weed crops while standing rather straight and relaxed is improved when using such hoes as the onion (I) or beet hoe (J). Sharpen the two



Hand-drawn illustrations of various garden tools, including hoes and weeder models, arranged in a grid-like fashion.

Figure H  
WOBBLE OR ACTION

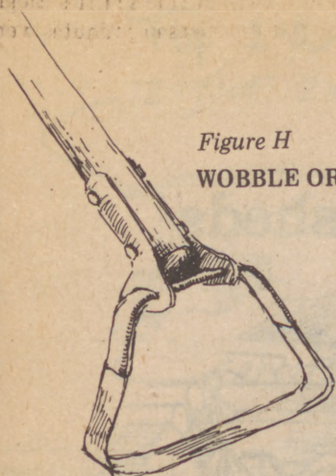
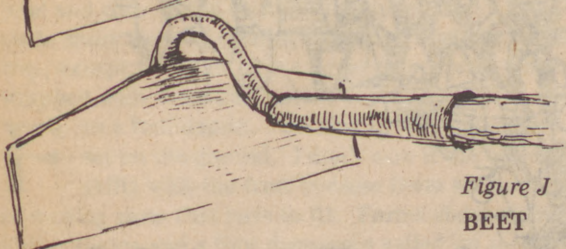


Figure I  
ONION



Figure J  
BEET



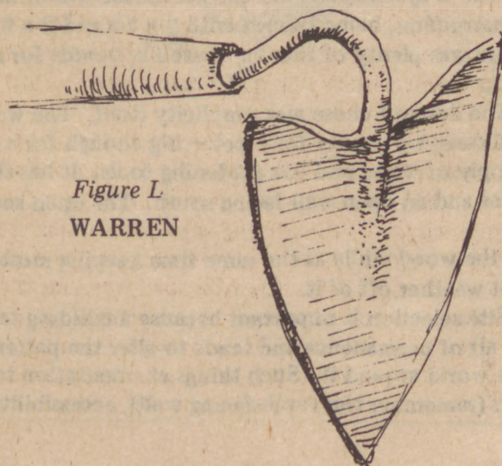
ends of these, work with a scuffling, not chopping motion, and they are efficient tools. The chopping or hilling hoes are many (K). Big areas of special crops to hoe will, I

Figure K HILLING OR CHOPPING



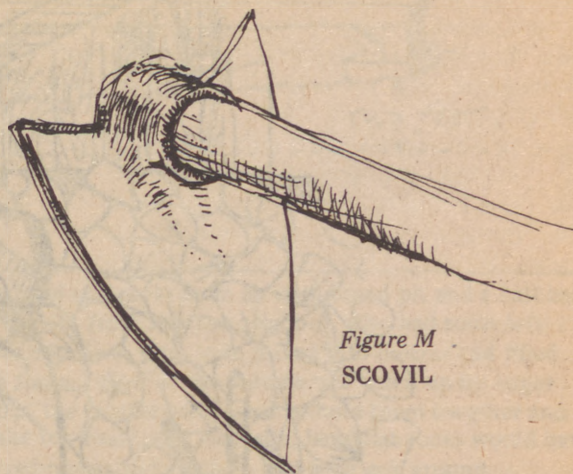
am sure, explain the development of all the blade configurations that are offered. Whatever your preference is, it can be accommodated. It will probably end up as an all-purpose hoe anyway.

Figure L  
WARREN



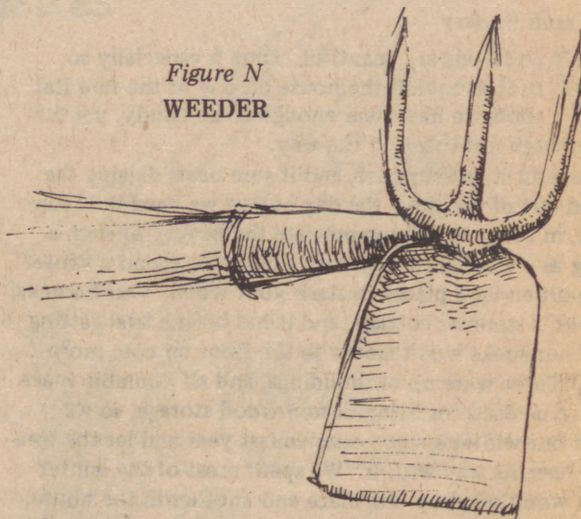
The Warren hoe (L) is a slick idea for furrowing small seed rows. I wish, however, that the shank could have been placed better because it interferes when covering fine seed. The Scovil pattern is best for me (M).

Figure M  
SCOVIL



Weeder hoes, in one, two or more toothed models (N), are sure to fit in with many gardeners' ideas. As soil looseners and weed pullers they must be accepted. I have one with a short handle for bed work and it is okay. Perhaps the most valuable tip that can be offered is the reminder to make and keep your hoes sharp. I was amazed to note, on a recent visit to a farmer's supply store, the poor edge condition on the \$8 — \$10 hoes. A buyer will have a long chore just getting the edges in condition for use.

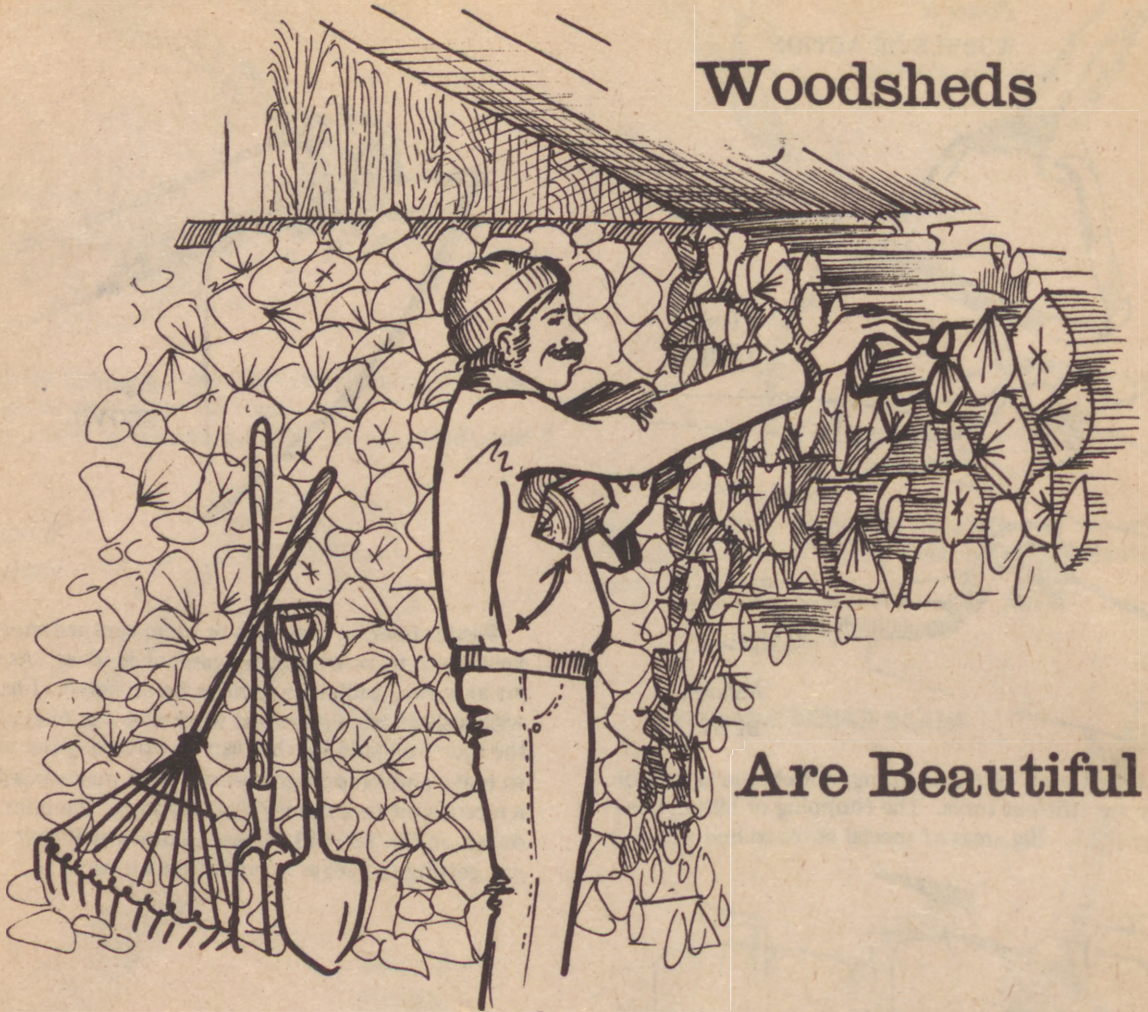
Figure N  
WEEDER



This has been a rundown, with comments, on the wide world of hoes. For centuries, the most important tool in helping crops grow has been the hoe. A hard row to hoe can be made easier with careful selection, so select to your needs from the many that are offered, and carry a file!



## Woodsheds



## Are Beautiful

by Frank Booker

**W**oodsheds are beautiful. Ours is especially so, tucked behind the house on one of the rare flat spots we have near enough to be handy, yet far-off enough not to get in the way.

We built it last summer, and it sure beats digging the wood out of the snow the day before we need it. I suppose, in order to fully appreciate the beauty of such a thing as a woodshed, you really ought to spend a winter without enough places to stash your wood. Our home is, or was, a summer cottage, and it has been a trial getting it so our socks won't freeze to the floor on cold mornings. There were no outbuildings, and all available space had to be used for living or non-wood storage, so we piled our winter's wood outside last year and let the weather have its way with it. We spent most of the winter with wood piled up one place and another in the house, melting the snow off of it and trying not to get buried in the bark, mud and debris that came in with it, not very satisfactory.

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*Frank Booker is the author of "Farmstead's 1977 Seed Catalog Review" which appeared in the Spring issue.*

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Late last spring, I discovered a lumber mine in the form of a neighbor's chicken house that had succumbed to the ravages of time and weather, and was invited to help myself to all I needed. Here's another reason why ours is an especially beautiful woodshed — it only cost about fifteen dollars, and that was for nails to hold it together and tar paper on the roof. The rest of the material was scrounged and recycled. The old chicken house was of modern construction, being framed with 2 x 4's and 2 x 6's, so there was plenty of framing as well as boards for my project.

The design I chose was simplicity itself. The woodshed is sixteen by twenty-four feet — big enough for a year's supply of wood and our gardening tools. It has three sides and an open wall facing south. The open south wall

of the wood while at the same time keeping most of the wet weather off of it.

Site selection is important because a building takes on an air of permanence and tends to alter the pattern of the world around it. Such things as orientation to the sun (remember the south-facing wall), accessibility (you



Fig. 1-a North sill of woodshed:

12-foot, 2x6's.

Spliced for 6-foot spans



want to be able to back the truck up to it), and nearness to the house so you don't have to lug the wood too far. Since our woodshed has an earth floor, the site had to be well-drained to avoid having to dig the last few weeks' supply of wood out of a frozen swamp.

We had just such a site out back of the house — fairly level and clear to the south. The nippers and a chainsaw made short work of clearing the brush that was in the way, except for a few of the larger alder roots, which we wrapped with chain and hauled out with the pick-up.

For a foundation, I decided to use cement blocks set on the ground. I don't care if the building shifts with the frost because there are no doors or moving parts that have to fit. Forms about eighteen inches square and a foot deep were nailed up and set into shallow holes dug by removing the sod. A half-yard

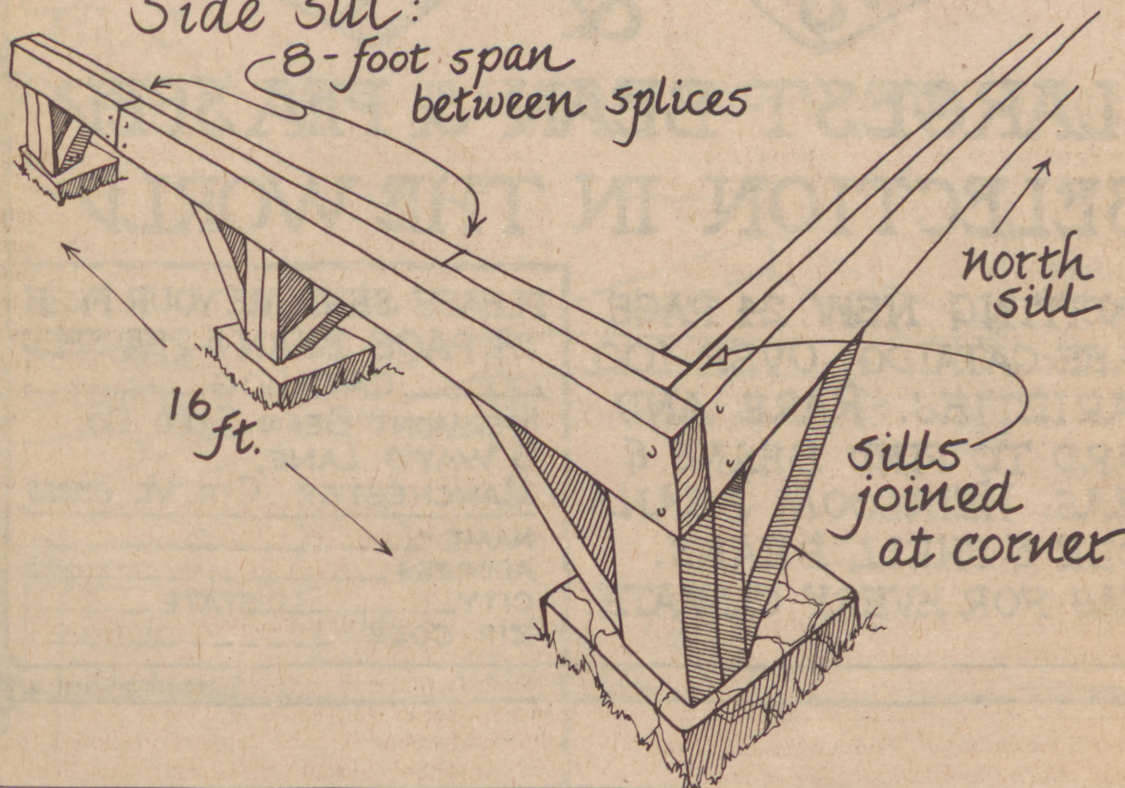
of gravel and rocks from an abandoned pit and a half-bag of cement from another neighbor, who had some left after a project, were soon mixed into mortar and filled the forms. Most of the volume was taken up by larger rocks, the mortar being used to hold them together and make for level tops. Actually, large flat rocks would have served just as well, if there had been any around.

Since the ground slopes about two feet over the length of the building, no attempt was made to bring these blocks to the same height. Instead, a sill was installed around the perimeter and brought to the level of the highest block with shims or short posts as needed. The short posts were braced as shown in Figure 1a. The sill is four inches by six inches made up of twelve-foot long 2x6's and spliced as shown, a support post being placed under

Fig. 1-b

Side sill:

8-foot span between splices





each joining of the wood. This gave me a maximum span across the back of six feet — adequate to support the light framing and the rafters. The same thing was done on eight foot centers along the sides, where the weight carried by the sills is less (Figure 1b). The sills are joined at the corners as shown in the inset.

This gave me a “foundation” of twenty-four feet along the back, sixteen feet along each side, and open at the front. Four more blocks were poured at eight-foot intervals across the front and across the center for support posts (Figure 2).

**T**he wall framing, gable ends and end rafters were cut and assembled as shown in figure 2. I used a stud length of four feet and two 2 x 4's for a top plate. This gave me an opening across the front of almost nine feet in height at the highest and seven feet at the lowest end.

The long rafters are supported by a four-by-six carrying timber made up of two 2 x 6's running down the center of the building. Another such carrying timber was set at the same height across the front to support the front rafters. These beams were supported by posts at eight-foot intervals that were set on the concrete blocks poured earlier for the purpose. These posts were braced-off against the carrying timbers with short lengths of 2x4's.

Next, the wall bracing was nailed on. For this bracing I used a few long boards nailed diagonally across the studs on the inside. These diagonal boards give the wall framing triangulation and make the building rigid. Make sure

that the building is plumb before this goes on, as it tends to “set” the building into its final position and shape. Additionally, these boards give me all kinds of nooks into which I can stash tools. Rakes, hoes and shovels stay conveniently against the wall, well-behaved and out of the way.

The remaining rafters were cut and nailed in next. Each pair of rafters was tied together with a four-inch wide board nailed to the rafters and running horizontally between the carrying timbers. These are called collar ties and they give the rafters the rigidity of triangulation and prevent their spreading (Figure 3).

**I**t was time for some rafter hopping. The roofing boards were nailed on and tar paper was put on for temporary roofing. This tar paper was run up and down the roof. Each course was lapped about four inches and stuck with some roof sealer. The seams were then secured by nailing on battens to keep the wind from lifting the roofing. This roof supports a couple of feet of heavy snow with nary a sag nor sway.

Side wall boards were next nailed on vertically. This kind of boarding works quite well to keep out all but the most driving rains and snows without siding.

Other projects started getting in the way, so I decided to let her stand like that for the winter. Later I'll recycle a few of the cedar shingles from my lumber mine and put on a proper roof and siding. Meanwhile I'll be content with the knowledge that our winter's wood is almost as snug and dry as we are. And that, to me, is beautiful.

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Fig. 2

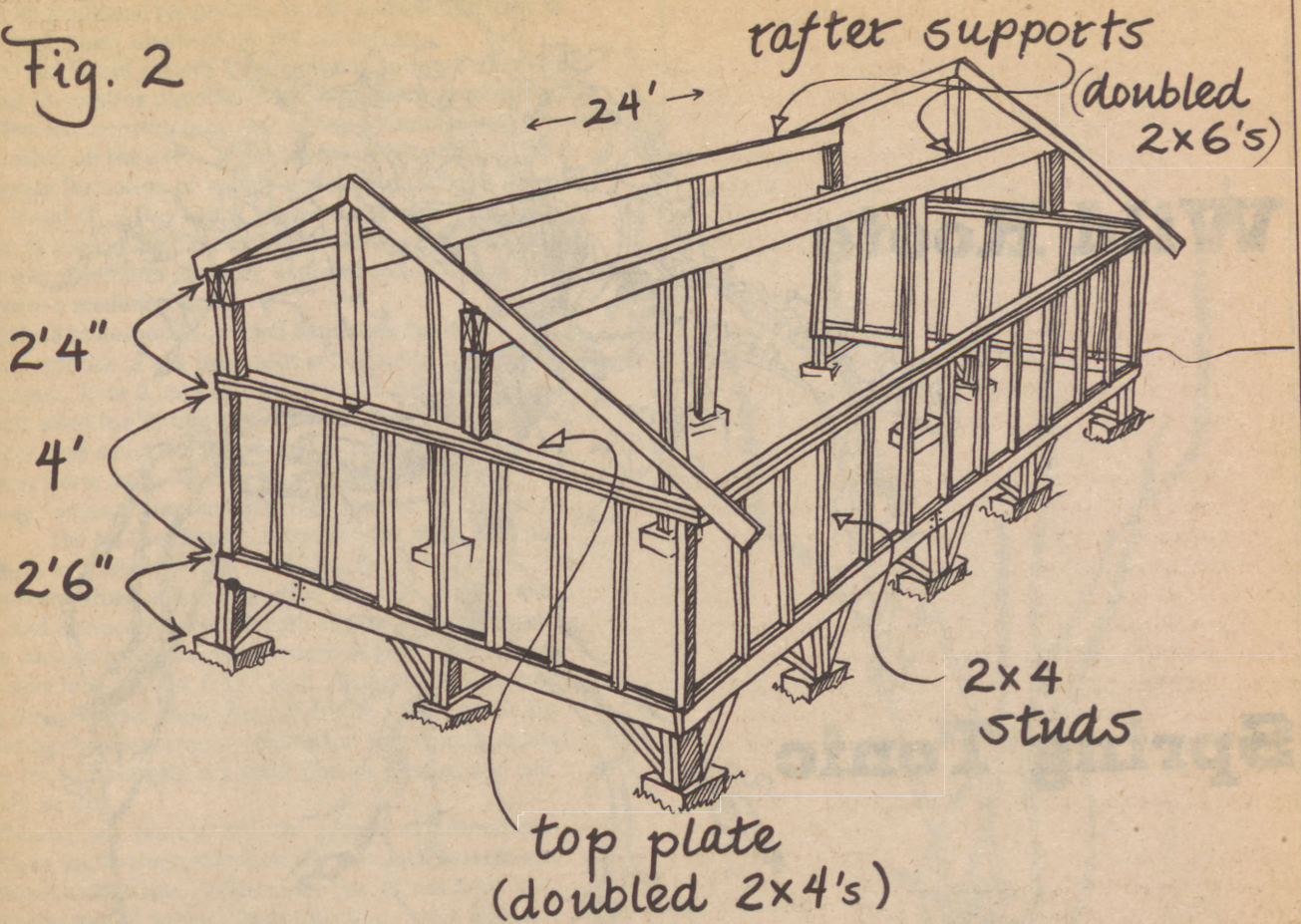
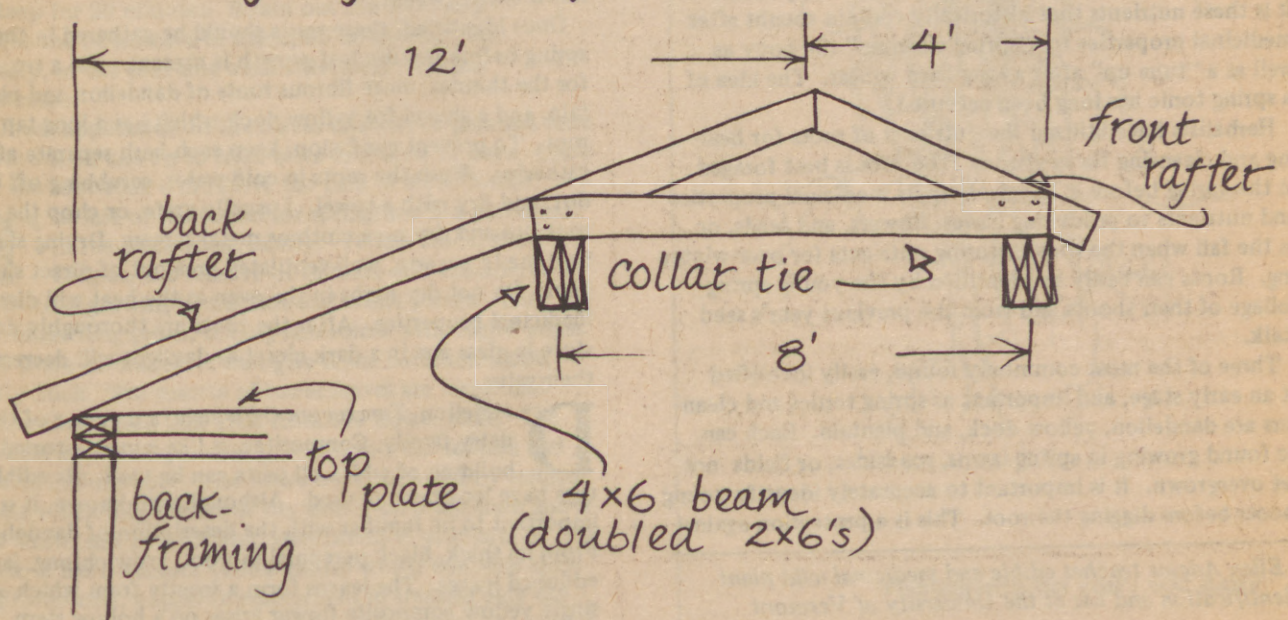


Fig. 3

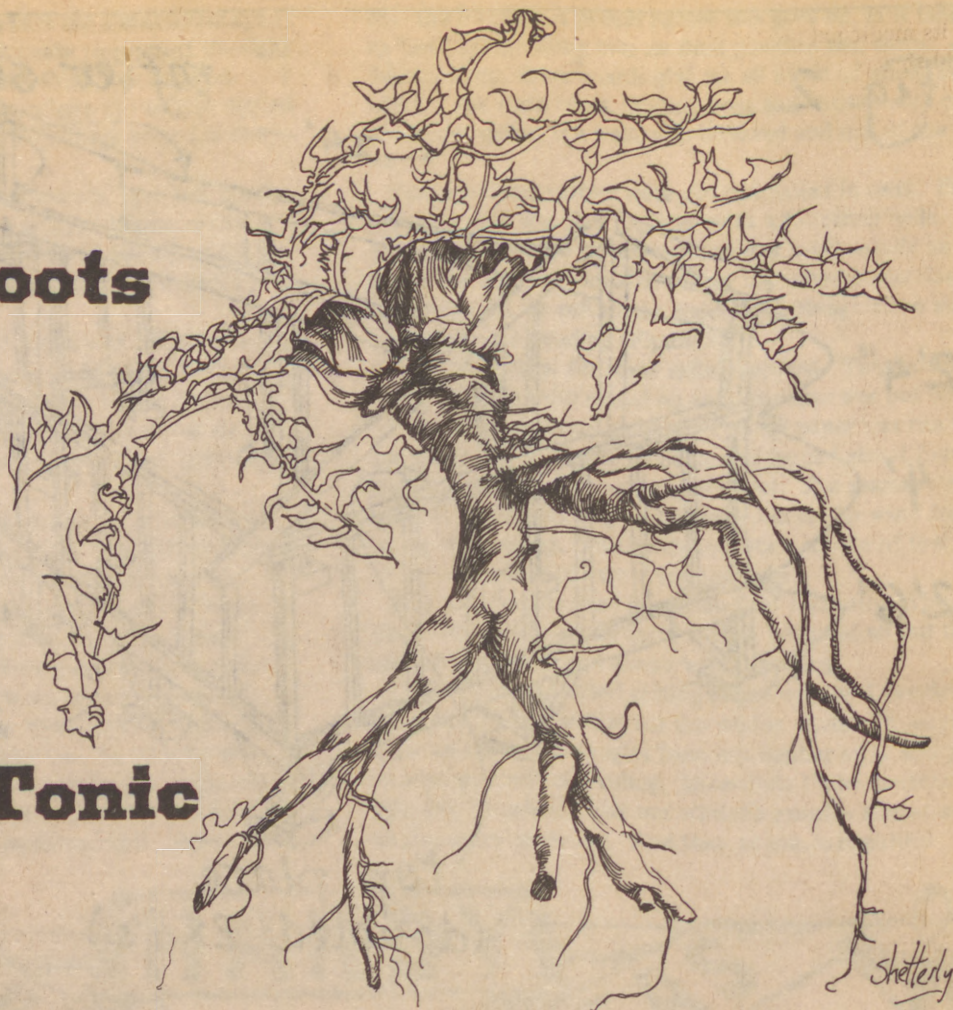
Detail of rafter & support beams with collar tie:





# Wild Roots

## Spring Tonic



Dandelion

by Ellen Adams

**A**s the warm spring sun begins to thaw the frozen earth, plant shoots of all sorts poke their heads above ground. The strength for accomplishing this feat comes from nutrients stored in their sturdy roots. It is these nutrients that historically contain sought after medicinal properties for "spring cleaning" the body as well as a "tune up" after a long hard winter. The idea of a spring tonic has long been accepted.

Herbalists have utilized the nutrients of roots for healing and cleansing for centuries. The root is best foraged in the spring before it has given up its medicinal properties and nutrients to producing leaves, flowers, and seeds, or in the fall when the root is storing nutrients for over-wintering. Roots can easily be identified by the young spring foliage of their shoots and from the previous year's seed stalk.

Three of the most commonly found, easily identified at an early stage, and important as spring tonics and cleansers are dandelion, yellow dock, and plantain. Each can be found growing in spring lawns, roadsides, or fields not yet overgrown. It is important to accurately identify young shoots before digging the root. This is a protection against

gathering a poisonous plant or the wrong one. At first, if you feel uncomfortable identifying these plants, ask a local farmer or check with a local greenhouse as they often know these "weeds."

Once identified, these roots should be gathered in the spring before mature leaf growth is present. Use a trowel for the thinner, more fibrous roots of dandelion and plantain, and a shovel for yellow dock which has a long tap root. To prevent confusion, keep each herb separate after gathering. Wash the roots in cold water, scrubbing off the dirt, and dry with a towel. I usually grate, or chop the roots up and dry on a cloth or metal screen. Drying should be done in a warm, well-ventilated area out of direct sunlight. Do not dry herbs in the oven as the heat will dispense medicinal properties. After the roots are thoroughly dried, store in glass jars in a dark closet as daylight will decrease their value.

**D**andelion, *Taraxacum Officinale*, a member of the daisy family, Compositae, is like a many-storied building of which all parts can be used. Its edible uses have long been praised. Although well-known, it is important to be familiar with the description of dandelion. From its thick, black perennial taproot, grow oblong, jagged-lobed leaves. The leaves form a rosette from which a single yellow composite flower arises on a hollow stem. All parts of dandelion contain a milky juice that consti-

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*Ellen Adams teaches edible and medicinal wild plant identification and use at the University of Vermont.*

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tute its medicinal properties. In the spring, it appears as a reddish-green tangle of deeply cut leaves.

An Old World remedy, dandelion is known for its tonic effect in assisting digestion and assimilation; treating indigestion and constipation; and having a stimulant and cleansing effect on the liver. It is a source of Vitamin A, which prevents formation of kidney and gallstones, and Vitamins B1, C and G. After a long winter when body functions slow down and little fresh food is available, it is no wonder why dandelion has been used as a spring tonic. To prepare a medicinal dose:

Take 3 tablespoons of dried dandelion root, or 6 tablespoons of the fresh root and place in a ceramic teapot. Pour 2 cups of boiling water over the root, and steep for 20 minutes covered. Strain out the root, and drink the liquid cold in teacupful doses four times daily. It may be sweetened with honey.

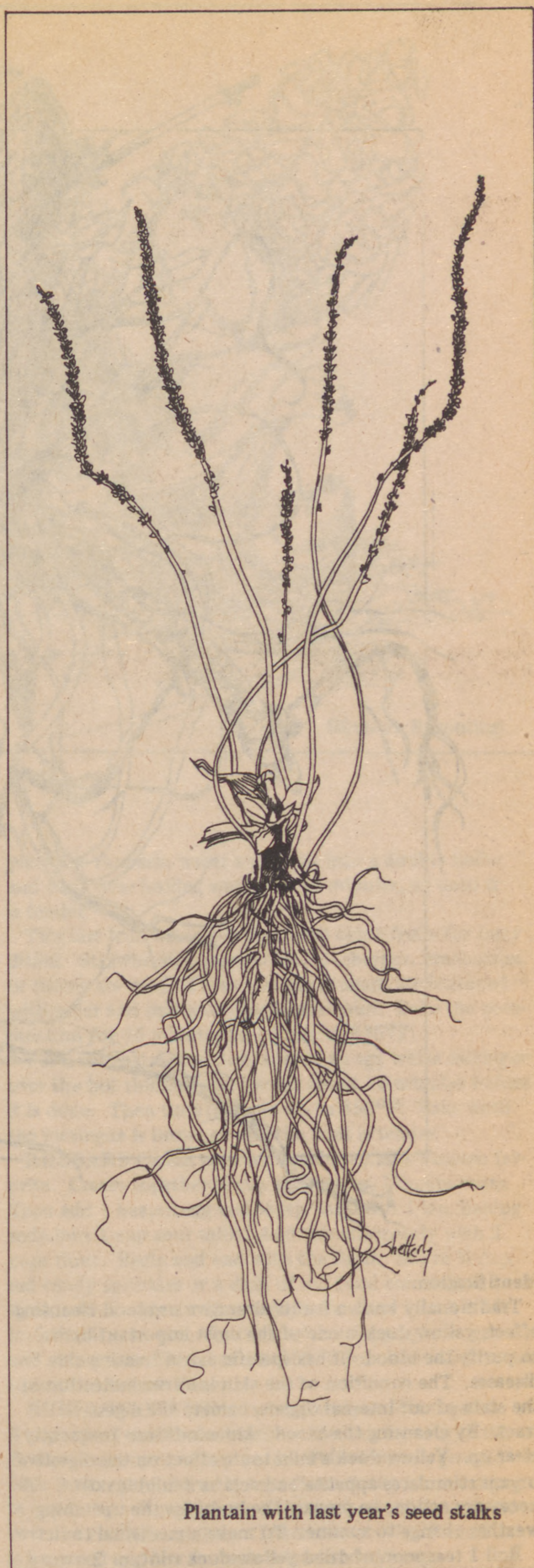
**C**ommon plantain, *Plantago* species, a member of the Madder family, is a perennial plant common in waste places as roadsides, fields and lawns. Its leaves are broad and ovate, either entire or slightly toothed, and characterized by deeply channeled veins. During late June, it bears one flower stalk of green-whitish flowers on a long stem of 6-18" high. I can remember shooting these flowers at my friends during a great battle by winding the stem around the button flower and pulling! The root of plantain is a small fibrous taproot and can easily be dug.

Plantain was famous with the gypsies and American Indians for its tonic effect on the glandular system and mucous membrane. As these are two of our most important lines of defense from infection, it is a highly recommended herb to use at the change of seasons. It also tones the kidneys. Known historically as a wound medication, a wash of the root can be used to treat eczema, sores, cuts, boils, swellings, and sprains. To make a medicinal recipe to use internally or externally:

Place 2 tablespoons of dried plantain root, or 4 tablespoons of fresh root in a ceramic teapot and cover with 2 cups of boiling water. Cover and let steep for 20 minutes. Strain out the root, and take the liquid cold in teacupful doses four times daily, or use cold as a wash externally. Do not sweeten.

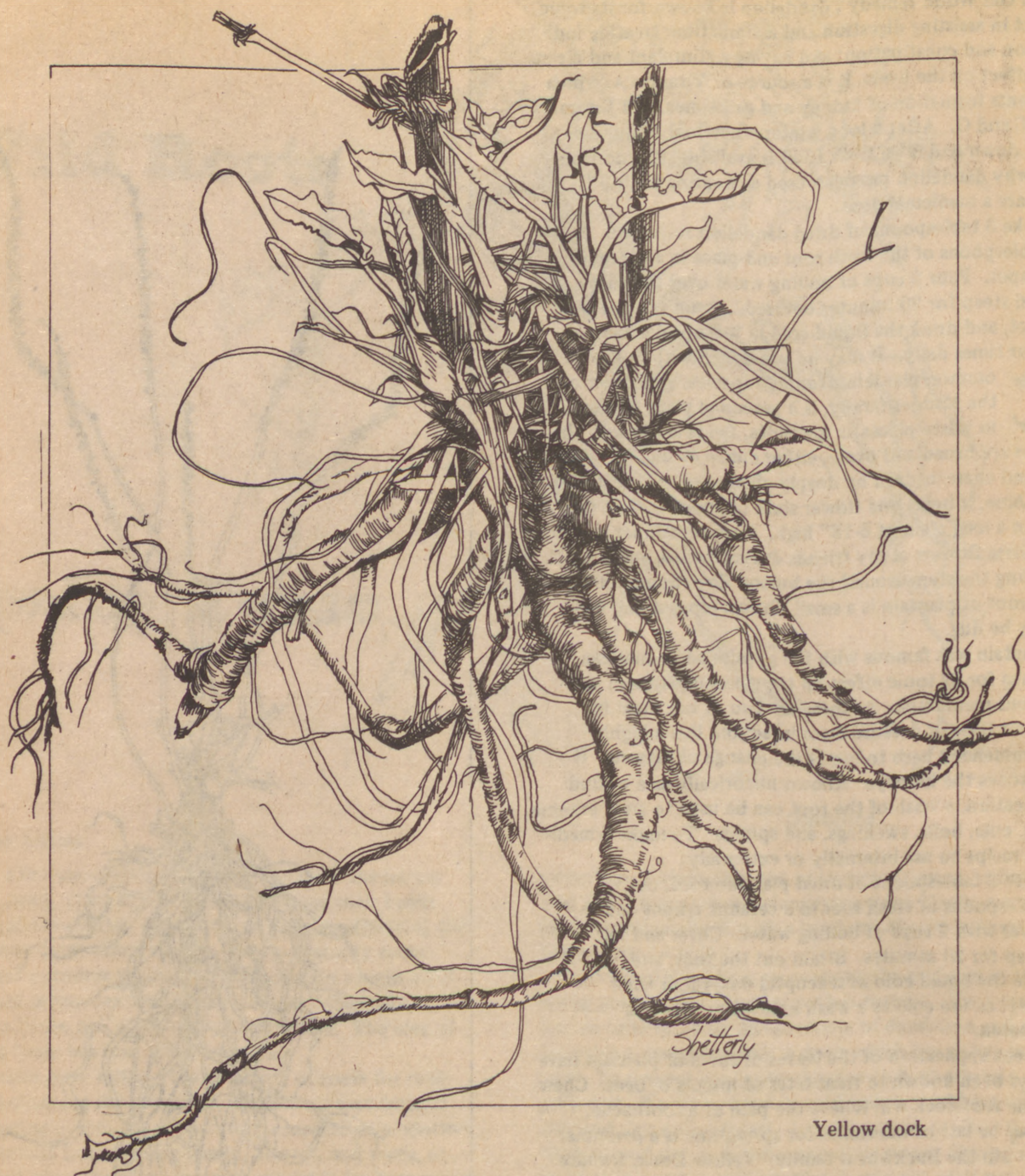
Direct application of the leaves or roots of plantain have always been known to treat bites of insects or bees. Chewing the rootstock will relieve the pain of a toothache.

**T**he last of the tonics for springtime is a perennial in the Buckwheat family. Yellow Dock, *Rumex Crispus*, is a relative of rhubarb and considered a rank weed growing in wayside and waste places. The leaves are long green, oblong-lanceolate with curled edges. It is these curled leaves that give it the common name, curly dock. The rosette of lower leaves are larger and longer than those that arise from the flower stalk. The flowers are inconspicuous, greenish in a tall raceme and bloom in June-July. The flowers are followed by reddish seeds which linger most of the winter on a tall stem above the snow, and provide easy identification year round. The taproot has a distinct yellow center which contains chrysophanic acid, a specific constituent in treating skin diseases. In the spring, one should watch for a young rosette of greenish-red leaves arising from the old seed stalk for



Plantain with last year's seed stalks





Yellow dock

identification.

Traditionally known for its alterative or blood cleansing effect, yellow dock is one of the most important herbs to purify the blood. It has specific use in treating skin diseases. The condition of the skin is a true indication of the state of our internal organs, namely the digestive tract. By cleansing the blood, skin conditions frequently clear up. Yellow dock's mild tonic effect on the digestive organs stimulates appetite and acts as a mild laxative. All necessary actions to prepare the body for the upcoming weather change to summer. To make a medicinal tonic:

Boil 1 teaspoon of dried yellow dock root, or 2

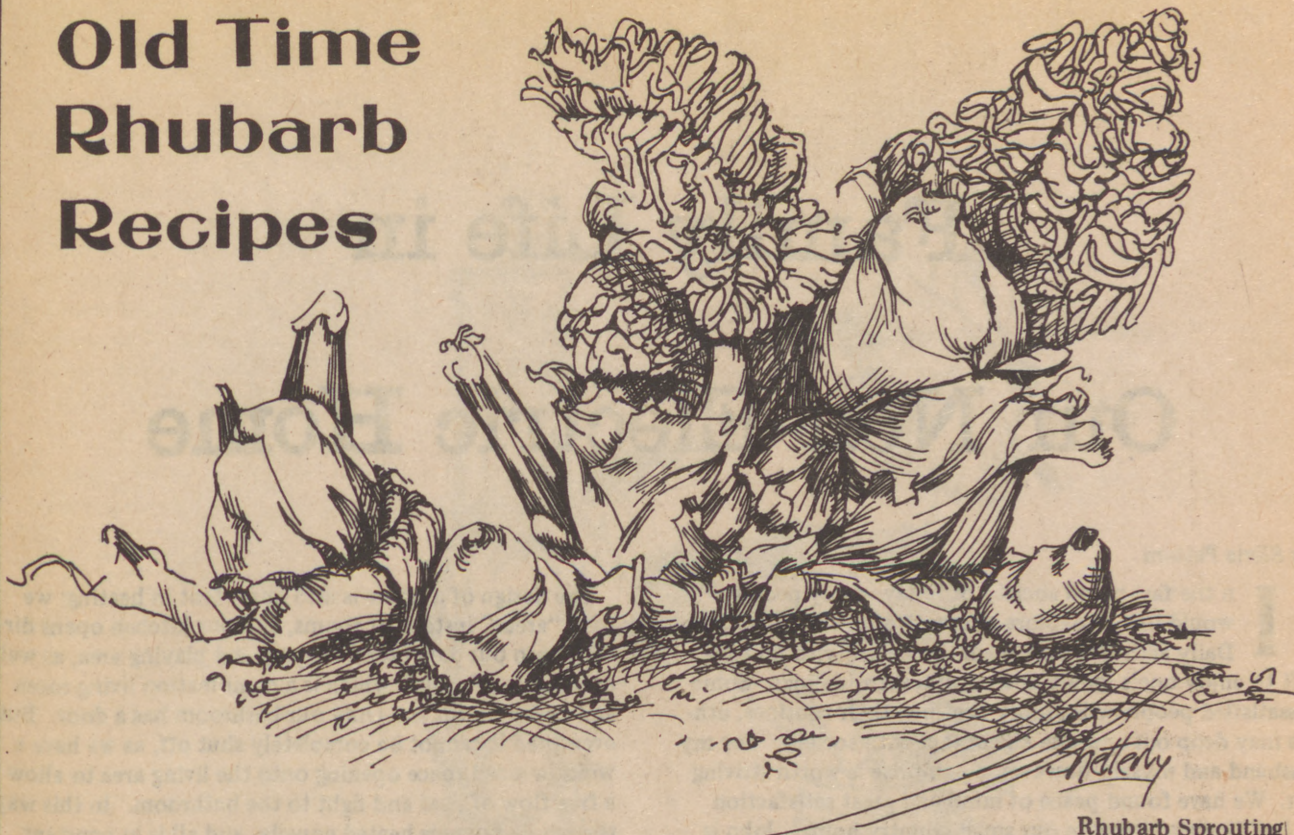
teaspoons of fresh, in 1 cup of water. Turn down to a simmer for 15 minutes. Strain out the root, and take the liquid cold in tablespoon doses 3-4 times daily. This may also be used on the skin directly.

Beware, yellow dock has quite a bitter flavor and not one of my favorite teas to sip. Its healing qualities, however, override this drawback.

In essence, if you want to tone up your digestive system and cleanse the blood of winter's sluggishness, start digging. These healing roots will help to poke our heads above ground at winter's end!



# Old Time Rhubarb Recipes



Rhubarb Sprouting

by Mary E. Allen

**R**hubarb - rosy, crisp, and tangy - has long been an old time country favorite when it comes to serving spring and summer meals.

"Spring tonic," Grandma would call it when the first stalks were ready to eat. Then she'd make tart pies and puddings. Or she'd cook up some sauce to eat with home-made bread and butter for simple old-fashioned dessert.

Rhubarb is a native of western Asia and is classified as an herb. It's actually a member of the buckwheat family. Because of the sour, tangy flavor of its stalks, it is used as a fruit for cooking purposes. For years, rhubarb has been used for making pies, sauces, preserves, wines, puddings, and even cakes and breads.

Because of its well-known use as a rosy-pink filling for pies and tarts, rhubarb has earned the nickname of "Pie Plant."

This food is used a great deal in northern Europe and the Scandinavian countries. The early settlers brought it to this country, where the Indians began cooking the stalks like wild asparagus once they began using it.

The stalks of the rhubarb are used for eating. However, *one must not eat the leaves and root, for they contain a substance which often can be poisonous.*

Rhubarb is often stewed in a moderate amount of water and sugar for 10 to 12 minutes, until it is tender. You can also steam it in the top part of a double boiler. To do this,

place the rhubarb, water and sugar into a double boiler and cook over boiling water for 45 minutes, or until it is tender.

This tart fruit often is baked with other fruits for tasty dishes. Strawberries, raspberries, blueberries, cranberries, or raisins are used. These and the rhubarb are seasoned with sugar and perhaps some lemon juice. Bake the combination for 45 minutes to 1 hour, at 325°F.

For a very attractive dish, spread an egg white meringue over the hot rhubarb and berries about 15 minutes before it is done. Then turn the heat up to 350°F. Bake until the meringue is browned and the fruit is tender.

**RHUBARB CAKE** is an old-fashioned Mid-Western favorite. Cream together  $\frac{1}{2}$  cup shortening,  $1\frac{1}{2}$  cups sugar. Then add 1 beaten egg and  $\frac{1}{2}$  tsp. salt. Stir 1 tsp. baking soda into 1 cup sour milk. Add this alternately with 2 cups flour. Begin and end with the flour. Stir in  $\frac{1}{4}$  cup red candy sprinkles or a dash of red food coloring, if desired, with 3 cups diced raw rhubarb. Pour into 9 x 13-inch metal cake pan. Sprinkle with a topping of sugar and cinnamon. Then bake at 350°F for about 45 minutes, or until cake tests done.

**RHUBARB CRUNCH** is a tasty recipe. Mix together 3 cups diced raw rhubarb (either fresh or frozen), 3 tbl. flour, 1 cup sugar,  $\frac{1}{4}$  cup water. Place this in a greased 13 x 9-inch pan. Mix  $1\frac{1}{2}$  cups flour, 1 cup brown sugar,  $\frac{1}{2}$  cup butter, 1 cup oatmeal,  $\frac{1}{2}$  cup shortening; sprinkle over the rhubarb mixture. Then bake at 375°F until it is browned and the rhubarb is tender and juicy.

Mary E. Allen lives in Plymouth, N.H.



# Family Life in Our Non-Electric Home

by Silvia Pettem

In the fast-paced society of today, many people would like to explore alternatives to their lifestyles. Daily activities may seem too hectic with no time left to enjoy one's family and natural surroundings. Some dissatisfied people will simply continue their routines, others may drop out and lose all contact with society. For my husband and myself, however, a compromise is worth striving for. We have found peace of mind and great satisfaction in building and living in our small country home. John is a self-employed logger, and thus works his own hours. While we are relatively isolated (only 4-wheel drive vehicles can reach us in winter), we are only eleven miles from a city of 70,000. We keep up our contacts in "town" when we wish, or remain where everything is geared to living without electricity.

Appealing as the simple life may sound, it took us several years to find solutions to our needs. How, we are often asked, do we have heat and lights? What about cooking and refrigeration? How do we bathe and laundry? There were many changes to be made from the conventional homes we were used to. Yet we have had visitors in our home who were unaware that we have no electricity. There are alternative ways of achieving the "comforts of home", and success lies in implementing them.

## HEATING

Most important of basic necessities is heat. Our home is primarily heated with wood -- "The Great Majestic", a big, black, iron cookstove in the kitchen and a brick and stone fireplace, one summer's project, in our living area. On particularly cold nights we put coal in the stove. It burns longer than wood and keeps up the room temperature overnight. Also, for additional warmth, we benefit from sunlight through our several southern-exposure windows. On sunny winter days we need only a stove fire to keep our home warm. On cold and snowy days we keep both the stove and fireplace fires burning all the time. Closed curtains at night are helpful in retaining heat.

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*Silvia Pettem, author of Woodstove Cookery, which appeared in the Winter issue of Farmstead, lives in Boulder, Colorado. Illustration by Siri Chandler.*

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The design of a home is also important in heating; we have "areas" instead of rooms, and our kitchen opens directly into our daughter's sleeping and playing area, as well as to a large "room" which is a combination living room and bedroom for us. Only our bathroom has a door. But even then it cannot be completely shut off, as we have a window-sized space opening onto the living area to allow a free flow of heat and light to the bathroom. In this way, the whole home is heated equally, and all is in constant use. There is no waste of heat to a bedroom in the daytime or to a living room at night. Thus, by keeping the home small and suited to our needs, we make the most efficient use of our heat.

Since small children are so often on the floor, it's been important to us to keep it warm. (At the time of this writing, Daisy is three years old and a new baby is expected shortly.) We built the fireplace with the hearth at floor level to draw up the cool air and keep the heat source low. A large wool braided rug covers the entire living area.

## COOKING

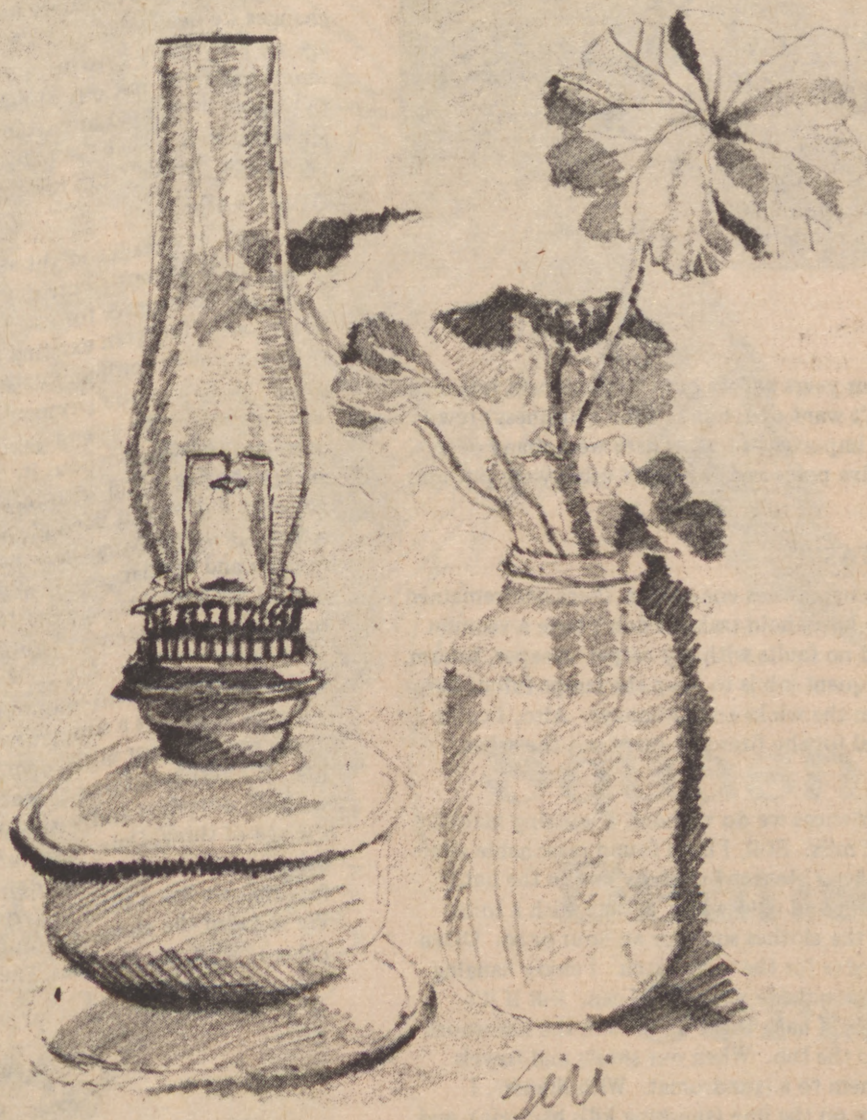
Practically all of our cooking is done on the cookstove. The interested reader is referred to my article "Woodstove Cookery" in the winter 1976 issue of *Farmstead Magazine*. In winter, when the fire in the stove is always burning, there's no preheating or waste of fuel. And when meals are prepared, they can easily be kept warm. Even bread and roasts cook well, and I don't feel that I'd ever get as much satisfaction from a gas or electric stove again. However, as a supplement to the woodstove, we recently bought a one-burner propane stove. This we'll use on a hot summer day or for a quick pot of tea.

Refrigeration has been no problem for us either. We built two food storage boxes underneath our floor. They open with trap doors, are lined with cement, and are kept cool by absorbing ground temperature. In winter they maintain a 40 degree temperature; in summer they are still surprisingly cool without ice.

## LIGHTING

We use kerosene lamps for lighting. Aladdin lamps, equal in brightness to a 100-watt bulb, are fine for reading and sewing. They are sensitive, but when used properly pro-





vide bright, clean and dependable light. Several smaller kerosene lamps give a warm glow to the rest of our home.

#### WATER

The remaining necessity to us is water. John dug an eight-foot well which taps a year-round spring. This is cased with a three foot wide galvanized steel culvert around which we built a pumphouse with cement floor. Our pump is a gasoline powered piston pump. 200 feet of  $\frac{3}{4}$  inch black plastic pipe carry the water uphill to our home. Inside, up in the rafters, is a fifty-five gallon drum for water storage. Next to the pipe entering the house with water is an overflow pipe, going back outside, to show when the drum is full. We pump water twice a week and

each time drain the pipes to avoid freezing. The water from the drum is then gravity fed to the taps of both the sink and bathtub.

At present we heat hot water in a five gallon kettle on the stove and carry it to the bathroom as needed. Eventually, we plan to install a small woodburning stove with a "water-jacket" to provide hot running water.

The drain from both the sink and the bathtub goes under the house and downhill to the outhouse. This disposal of waste water would not work for everyone, but is adequate for us as we use a relatively small amount of water and have a rocky porous soil. We have gotten used to the outhouse and feel no need to have an inside toilet.





## TELEPHONE

It was over four years before our telephone was installed. At first we didn't want one, but as John's business grew, it became more important to us. There were many delays, but eventually five poles and ½-mile of cable were put up to reach us.

## HOUSEHOLD TASKS

With the basic necessities conquered, there still remained some changes in household tasks. I don't have a vacuum cleaner, but find no faults with my carpet sweeper, broom, and mop. A frequent job is to keep the lamps full of kerosene and to clean the wicks and chimneys. Also, I carry in wood and coal for the fires and carry out the ashes.

## LAUNDRY

Of all the conveniences we do without, a washing machine is the only one I miss. Still, I have found reasonable alternatives. Most of our clothes I wash by and in the bathtub. I use detergent and cold water, agitate with a toilet plunger, and let the clothes soak for an hour or so. Often I use the rinse water for the next batch. I enjoy hanging clothes on the line outside whenever I can. But if it's raining or snowing, I hang them on lines in the bathroom so as to drip into the tub. When our sheets and towels pile up, I take them to a laundromat. With diapers, I would hang them on the line (sunshine kills bacteria), and then once a week take them, dry and fresh-smelling, to the laundromat.

I rarely need to press anything, but when I do, I use my flat-iron, set on the woodstove.

## ENTERTAINMENT

Evenings are a family time, and we really enjoy being together. Instead of watching television, we sit by the fire, play with Daisy, read, work on various projects. We have a battery-powered record player and radio. Televisions are made battery-powered also, but we really don't want one. One of my biggest joys is sewing on my treadle sewing machine. I've made clothes for us all, even my wedding gown, and would never trade it for any other. We didn't even lack a beautiful Christmas tree; it was lit (briefly) by real candles.

## ADAPPTIONS FOR BABY

When Daisy was born we had no doubts about how she would fit into our lifestyle. The few adaptations for a baby came easily. I had planned to breastfeed and found it not only a very satisfying and rewarding experience, but convenient as well. When Daisy was old enough for solid food, we fed her what we were eating. With a stuffy nose, we'd boil water on the stove for steam. Sterilizers, blenders, and vaporizers certainly aren't necessary. The only changes we needed to make were for safety. At crawling age we put a baby gate in front of the stove. Kerosene lamps had to be put out of reach and the baby was taught to respect them. An important advantage of having basically one room is that the baby is not out of sight and doesn't need to be carried from room to room.

## OUR REASONS

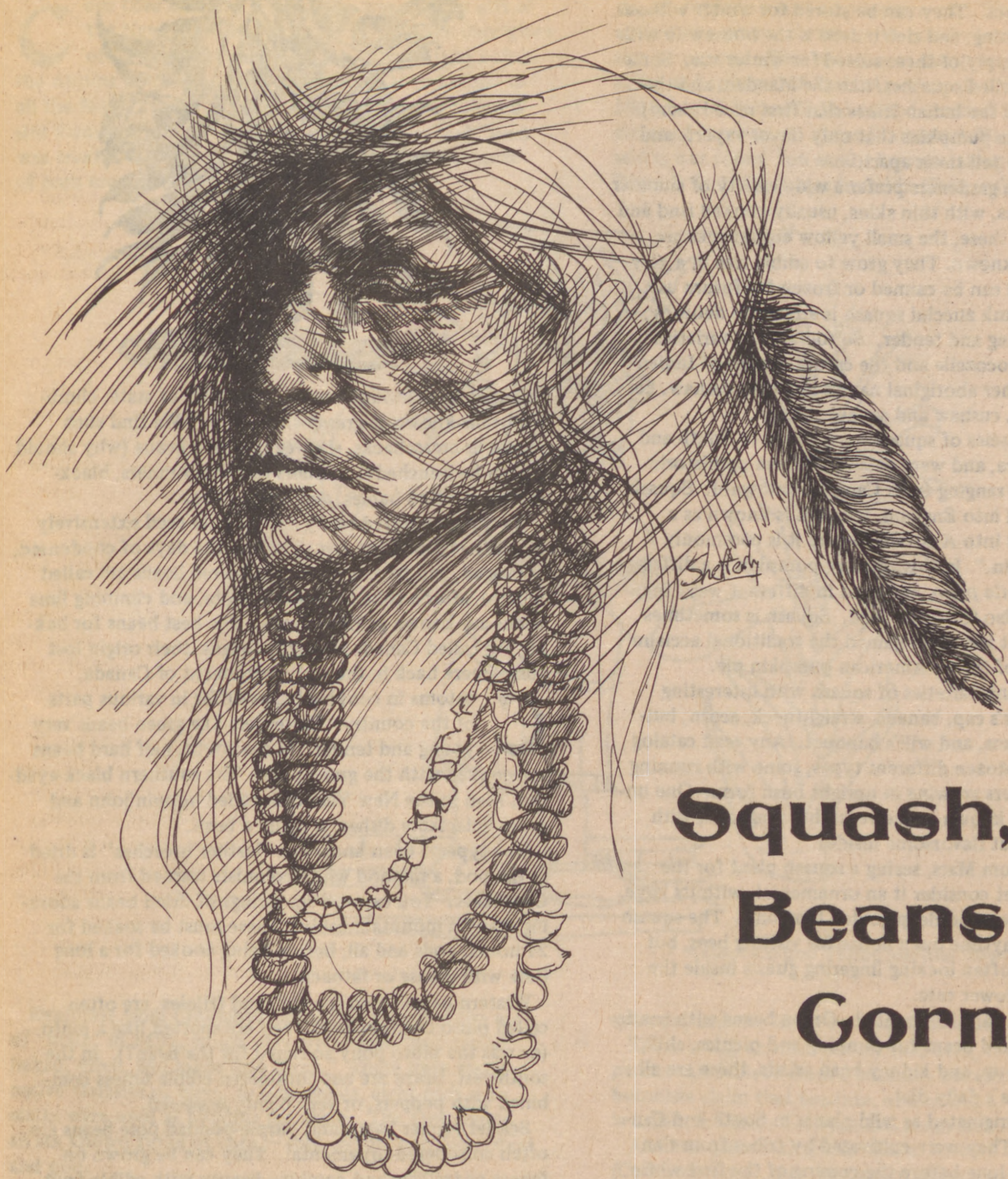
Why, the reader might ask, would anyone want to live without electricity? At first it was a matter of economics for us. We bought an isolated piece of property, far from existing power lines. An estimate from the power company determined that we would need to pay \$2,600 in one payment to have electricity. That was impossible for us and gave us the challenge to gear ourselves to living without it. But with the threat of energy shortages and with inflation, we soon realized that not only did we not need electricity, we didn't want it either. Besides saving the construction charge, we save on utilities and appliances. Living as we do really gives us the best of both worlds -- an old-fashioned lifestyle with access to modern conveniences (trucks, chain saws, laundromats, etc.).

We will try to instill in our children an appreciation of what we believe is a simpler way of life. We are often outdoors watching for birds, deer, raccoons, and other wildlife. It's very satisfying to warm ourselves by a fireplace we built ourselves and with wood we've cut and split. At the age of three, Daisy knows that electricity is something other people have, but we don't. Also, she's accepted the fact that we live a little differently than other people. We've faced the elements, found our solutions, and are content with our choices. The romanticism remains.





**As American As...**



## **Squash, Beans & Corn**

by Marie Mellinger

**W**e often hear of the origins of agriculture in the Middle East and of the important crops which originated there — most notable, wheat. Many other vegetable and agricultural crops came from Europe and Asia, but several of our most important plants came from North and South America. The Incas of Peru and Mayas of Mexico were successful farmers and are credited with the domestication of corn, beans and squash.

A squash by any other name might seem much more

palatable to word conscious folks, for whom squash means a soft, squishy mass of nothing." To others, with a country background, squash conjures up all the nostalgia of autumn on the farm, with the ripe riches of garden and orchard being gathered and stored for future feasting. No one ever tolerates squash, they either consider it among the most delicious of vegetables or detest the sight and sound of it.

In the north and east squash means the Hubbards and



Table Queens, with rinds so tough it often takes an axe to chop them open. These are baked for a long time in a slow oven with butter or sausage seasoning, and are incredibly delicious. They can be stored for winter without canning or freezing, and rich indeed is the housewife with an abundant supply of these stored for winter use. Some of these hard shelled squashes, like the Mandan, and the Arikara (named for Indian tribes that first raised them) are so much like pumpkins that only flavor experts and good cooks can tell them apart.

**S**outhern gardeners prefer a wide variety of summer squashes, with thin skins, usually cooked rind and all. Of these, the small yellow crooknecks are probably best known. They grow to edible size in a very short time, and can be canned or frozen for future use. The long and lank zucchini squash is a favorite delicacy, used when young and tender. So too are the varieties known as the cocozelle and the casuta, names of Indian derivation. Other aboriginal names included cashaw, kershaw, ecushaw, cushaw and squato-squash.

The many species of squash were native to South and Central America, and were cultivated from prehistoric times by tribes ranging from Canada southward. Squash was introduced into England, where it is known as a "marrow", and into Australia, where it is commonly called "pumpkin." In this country pumpkin is a different species, *Cucurbita pepo*, and used in different ways for cookery, and also for cattle feed. Squash is sometimes used for pie but has never gained the traditional acclaim that is the lot of the all-American pumpkin pie.

There are many varieties of squash with interesting names like turk's cap, banana, straightneck, acorn, butternut, pattypan, and will's banquet. Any seed catalog will describe a dozen different types, some with running stems, and others growing in upright bush form. One unusual squash is known as the vegetable spaghetti, with soft, stringy, but flavorsome insides.

A stranger from Mars, seeing a squash plant for the first time, might consider it an ornamental, with its large, decorative leaves, and deep golden blossoms. The squash flowers hold daytime open house for visiting bees, but close at night, often locking lingering guests inside the yellow silken flower case.

**W**e take beans for granted. Green beans with roasts and baked beans for camping and picnics, chili, bean soup, and kidney bean salads, these are all part of America's daily diet.

Most beans originated as wild plants in South and Central America. They were cultivated by tribes from Canada southward long before the coming of the first white explorer. Almost all species of beans, including the kidney bean, the pole bean, and the lima bean, are native to the new world. The broad bean, or big butter bean, was native to an area near the Caspian Sea.

Every seed catalog has a wide selection of bean seed varieties for the home garden. Gardeners enjoy planting beans because the visible results are satisfying. Some of the most interesting varieties are still found in the southern Appalachian mountain areas where seed is often carefully kept from season to season and handed down from generation to generation.

We find strange varieties of beans advertised in the Georgia and South Carolina Farm Market Bulletins. One ad,



"wanted from mountains, or lower part of state, climbing beans known as greasy-short-cuts." We find such names as creasebacks, six weeks bunch beans (why should a bean be bunched?), runners and half-runners, black-turtles, spotted babies, and calico beans.

Navy beans stored easily and so were used extensively by the navy (and the army) before the days of condensed, packaged, and frozen foods. Some red beans are called hidatsa, after a tribe in North Dakota, and climbing lima beans are known as Hopi beans. The best beans for baking are called Canada Voyaguer beans, their origin lost somewhere back in the early settlement of Canada.

**C**ustoms in cooking beans differ in various parts of the country. Easterners like green beans very young and tender. In the south, half hard beans are cooked with the green pods. The southern black-eyed-pea, used in the New Year dish called hoppin'john and other delectable dishes, is really a bean.

One type of bean known as "leather breeches" is dried in the pod, a method white colonists learned from the Cherokees. You can still see strings of dried beans adorning many a mountain cabin. These must be soaked for 24 hours, pods and all, before being cooked for a long time with grease or fatback.

Western beans, used for chili and frijoles, are often called pinto beans because they are spotted like a pinto (or was the pinto pony so called for the bean?). In the southwest, beans are not considered edible unless combined with peppers, or very highly seasoned.

Scarlet runner beans and purple-podded pole beans are often considered ornamental. They can be grown on fences or trellises and combine beauty with edible fruit. They are ideal for the gardener with a small space, for the beans are prodigious of their bounty.

Every child knows of the fabulous bean of Jack and the Beanstalk. It's not surprising that that story allotted the part of the amazing vine to the bean. Beans are one of the easiest plants to grow in any soil and almost any climate. They yield big returns from a packet of seed. Philosopher Thoreau raised beans at Walden Pond, and thus eked out a living of sorts while writing. Beans have always been a poor man's food as well as a gourmet article in

Marie Mellinger lives in Tiger, Georgia.



the diet. It is said a dollar will go further buying beans than any other food.

**C**orn (*Zea mays*), a major crop, was another gift of the New World known and raised by the aborigines of North, South and Central America long before the coming of our so-called civilization. It was raised in all the forms known today. However, its actual origin is still shrouded in mystery. The ancient Mayas said "man was created from corn", but they had no remembrance of corn created by man.

**S**till another likely parent of corn is *Tripsacum dactyloides*, the sesame or grama grass. This too has seeds in a sort of primitive ear. The heads are ranked like grains of corn, with polished scales, and can also be popped. This is native to damp woods in southern states and to most of Latin America. In 1818, botanist Nuttall wrote it was found on the seacoast and "the vast plains of the western states." Botanist Elliott in 1824, said it was found "on sandy knowles along the Ogeechee River." In 1937, it was found in Chester County, Penn-



Aztec rain god Tlaloc holding precious gift of corn.

Explorers from Columbus' ships first recorded the use of "maiz" in 1492, which they wrote was "well-tasted, baked, dried, and made into flour." There were many native varieties of corn. In Guatemala, eight-foot corn stalks were used as building materials. The Incas raised all six known types of corn — soft, sweet, pop, flint, dent and pod.

A very primitive form of corn was found in South America. One theory states that corn evolved from a grass called teosinth, or teosinte. Like corn, this plant had tassels and ears, although they bore only five or six seeds, each enclosed in a hard, bony shell. Like corn, teosinte has ten chromosomes. It will pop if placed on a fire.

Some of the small ancient ears of corn are known as "pod" corn, with kernels enclosed in a chaffy shell. The cobs are about two inches long. Pop corn was found in South America, along with a primitive pottery corn popper. Some of this ancient popcorn is very similar to the small-eared, dwarf strawberry popcorn raised an an ornamental today.

sylvania, and was listed by Deam for southern Indiana.

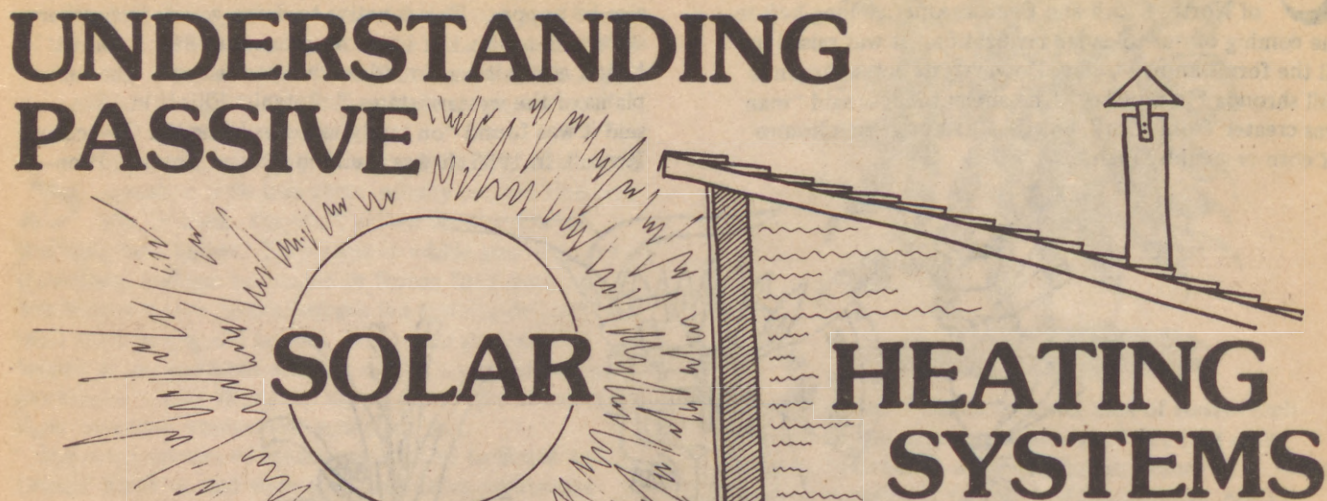
There is still another theory that corn, teosinte and *Tripsacum* all evolved from a common ancestor. Still, other botanists claim that teosinte, or *Echlaenia mexicana* as it is called, is a cross between *Zea mays* and *Tripsacum*.

Another grass with grains similar to corn is job's tears. (*Coix lachryma*), but this cannot claim a new world ancestry. It was raised in the Mediterranean areas, but was supposedly brought there from China in the early ages. The hard, shiny seeds have always been strung for teething babies. Job's tears had been used in the Orient as a diuretic and purgative medicine and in certain salves for rheumatism.

Job's tears were brought to the early Spanish missions in this country and the seeds used for rosaries. They were adopted by the Seminoles for magic ceremonies. The Cherokees also adopted the use of this grass, and it is still raised extensively on the Cherokee reservation and used to make interesting strings of beads, now known as "love beads." Strangely enough the Cherokees call them "se-utsi", or "mother of corn."



# UNDERSTANDING PASSIVE SOLAR HEATING SYSTEMS



by John M. Rohman, P.E.

**S**pace heating requires about 20% of our total national energy consumption. Nationally, about half of this space heating uses natural gas and half uses oil, with other energy sources contributing very little. Most space heating is done with oil, imported oil, in the Northeast. The experts agree that both natural gas and oil are in short supply and that certainly the price of both will increase rapidly in the future.

The technology to enable us to heat our homes with solar energy is here today. (Even a recent publication by the American Nuclear Society makes this admission). The technology is simple, as I will try to explain, and could be applied by almost anyone designing and building a new home. Solar heating concepts can also be considered when remodeling older homes.

All solar heating systems are made up of three components. They are:

- 1) Collector
- 2) Storage
- 3) Back-up System

A solar heat collector is a system of layers of glass or plastic with an absorber in back that intercepts the sun's rays and converts them to heat energy. This energy is then transmitted by a fluid (either air, water or another liquid) from the collector to the dwellings or a storage unit. The storage unit can be made up of any material that can store this heat energy. This commonly is either rocks (air system) or water (water system). These components and a means of transporting them are shown in Figure 1.

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*John, a Maine Professional Engineer, is an Associate with the firm of Webster/Ebbeson/Baldwin/Day in Bangor, currently involved in the design of solar heating systems.*

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This system is what is known as an ACTIVE system since it obviously requires a means of transporting the heat from the collector or storage area to the dwelling.

A pump would be used to transmit the water (or other type liquid) over the collector to the storage in a water system and then another mechanical means would be used to transport the heat in the storage to the dwelling.

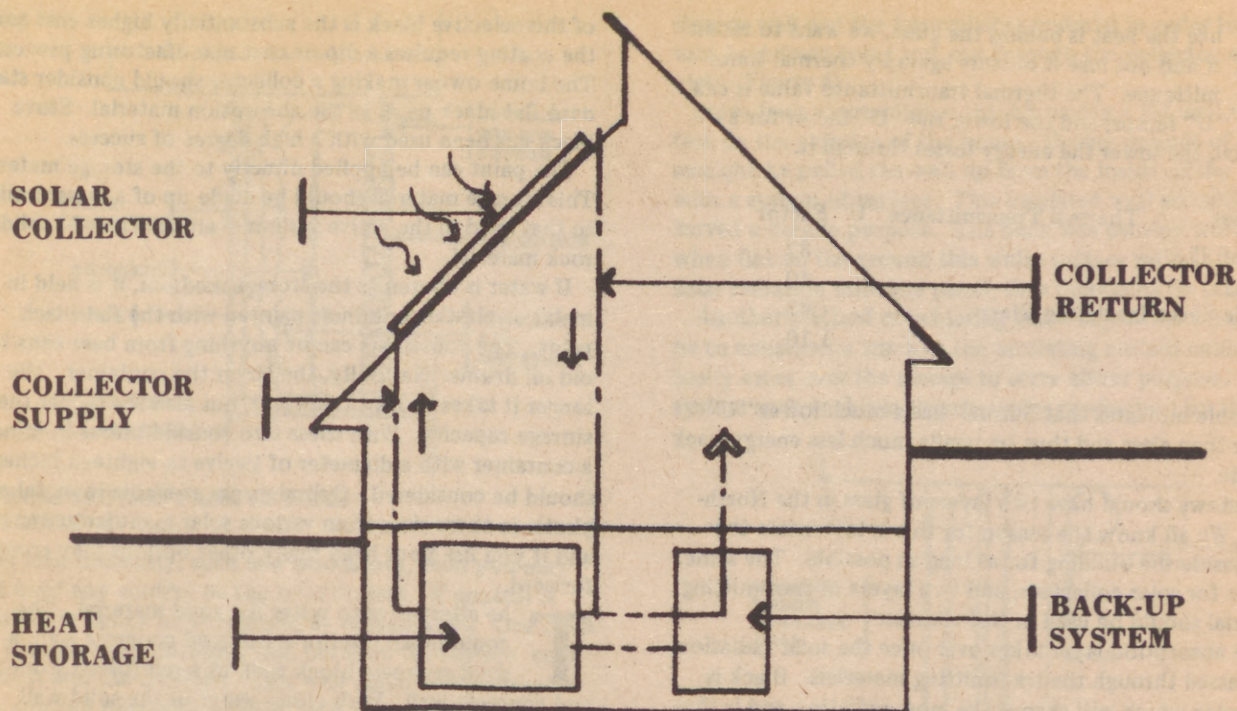
The air system would require a fan, duct work and control damper system.

The dwelling temperature would dictate mechanically when and from which source (collector, storage or back-up) the heat would come. A relatively sophisticated control system would be required if this operation were done automatically.

This is certainly not to say that active systems should not be utilized. Many homes are currently in design stages or already constructed that have successfully used the above system types. These active systems are not quite competitive with oil at present prices but will be very competitive as the price of oil rises.

**B**ecause of the complexity of this type of active solar system, the remainder of this article will deal with another type of solar heating system, which is called PASSIVE. A passive system contains the same three basic components — collector, storage and back-up. However, no mechanically moving parts are incorporated to move the heat from the collector to storage and to the dwelling. All components can be constructed by anyone who can do carpentry. Essentially, the collector and storage units are designed to be part of the dwelling, a cross-section of a dwelling utilizing passive solar energy is shown in Figure 2. There are no ducts,





**CROSS-SECTION ACTIVE SYSTEM**  
**FIGURE #1**

pipng, fans or pumps to transmit the heat from the collector to the storage. The sun simply heats the collector space, and this heat is absorbed into the storage and, in turn, heats the dwelling.

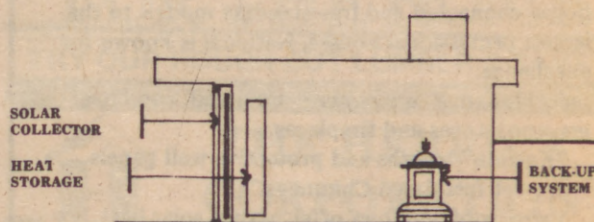
The orientation of the system is the single most important aspect of the entire solar heating set-up. The collector should face South. Direct South would be best, although a deviation of 20% in one direction or another would be acceptable. The area in front of the collectors should be free from trees. Deciduous trees could be planted at some distance in front of the collectors as long as they did not cast large shadows in the winter. Since these trees have leaves in the summer, they actually keep the collector cooler during this period when heat is not required.

The collector operates on the principal of the "greenhouse" effect. The radiation of the sun is in short wavelengths and these short wavelengths can pass through glass material. However, once they come in contact with a good absorption material, they are then converted to long wavelengths. These long wavelengths cannot pass through the glass, so the air around the absorption material is heated.

The layer that the sun passes through must necessarily be able to let the sunlight reach the absorber. This layer need not be glass. There are several materials which have been developed for this purpose. Different materials have different values of solar energy transmittance, which is simply the percentage of solar energy which can pass through. Below are some figures that are a result of studies performed by the American Society of Testing Materials (Test ASTM E-424).

Material	Solar Energy Transmittance
Polyvinyl Flouride	93%
.025" Fiberglass (Premium by Kalwell)	87%
1/8" Glass (DSB Grade)	86%
1/4" Glass	81%
Sunwall (by Kalwell)	77%
Double Sheet Insulating Glass	70%
Sunwall II (By Kalwell)	69%

You will notice that the glass and the products by Kalwell are comparable. This is not intended to be a plug for Kalwell, but the material provided by that Corporation has been tested and has proven itself and is a commercial product to consider for solar applications. Other competitive commercial products exist, and as the solar market increases, there will be even more competition. The fiberglass-type products are not clear like glass. This clarity in glass, however, is not evidence of a higher solar energy transmittance value, since the transmittance value is based on energy transmission rather than light transmission.



**CROSS-SECTION PASSIVE SYSTEM**  
**FIGURE #2**



Once the heat is behind the glass, we want to retain it and not lose it outside again by thermal transmittance. The thermal transmittance value is called the "U" factor, and the lower the "U" factor for a material, the lower the energy losses through it.

Material	Thermal Transmittance "U" Factor
Sunwall II	.32
Sunwall	.40
Double Sheet Insulating Glass	.65
Glass	1.10

The table indicates that Sunwall has a much lower "U" factor than glass and thus transmits much less energy back outside.

Windows should have two layers of glass in the Northeast. We all know the reason for this is to contain the heat inside the building for as long as possible. The same is true for solar collectors, and two layers of transmitting material should be used in this climate.

The absorption layer takes over once the solar radiation has passed through the transmitting materials. Black is the color which will absorb the most radiation and is thus used to cover the absorption surface. Special "selective black" materials are available which have a much lower value of emissivity. The emissivity of a color is the rate at which it re-radiates heat. A collector with a selective black absorber can have an efficiency of up to 15% higher than the standard flat black paint. The disadvantages

of this selective black is the substantially higher cost and the coating requires a dip or coat manufacturing process. The home owner making a collector should consider standard flat black paint as the absorption material. Stove black has been used with a high degree of success.

The paint can be applied directly to the storage material. This storage material should be made up of a mass similar to that used in the active system — either water or solid rock material.

If water is chosen as the storage medium, it is held in metal or plastic containers painted with the flat black paint. The containers can be anything from beer cans to old oil drums. Naturally, the larger the container, the longer it takes to heat the water, but also the higher the storage capacity. With these two considerations in mind, a container with a diameter of twelve to eighteen inches should be considered. Cylinders are available in metal and plastic in these sizes from various solar manufacturers, and if you use your head many other options may come forward.

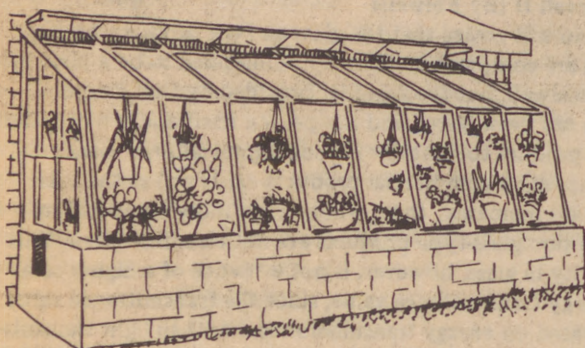
The alternative to water is a solid material. This could be an interior reinforced concrete wall, a solid concrete block wall, or a reinforced stone and concrete wall. With either water or the solid wall the principal is the same — because solar energy is intermittent, we need to store any excess energy and use it during the sunless periods.

The only addition that might be required for the system is some control over the rate at which the heat is dispersed to the dwelling. If the back-up system is intended to be

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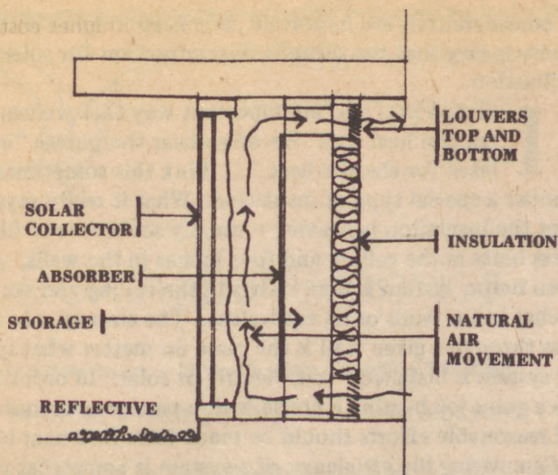
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**CROSS-SECTION PASSIVE WALL  
FIGURE #3**

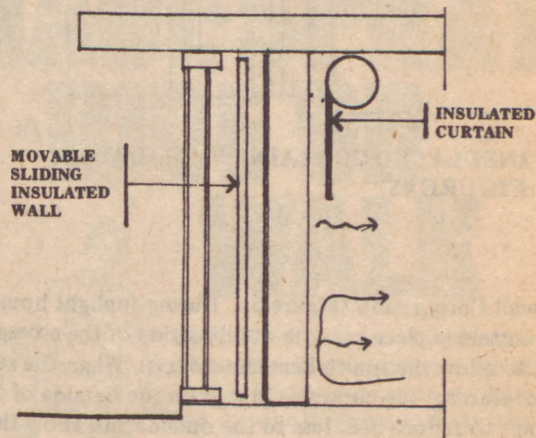
used intermittently, such as a woodstove, then you may not need any control on the solar system. If control is desired, it can be accomplished in various ways. One method is to place an insulated wall between the storage component and the dwelling. This wall could have louvers in the top and bottom and when heat is desired, the louvers could be opened and the natural air currents would carry heat into the dwelling space (Figure 3).

An insulated curtain could be installed between the storage unit and the dwelling. When heat is needed, this could be drawn completely away, and then the curtain could be partially or completely closed when the condition is satisfied. Insulation could also be placed between the

storage wall and the transmitting material in order to prevent heat from being lost out through the collector at night (Figure 4).

Steve Baer accomplished this by having a lift wall system on the exterior of the house. During periods of no sunlight he pulled the wall up from the inside of the house with a system of pulleys. This insulated wall actually served a double purpose. The back was painted white and when flat on the ground this white surface reflected more solar radiation onto the panel, thus increasing its efficiency.

Another method of achieving these objectives would be to construct a track so the insulating curtain could actually cross over the storage to serve either purpose. A system such as this is already under production by the



**INSULATING CURTAIN/WALL  
FIGURE #4**

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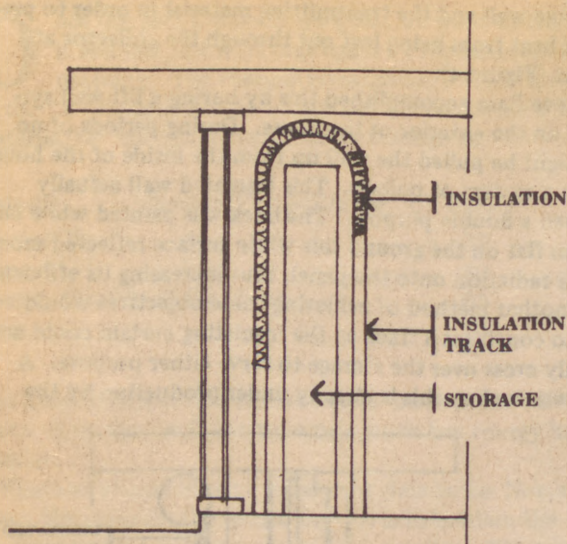
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**INSULATED CURTAIN (BY KALWALL)  
FIGURE #5**

Kalwall Corporation (Figure 5). During sunlight hours the curtain is placed on the dwelling side of the storage unit to allow the sun to heat the storage. When the sun is not shining, the curtain is placed on the outside of the storage to reduce heat loss to the outside and allow the storage to radiate heat to the dwelling.

I briefly mentioned previously placing an insulated panel on the ground in front of the collector and painting this white to reflect more sunlight. Exterior insulating panels are rather impractical in the north because snow and ice make them difficult to move, but we can still use this effect. When snow is in front of the collector, it reflects more energy into the collector, and white rocks could be placed at this location to help during the periods when there was no snow but heat was still needed. This added reflection can increase efficiency up to 10%.

The construction of the house greatly influences how effective any particular solar heating system is. Windows should be avoided when possible on the North side, since virtually no sunlight passes through these windows. Even East and West windows have very little sunlight during the cold winter months. Certainly only the purist would decree NO North windows, since a mountain view or oth-

er considerations are important, but keep in mind if the house is new that the siting is very important for solar utilization.

Insulation is also an important way that we can control heat loss. We often hear the phrase "insulated for electric heat." I think this sometimes implies a special type of insulation. What it really says is that the insulation is heavier — usually six inches of fiberglass batts in the ceiling and four inches in the walls. An even better system is nine inches in the ceiling and six inches in the walls or its equivalent. The amount of heat loss through a given wall is the same no matter what type of system is installed — oil, electric or solar. In order to do a good job heating a house with a passive solar system, all reasonable efforts should be made to reduce heat loss.

Calculating the efficiency of a system is somewhat complicated and it depends on many variables, such as the size and type of collector, the size and type of storage, the size, shape and expected heat loss of the dwelling, etc. I should mention some examples, however, of what can be expected as guidelines. An active roof-mounted system can be designed that will justify itself financially in approximately ten years, if the system is designed to supply around 55% to 60% of the heating requirements. If for the same house a system was designed for 100% of the heating requirements, it would be next to impossible to justify the cost over an oil or electric system, since the system would be so large in order to handle the month of January that in the spring and fall it would produce more heat than necessary.

A good estimate of the proportion of heat you could supply with a passive system is about 40% to 50%. Naturally, this would vary with the house, and using good site adaptation, high insulation, berming, good storm windows and doors, and small glazed areas on the North, you could hit 85%. At any rate, the need for a back-up system is obvious.

In an active system, the back-up should be incorporated in with the storage and collector, but a passive system does not lend itself to this. A space heating system would probably be best, either wood stoves or electric baseboard heating.

Certainly not all the questions about passive solar heating are answered here, but I hope I've raised your interest enough so that with a little experimentation and guidance, and a lot of common sense, you will be able to utilize the sun's energy for heat and save some bucks besides.

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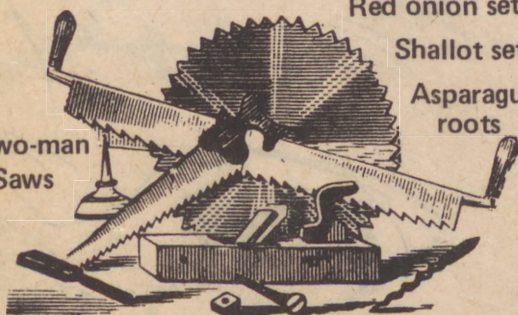
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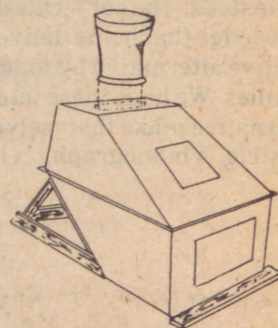
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# Home Childbirth

Years ago childbirth took place in the home as a matter of course. Improved hospital care and new techniques, however, prompted a change in tradition. Hospital birth became the norm. In recent years there has been a renewed interest in childbirth at home. Many young couples no longer automatically accept the conventional choice of a hospital as the place to have their babies.

The following four articles all deal with home childbirth from several viewpoints. Two of the articles are about the experiences of families who chose home childbirth, one article deals with how to react to the home childbirth that happens accidentally, and the fourth article is an interview with a medical doctor involved in home delivery.

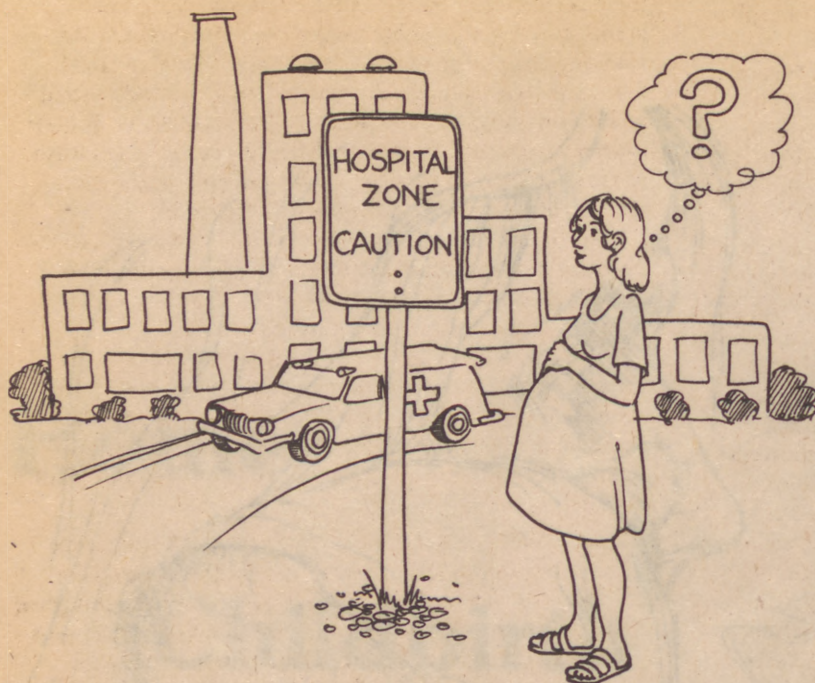
Home childbirth is an unusual topic for **Farmstead**. The subject is dealt with in the knowledge that home delivery is considered an attractive alternative by many young homesteading families. We hope those interested in this alternative make themselves as fully informed as possible. A bibliography is included as a help to that end.











## Our Babies Were Born At Home

*"Is it beyond thee to be glad with the gladness of  
this rhythm? To be tossed and lost and broken in  
the whirl of this fearful joy?"*

RABINDRANATH TAGORE

*Gitanjali*

by Liz Buell

Our present involvement with child-raising has replaced our earlier, intense pre-occupation with meaningful childbirth. But for those who've yet to experience the joys and traumas of bringing a new little human into existence, we can pass along a reliable impression of home-birth from a treasure of memories.

While we remained a freewheelin', childless couple, the physical process of childbirth meant little more to us than those implausible photos in a hospital brochure showing a stylish couple with a suitcase, smiles and neatly packaged newborn strolling to the parking lot, leaving experience in a big blank. Fortunately, our lifestyle made us somewhat skeptical of such ballyhoo, having experienced with sweat and depression of reality, as well as the freedom and rapturous achievements of living on one's own resources in the woods. Also, by good fortune, we had the acquaintance of a local, earthy, female physician. She guided us from the first months of pregnancy, through our decision to avoid the hospital routine, and agreed to be our midwife.

At the time, it was unacceptable for fathers to participate in a delivery (let alone peek through the door) in any hospital in Hancock county. Ours is an equal-sharing partnership, so as far as we were concerned there was no choice but to accept the responsibility of childbirth together - at home. Needless to say, this meant finding out what was going on, inside and out. Good nutrition became uncompromising and nurtured a continuing interest in organic gardening and healthy eating habits. Understanding the functions of the body became a discovery of all

the amazing mechanisms through which nature introduces each new being. Learning the powerful roles of muscular and bone-bunching motion left us in eager anticipation to see all these marvels at work. Through this inquiry and education, we found the key to smooth, natural birthing. It lies in understanding the harmony of mind and body; a confidence in the overall workings of nature. It requires almost a surrender to the instincts basic in us all. During the hot summer months of the Big Belly, I read lots of accounts of pre-"civilized" women giving birth, effortlessly. We both read a score of books on gestation and home-birth, most of which were then obtainable only through "underground" sources and by writing to publishers in England and Mexico.

I grew accustomed to squatting on the porch to do mending or meal preparing and in the garden when weeding. Leisure time was spent lying on the warm ledges of granite, rubbing olive oil into the taut skin of my bulging abdomen. I would lie for hours concentrating on what was happening inside me; going over the process of what would spring into action on the day fast approaching. I felt obsessed probably by the same instincts that drives a she-wolf to dig out her den. I was feeling strong and unafraid. My skin had become tanned and tough, my inner control was capable of complete relaxation, with David as my mentor. The birth passage had become, as our midwife commended . . . buttery. I was ready. David was ready.

a boiled scissors and string in a Baggie, and some sterile cotton and olive oil. (This was a marked simplification of the extensive preparations made for the first birthing. I had scorched several sheets and baby-clothes in the oven after steam-sterilizing them in the pressure-canner. Clean-

---

*Liz Buell, a frequent contributor to Farmstead, lives in Sullivan, Me. Illustrations are by Liz.*

---



liness is sufficient. Sterility is more important in a hospital where armies of germs congregate.)

At that time, we had agreed to caretake and repair an old, drafty farmhouse in town during the winter, convenient to phones, but mostly to be across the road from our old-timey friend Forrest whose wife was dying, in old age, at home. The two events of impending birth and death seemed interlocked for weeks and we had misgivings that either would give. On the day of Geneva's funeral, I welcomed the first contraction while preparing food in Forrest's kitchen for soon-to-return friends and relatives. Just as they arrived, I made a quick exit and David loaded up the woodboxes for the vigil ahead, during which another lesson was learned. No two birthings are alike and one has to be flexible for whatever happens. The second delivery is not always shorter or less laborious than the first. It was necessary to reload the woodboxes and it was not to be until the evening of the next day that we held our second child. After taking an arm-swinging walk along the shore to stimulate the process, I squatted under a blanket-shawl in the throbbing heat by a stove, and David brought me cups of Raspberry-leaf tea. Ever so gradually, the *accouchement* began in earnest. I felt like a boxer in a ring of endless rounds. David was the coach. He rubbed and encouraged and changed the cool towels on my forehead. The, in that slow-motion of the moment long-awaited, a hairy little head pressed into view and spiraled against the giving tightness of its exit. (This is when it is so important to not push and have patience). The limbs slithered out all at once and the body emerged wiggling, wet and wonderful. (Oh God! It's a girl! I had strong expectations of another boy. We'll manage, said David with a grin). While waiting for the umbilical cord to stop throbbing in its final transfusion of liquid life, we watched in awe, as the little girl, curled up on my breast, changed from lavender to apricot. David tied the cord twice, a short ways above her abdomen and cut in between the two knots. We agreed on Sharma-Naomi to replace the chosen masculine name. After much massage,



the placenta came out and we had a champagne toast before cleaning up. Gibran came home from across the road and sleepily greeted his little sister. When Forrest first held Sharma in his big, rough hands, he stood proud and his one good eye flashed in loving familiarity. It had been long ago that his first wife had peaceably given birth to three of their children at home, and died in the more modern childbirth of their fourth, in a hospital.

Throughout the days of diapers and nursing, my dreaming was still drawn to that little boy, legs dangling over eternity, who was wanting to be born. There was no denying that our family was not yet complete.

Now, we are fireworks-makers by occupation and the Fourth of July is our busiest day of the year, but by terrible planning, there we were, *that day*, asking friends Penny and John to shoot a display for us in Jonesport. It was obvious that we were about to enter into our third birthing.

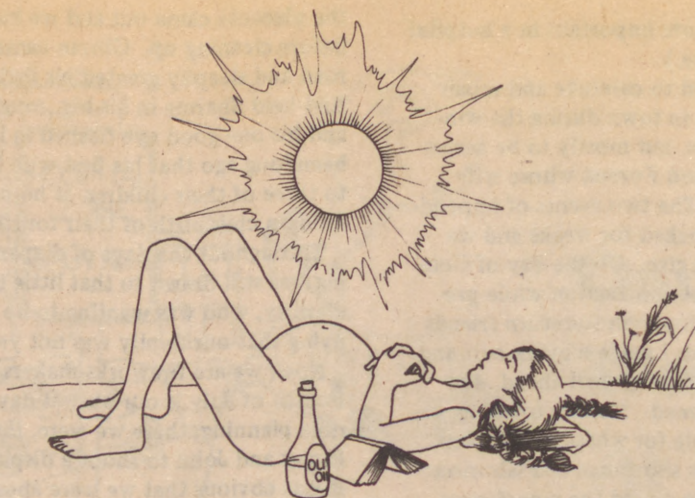
It was a crisp October evening when David drove out to call the midwife. The contractions were more powerful than could ever have been imagined. I welcomed the natural oblivion that a mother drifts into with abandon and trust. The feline grunts and moans were a gutsy pleasure and David held on to me in confidence knowing it was good. There is the nausea, the sweat, the grimy humanness all within that swelling realization that -- this is it -- we're into it -- the universal heart-throb. Before too long, however, it became apparent why everyone in attendance at a home-birth must be capable of absolute calm and be able to transmit tranquility. Our midwife was of invaluable guidance through her wisdom and experience, but at the height of our dependance on her, the fury of her vibrant personality came out in an emotional excitement that kicked open the door of panic. It is possible that such static might interrupt the natural flow of things. Anyway, what happened it that we all (midwife, David, two friends and myself) walked down the garden path, at midnight, to the midwife's VW bus. She felt that we needed to be nearer to a phone and electricity (we had neither). Our friend Tom offered the use of his unfinished office in an old farmhouse in Ellsworth.

Happily, I was awash in an attitude of wonderment and felt as an observer to all this; but I was ever so conscious of a head wedged within my pelvis.

The farmhouse kitchen was bare, so Tom got a mattress and a legless captains chair from the shed. Oh how good it felt to get on with it again. There was a tumult of bones and muscles grinding together in exhausting sequence. Then, settled there in a squat, I felt a new thing; a quiet vacuum of calm and stillness. It is technically known as Transition stage, but I remembered it as terrific. With a big smile and a "whew", I said that this must be it... entry. I held tight onto the chair arms, waited for the emerging head to rotate, and gave the big push that had been imagined so often, and... whoosh! Everyone reached out, but I caught him first, by the armpits. This wet little creature unfolded his legs, opened his eyes wide and blinked, and I said "hello" to Gibran.

When Gibran was three years old, he felt my protruding "tummy" and announced that his little brother was kicking to come out. We were eager for our new encounter with confidence from the lessons learned three years earlier and knowing that the body would be moving along





familiar currents. We decided, this time, that it would be just David and me. We had kept up with our regular pre-natal check-ups in Blue Hill and had our kit ready.

**A**gain, we had completed the regular round of pre-natals. Blood-pressure, weight and position were all good. There had been a remarkable improvement in awareness, locally, in obstetrics over the past four years. Hospital rules had become more humane and realistic toward the immediate needs of the newborn and its mother. Natural childbirth, with fathers present, was becoming common. The unquestioned control of the almighty obstetrician, and hasty methods for *his* convenience, were giving way to the demand for shared involvement. Our most recent doctor was very considerate in his urgings that we have the baby in the hospital. He had made an effort to make compromises acceptable to us, eliminating some of the automatic hospital procedure. We would even be able to manage the birthing ourselves on a regular bed. We couldn't say yes or no. Now that there was a choice, we began to consider just how important it is for a baby to be born at home, at ease, in the softness of family environment. The weather on that Independence Day, and the next, was so beautiful that it was decided. How awful to be indoors, especially during labor, on such a glorious day! David notified Shep and Linette, friends who had agreed to be at hand in case a phone call or driving was necessary. They are a remarkably calm couple who are very sensitive to the spirituality of a new born and its entrance into the world. We spent the following day together (another long labor) sitting on the ledges in the sunshine. I walked through the garden picking peas and sometimes crawled back on my hands and knees, hoping to relieve the tightness of my contracting abdomen. I would complain at the prolonged discomfort and grumble over the others' patience. Linette braided my hair and calmed my irritation by drawing a cool, damp cloth between each of my toes. Oh! How wonderful that felt! The sensation of that toe-massage is the most vivid recollection I have of the long hours of labor. Just as the sun had set on July 5, and I was having miserable thoughts of being achy forever, the "waters broke" (liquid emptied from the uterus) and it was beautiful. It was really happening. Just a short time of resisting the urge to push was follow-

ed by an intake of strength and an expulsion that left our little boy in our arms, glistening in the lamplight. So that is Obadiah. He fell asleep.

These treasured experiences were a privilege, for which thanks is given, and an accomplishment, of which we are proud. Each decision we made to have our children delivered at home was not based on blind bravery, nor (I hope) on foolhardy rebellion. Home birth is too much of a responsibility to take lightly, without becoming thoroughly informed and prepared. Many of the complications feared at birth are often avoided by proper attention given early in pregnancy. If there had been any indication of trouble within the months of monitoring and pre-natal exams, we would have sought medical care as necessary. Obviously, there are situations that require hospitalization, but arrangements should be made beforehand to maintain an atmosphere of personal warmth for the baby's welcome, rather than floodlights, cold metal and nursery isolation. Even for those fully prepared, there remains the chance of unforeseen difficulties . . .

**S**hortly after Gilbran's arrival, it became obvious that the placenta was not going to come out on its own, or by our coaxing, and it was beyond our endeavor to remove it, as the surroundings had become increasingly unsterile. So a call was made to a sympathetic doctor who agreed to meet us (with outpatient status) in the emergency room of a Bangor hospital. (Maybe our midwife had had a premonition). It was still a long trip and there was danger of hemorrhage. We made quite a sight, all of us tramping in there, wearing oddments of woolen clothing & sleepwear, and David looking pregnant with our 4-hr.-old newborn tucked under his jacket. But the doctor was very understating and good-humored. He removed the placenta manually, and we took a short rest and had breakfast in the hospital cafeteria before driving home in the early morning sunlight. Our midwife's husband had thoughtfully gotten a fire going in our house, making it warm for our return.

Today, there would not be the need of going such a distance. There is the possibility of setting up an agreement involving the back-up of a local hospital. Better yet, but improbable, would be a system similar to that in England. There midwifery is the rule and each town maintains a motorized birthing unit carrying emergency sup-



plies (like the fire department) which is called to a residence at the beginning of labor. While the parents welcome their child in the comforts of home, the crew supposedly has a jolly good time drinking tea in the kitchen.

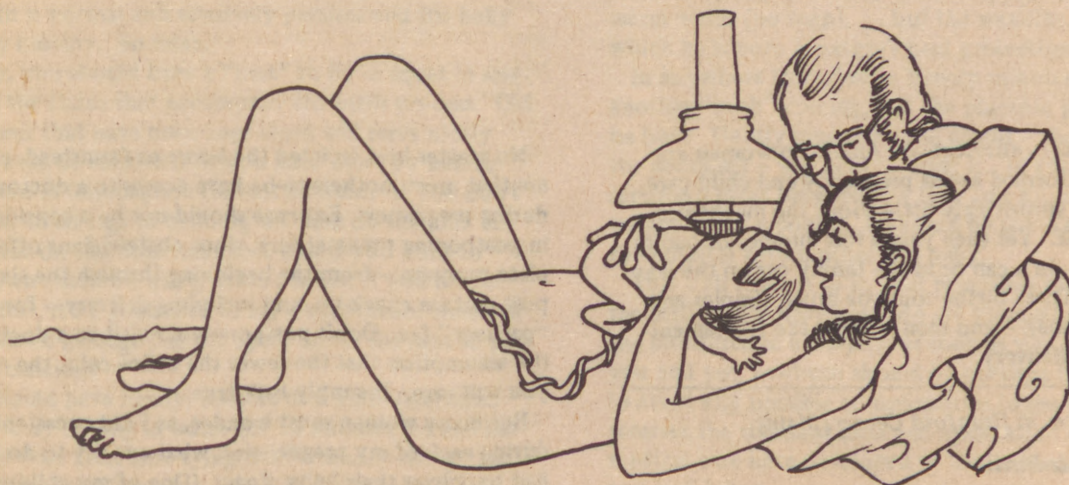
I've yet to see the interior of a hospital delivery room, and, in all fairness, I probably should look at one instead of perpetuating the image I have that it is something straight from the pages of a Dr. Strange comicbook. Judging from the hospital rooms I have seen, and assuming that the labor room has the same mandatory four cold walls and glaring lights, I know that it would have been a devastating entrapment for me during the long hours of labor, made at least bearable by familiar, cozy surroundings. It is probable that in a hospital I would have eventually succumbed to the "kindness" of anesthesia and missed out on the best part, deserting the baby at the crucial time of our team-work. The Big Blank. But, changes are still being made and there is much progress to look forward to. There is considerable improvement also in the variety of books now available at local book stores that shed light on all aspects of having a baby. One point that might not be emphasized enough in any of the books is the care that should be taken throughout pregnancy to avoid the need for an episiotomy. A regular application of almond oil to the perineum, (*and knowing when not to push*) assures elasticity during the stretch of delivering the baby's head, so that no cutting or tearing is involved.

One important book that I wish had been available for inspiration before any of our three were born, is *Birth Without Violence* by Frederick Leboyer (Aldred A. Knopf, N.Y. 1975). Leboyer vividly describes the obvious shock and pain that an infant must endure when born into the glare and noise that is so common. His proposal of semi-darkness at birth is imperative, as well as his admonition to keep the baby in a curved position as it had been for so long in the uterus. It seems revolting now that the practice of jerking a newborn's body into the air, by the ankles, could have become so widespread and acceptable. My spine tingles with discomfort at the thought. Although it sounds like a good idea, his method of having a tank of warm water at hand, for immediate soothing immersion of the infant, seems superfluous. The touch and heartbeat of a mother's closeness seems sufficient.

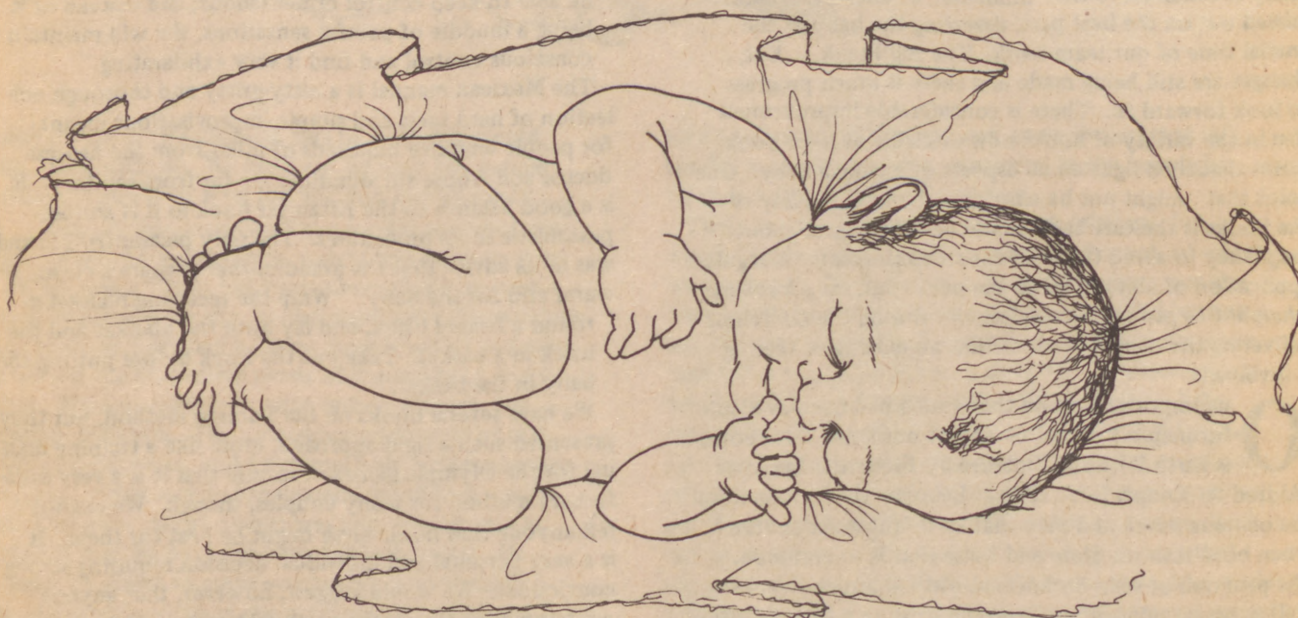
Two books that were very helpful to us and still might be difficult to obtain are: *The Experience of Childbirth* by Sheila Kitzinger (Victor Gollancz Ltd. London 1964) and *PREGNANCY, CHILDBIRTH AND THE NEWBORN; A Manual for Rural Midwives* (Instituto Indigenista Interamericano, Ninos Heroes, 139, Mexico 7, D.F., 1959). The Kitzinger book is full of anatomical enlightenments, and the romantic, home-birth notions that help keep one optimistic. It is beautifully written and conveys a strong message about keeping one's head above water. "If (the woman) succeeds in harmonizing her breathing with the contractions of the uterus, which have a definite rhythm of their own and are like waves in the way that they gather, rise to a crest, and then die away, she will be able to keep control of her labour, and instead of it being a muddle of painful sensations, she will maintain conscious control and find it very exhilarating."

The Mexican manual is a nitty-gritty and thorough collection of hard facts and simple improvisations meant for people who live hundreds of miles from the nearest doctor and whose surroundings are far from sanitary. It is a good balance to the Kitzinger book as it is almost pessimistic in its procedures. The only pleasantry I found was in its advice that the grandmother prepare a clean, warm crib for the baby. "Wrap the receiving blanket around a heated brick, and lay both the blanket and the brick in a basket. Take out the brick before putting the baby in the basket."

We have several books on the Lamaze method, but they presented such a rigid approach; more like a training manual for the Olympic games. I'm sure that it is a very satisfactory method for many couples, though. We cannot tell anyone that home-birth might be best for them. It is a very personal and individual decision requiring strong convictions. We would suggest, however, that anyone contemplating this decision, should seek out what has been written and become informed, if not influenced. We were most affected by reading chapter 8 entitled: "Should Babies Be Born at Home?" in the book *The Humanization of Man* by Ashley Montagu (Grove Press, N.Y. 1962). He leaves no room for doubt in the rightfulness of such a decision. Now that Obadiah is mobile and outgoing (and the last in diapers) we're getting that free-wheelin' feelin' again, with the added camaraderie and sharing that comes with being a family.







## Emergency Childbirth

by Peggy Gannon

**O**ddly enough, although we American women are so well-informed about pregnancy and child care, we know surprisingly little about the mechanics of childbirth itself. Yet each year a fair number of babies are born at home, in a cab or in the family car on the way to the hospital. These births could be much simpler and easier if more women -- and men -- know the fundamentals of emergency delivery.

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*Peggy Gannon lives in Rumford Center, Maine.*

*Illustrations by Liz Buell.*

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No matter how isolated the home or farmstead, chances are that most mothers-to-be have access to a doctor's care during pregnancy. Expense should not be a consideration in postponing prenatal care, since obstetricians offer a complete program -- from the beginning through the six-week's post-partum check-up, and including delivery -- for one "package" fee. Don't postpone your visit to a doctor on the assumption that the fewer the office calls, the more you will save. It simply isn't true.

But many women must wonder, as I did occasionally during each of my pregnancies, what exactly to do if they had to deliver their baby alone. (One of my children was



born at home -- by prearrangement -- and I thought, at last I'll find out why the need for all that boiling water I see in the old movies. The doctor arrived, had a look at me, then turned to my husband and asked, "Is the water boiling?" "Oh, yes," he replied. "Fine. Let's you and me sit down and have a cup of coffee.") Since we moved to Maine, the possibility was very real during my last pregnancy that we'd be snowbound . . . or the car wouldn't start . . . or that one of a dozen things would prevent our getting to the hospital in time.

Besides, babies have a way of making their appearance when least expected, and seldom on their due dates. If you baby announces his impending arrival under circumstances that make it impossible for you to get to a hospital in time, what to do?

To begin with, make sure that what you feel is the real thing. (If this is not your first child, you will probably have no doubts.) If you have had a bloody "show" (the plug of mucous that seals the cervix being passed) or if your bag of waters has burst (either a gush or a continuing trickle of fluid from the vagina), these are definite signs that your baby is on the way. However, in most cases the onset of labor is signaled only by a fairly regular uterine contractions. These may be uncomfortable but are usually not painful; you will feel a very definite "sensation" in the lower part of the uterus, increasing in intensity and lasting from a few seconds in the beginning up to a minute or so in duration. With each contraction, the cervix is dilating a little more; eventually it will be wide enough to allow the baby's head to pass through. If these contractions are fairly regular, beginning about twenty minutes apart and progressing down to five minutes apart or less . . . if they seem to increase in intensity as they get closer together . . . if you are uncomfortable on you feet during a contraction . . . you can be reasonably certain that labor has begun. You should plan to arrive at the hospital when the contractions are about five minutes apart. But what if this is impossible? Or what if labor progresses so fast that you're better off delivering the baby at home rather than risk his being born in the car or pick-up?

**F**irst, keep calm. Women have been having babies for centuries without benefit of delivery rooms.

Even in many "civilized" countries today, a home delivery with a trained midwife in attendance is the rule rather than the exception. In the vast majority of cases, childbirth is normal and relatively painless and the baby perfectly healthy. So relax.

Ideally, you should have a "nest" to lie or squat in and to catch the fluids that accompany the birth process. Old newspapers that have been kept clean will serve nicely and can even be sterilized (if you have time) by baking in the oven at 350 degrees for half an hour. If you don't subscribe, clean rags or bedding will also do the job. Arrange these on the floor next to a wall if you want to squat down (nature's way), or on the bed if you prefer. If the latter, it's a good idea to lay a waterproof sheet, or even a plastic garbage bag slit open, under the nest to protect the mattress.

You should have handy, scissors or a knife (sterilized if possible by boiling in water for 15 minutes) to cut the umbilical cord after first tying it with sturdy string. No string? Use your shoelace. You will also want a towel

handy to hold the baby (or use your shirt or jacket if you're really out in the woods) and clothing and/or blanket to wrap him in afterward.

When the second stage of labor begins and you feel the need to "bear down" or push with each contraction, it's time to get into your nest. (Don't push until you feel you have to; it won't help and will only tire you out.) A squatting position is probably easiest to assume and, if you are alone, will enable you to receive the baby as it is born. By squatting, you also have gravity on your side in making delivery faster and easier. Lean against a wall to support your back if you wish. If someone is there to help you, and you feel more comfortable lying down, by all means do so. Lift your knees and grasp your legs behind your thighs when you feel a "push" coming; take a deep breath and push for all you are worth. When the feeling passes, take several short shallow breaths (like a dog panting) and rest until you have to push again. Chances are good that a few strong pushes will birth the baby.

**T**he majority of babies are born face down. The baby's head should be supported gently (not pulled) when it appears; another push will bring the shoulders, and the child is born. Most infants begin to breathe immediately, and if so, there is no need to slap his buttocks or hold him upside-down. Do hold or lay him with his head lower than his body for a few minutes so that any mucous has a chance to drain from his nose and throat. You ear will tell you whether he is breathing easily. If his breathing sounds congested -- if you can hear a "rattle" -- keep his head low until his breathing is free. If you have a bulb syringe, you can use this to help drain mucous from his nose and mouth. If not, you can "milk" the pharynx by firmly running your index finger from the base of the throat to the chin several times to force the mucous up and out.

The umbilical cord can be tied off six inches from the baby's body and cut as soon as it stops pulsating. If you have enough string, tie the cord *twice* more, each tie an inch farther from the body. Cut the cord between the second and third ties from the body. Gently wrap the baby in a towel, blanket or whatever is handy; mother can put him to the breast, guiding the nipple into his mouth. The baby's sucking releases a hormone (oxytocin) in the mother's body that stimulates the uterus to contract and so lessen bleeding. You may wish to sponge him off with warm water (no soap) . . . but the wax-like covering with which he is born is nature's best protection for him.

In anywhere from five to twenty minutes you will feel another "push" coming, and the placenta (afterbirth) will be born. Gently massaging the uterus -- the lower part of the abdomen -- will help to bring it. In appearance it resembles a cross between raw liver and round steak, and weighs about a pound. It should be saved and brought to the hospital with mother and baby.

That's all there is to it. But regardless of how "easy" the birth might have been, do get yourself, your baby and the afterbirth to a hospital as soon as you are able. Both you and you newborn should be checked by a physician, to avoid any possible complications to see that your child receives the standard tests and medication that modern medical care have developed to insure his perfect health and well-being.





Photos by Jo Barrett

## Why We Chose Home Childbirth

by Tom & Karen Adamo

**K**aren and I decided on a home delivery for three major reasons: Karen delivers extremely easily and quickly, we did not want to separate our two-year-old son from us for any length of time, and attempting to homestead in Maine has its financial considerations.

Our last child cost almost \$1,000.00 for three days in the hospital and we were determined to find another way. The hospitals in our area don't require a hospital stay for the woman, but we have reservations about hospitals anyway.

In preparing for a home delivery one very important thing must be considered -- the medical history of the woman having the child. Consider the medical record as far as difficult pregnancies, complicated childbirth and the general health of the mother.

Karen's medical record had nothing to be concerned

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*Karen and Tom Adamo live in Penobscot, Me. with their two sons, Jesse, 2, and Jason, 5 months.*

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about so we proceeded to locate a doctor willing to participate.

Thanks to neighbors, we were lucky to find a good general practitioner seventeen miles from home. He was experienced, eager and very much a human.

There are several things to be discussed before making final plans with the doctor. It is desirable to agree upon the role of the father, the role of the doctor, fees, whether or not he uses an assistant, medications to be used, if any, and who will handle an emergency if one should arise.

Agreement on all the issues you and the physician have will make for a much smoother home delivery.

If neighbors cannot be helpful in locating a suitable doctor, you can check with local hospitals, medical societies, chapters of La Leche League or the organization sponsoring the classes in the LaMaze method of prepared childbirth. Fees should range for an uncomplicated delivery from \$0 - \$300.

After locating an acceptable doctor it is wise to do some



Bed made up for  
delivery...  
... and afterwards:

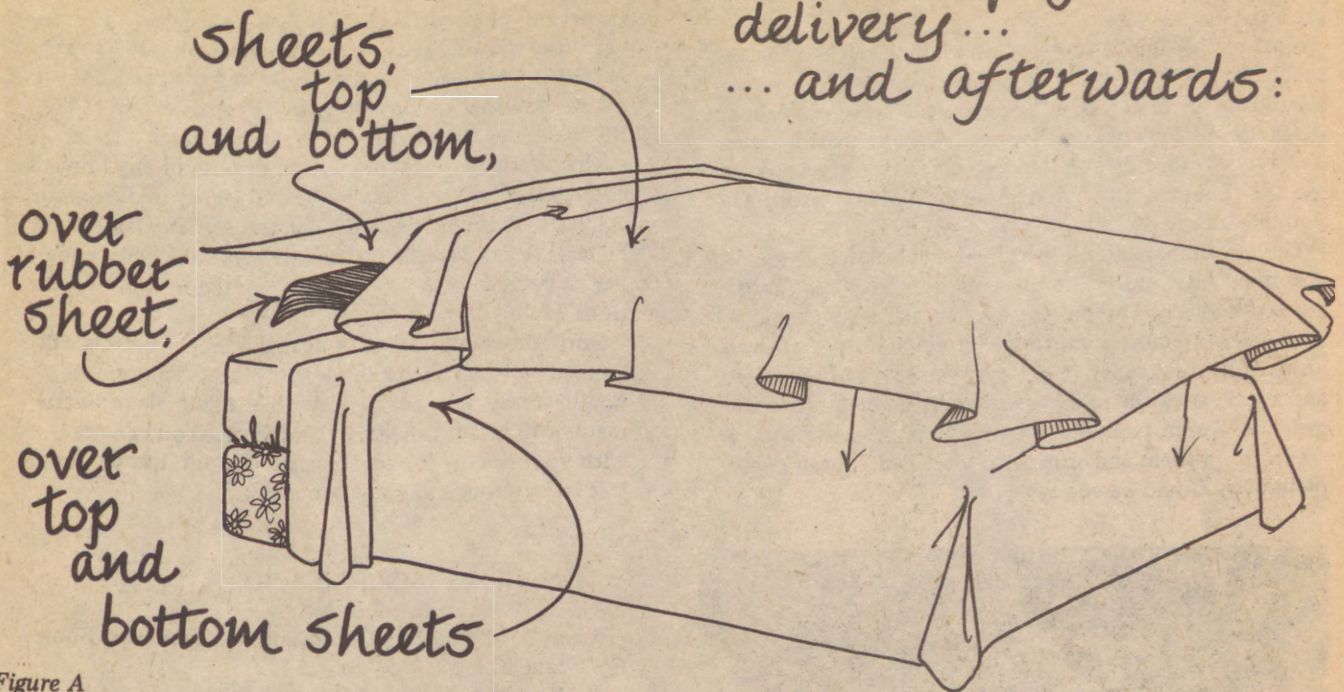


Figure A

reading about homebirth and prepared childbirth (natural). Reading will give you some information as to what goes on. The more information you have the less nervous you will be. (See bibliography.)

If all prenatal visits are positive, and preparations are complete, most deliveries will be joyous, relaxed and euphoric.

Our's went very well. Karen began labor at 1:00 a.m., our son was born at 2:30 a.m., completely unassisted by the doctor.

It is important to note here that calling the doctor at the beginning of labor is imperative. We didn't, and the baby arrived before the doctor did. Karen and I delivered the baby ourselves, and it was one of the most thrilling parts of our lives. Our two-year-old son was not only not separated from us, but watched the entire birth of

his brother. Some friends and family thought we were crazy, but we would do it again, except this time, we would call the doctor at the beginning of labor.

A good medical record and good preparation increase the chances of a good delivery. Our experience was nothing but positive, and we wish the same for you.

**A**fter a few prenatal examinations and tests there are additional preparations to make the delivery easier for all.

Room selection (if possible) should be based on warmth, the warmer the better, proximity to a water source for clean-up, and the availability of two light sources so all can see the arrival. A mirror can be positioned so the mother can see. After all, she is the real star.

Equipment needs are both simple and inexpensive and easily obtained. You will need one rubber or plastic sheet,

Absorbent pads:  
Cut old sheet...



... 2 inches larger (bordering)  
than newspaper.

Figure B



2 inch border turned over,  
and stitched at corners.

Figure C

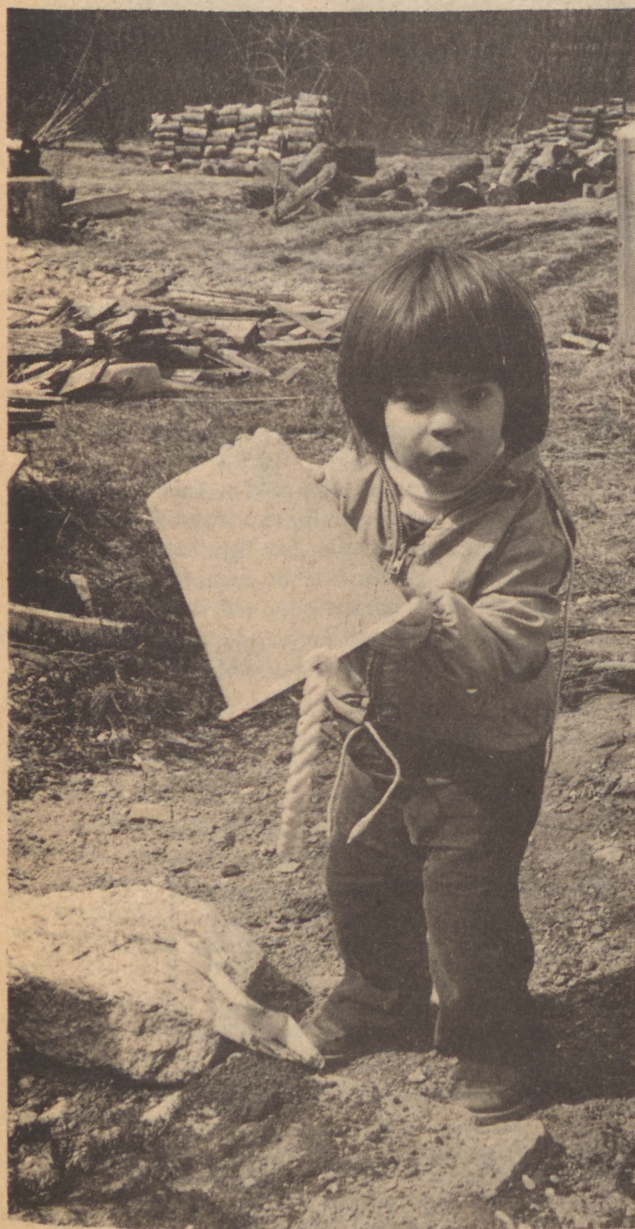


some newspaper, an old bed sheet, a few plastic garbage bags, one medium-sized table and three or four towels.

It is suggested the room be set up at least two weeks prior to the due date.

Most of the supplies are used in making the bed for actual labor and delivery. The bed is made in layers. A sheet over the mattress, a top sheet, the plastic or rubber sheet (twin size is okay), the sheet over the mattress and a top sheet. (See diagram A) No blanket is necessary unless the room is cold. You can sleep this way as long as you like before delivery.

The newspaper and old bedsheet will be used to make absorbent pads much like those used in hospitals. Pads are easily made. Lay out the old sheet and cut as many rectangles as you can, making a two-inch border of sheet around the newspaper. Fold over the edges of the sheet and stitch, tuck the newspaper under the hem. (See Diagram B) About twelve layers of newspaper will fit in the sheet. Fold them and store near your bed. Seven complete pads should be enough.



As the labor and delivery process proceeds, these pads will be placed sheet up under the buttocks of the woman. As body fluids are expelled, the pads will absorb it, and excess will be absorbed by the first two sheets. The rubber sheet will protect the last two sheets and mattress. After the birth, the two top sheets and the plastic sheet can be removed and you have a dry, ready-made bed. All the linens can be cleaned with cold water.

The plastic bags will be used to dispose of any unwanted materials. There are a lot of wet things to dispose of, so plastic is about the best thing to use. The table will be used to hold sterile instruments and to examine the baby. A chair in the room gives you the option of positions while you wait.

One light should be on or near the table. Towels will be used to clean both baby and mother. Things need not be sterile, just clean. Any other materials or instruments will be furnished by the doctor. You can check with your doctor for anything we left out, but we found this to be enough and not too much.

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Additional information can be obtained from:

American College of Home Obstetrics, 664 No. Michigan Ave., Suite 600, Chicago, Ill. 00681.

(Information about home delivery and doctors list.)

The LaLeche League International, 9616 Minneapolis Ave., Franklin Park, Ill. 60131.

(Breast feeding and list of doctors.)

The American Society for Psychoprophylaxis in obstetrics, 1523 L. Street, N.W. Washington, D.C. 20005. Phone, 202-783-7050.

(Natural childbirth classes.)





Photos by Jo Barrett

Dr. Bill Davis and interviewer Tom Adamo

## An Interview with Dr. Bill Davis

by Tom Adamo

**F**armstead: I guess the best way to start an interview like this is to find out some things about you. How old you are, where you were born, where you went to school and why you chose medicine as an occupation.

**Bill Davis:** I'm thirty-three years old and was born in a place called Auburn, New York. Auburn is a town about the size of Bangor, between Rochester and Syracuse in upper New York State. I went to Georgetown University in Washington, D.C. as an undergraduate and stayed on at the Medical College.

In 1969 I started a two-year Rotating Internship at Cambridge City Hospital in Cambridge, Mass. The internship was one in which I spent time in each major specialty of medicine. After Cambridge, I entered the Central Maine Family Practice Residency Program in Augusta and was the first Resident to graduate from there. I finished there in 1975.

My choice of medicine wasn't very dramatic. It sounded good to me when I was getting out of high school, and I decided to apply to colleges as a pre-med student and I suppose I just kept going that way.



**Farmstead:** In choosing medicine you could have chosen a specialty like surgery, psychiatry, etc. There's big money, and other things too. Why Family Practice?

**Bill Davis:** Well, somewhere in my life, it always seemed like general practice was ideal. It involves a closer physician-patient relationship than any other specialty, and the various skills of medicine all make up a family practice.

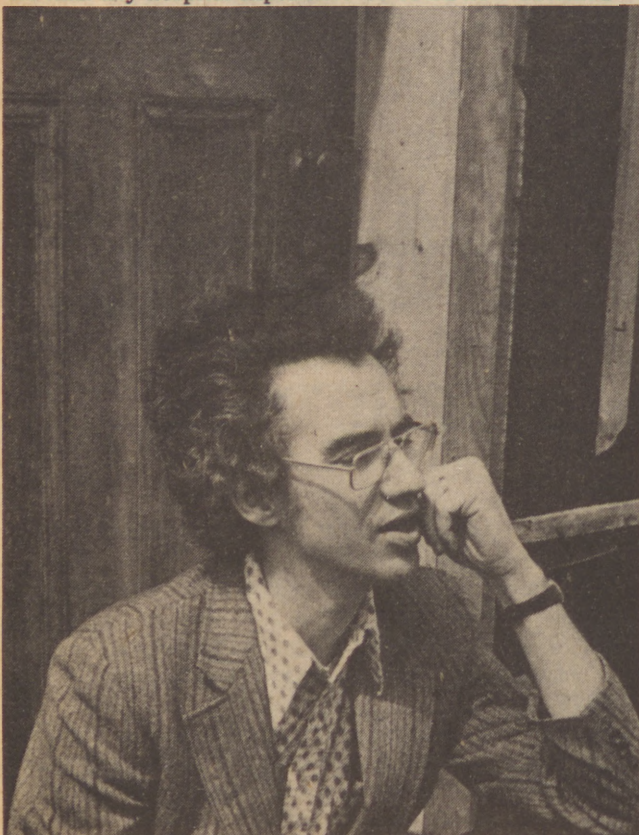
I guess I considered psychiatry and pediatrics on occasion, but I found both of them too limiting as far as potential to practice a variety of skills.

**Farmstead:** As a family practitioner you have gotten into home delivery as a service. What made you move in this direction?

**Bill Davis:** Well, I always read a lot of British Medical Journals and was quite impressed that the British people were able to establish a standard of health care similar to ours with a lot less technology, and so the idea of home childbirth was appealing from that point of view.

The major thing, though, was that Joanie, my wife, had our first child by natural childbirth. It was a really exciting experience. That was in 1970. I was an intern at Cambridge then, and my position enabled us to have natural childbirth. (Even then, in Boston it was somewhat controversial and to me seemed so normal. I wondered why it was so difficult to arrange and felt that it should be made available to anyone wanting it.)

My second child was born in 1974 in Augusta. We were very unhappy with the obstetrical situation there, but we were unwilling to go outside the community and there seemed to be no way to change the hospital forces, so after setting up some rigid criteria, a physician friend, my wife and I took the responsibility of having our second child at home. It was a wonderful experience. We could have done some things better but by and large it was better than any hospital experience we could have obtained



at that time.

So my interest went initially from natural childbirth in a hospital to natural childbirth at home. After the birth of my second child, gossip gradually leaked out around Augusta and I started getting requests for me to do home deliveries.

**Farmstead:** There seems to be an increase in home deliveries. What are the reasons in your experience for this?

**Bill Davis:** There is an increase, and I think some people come for financial reasons, but that's not the major concern for them or me.

An important reason is that families are getting smaller and fathers, especially, want to participate more in the birth of their children because it is happening less frequently.

Another reason is that until recently hospital policies put too many restrictions on childbirth there and in home delivery the couple could be as much or as little involved as they wanted. A lot of reasons originate in the stereotyping of the hospital experience where over the years the needs of the institution are often confused with the needs of the patient, and the model of a woman in labor and delivery is the model of a sick patient rather than someone who is healthy. The personal idiosyncracies and individual emotional needs are disregarded on the basis that the institution is treating someone who is ill and things always have to be done the same way.

Family separation is another factor. That is, people would rather keep things in tact the best they can.

**Farmstead:** Who, by that I mean, occupation, education, socio-economic status, etc., are making the requests?

**Bill Davis:** Most of the people are college educated and from out of state. Most are coming from localities where the institutions have been more alienating towards the needs of the people than many rural institutions. These people probably have more contact with newer ideas, or should I say, newer trends. The idea of homebirth has been around Maine for a very long time.

The bulk of the people are "new lifestylers" who are well-entrenched in the American idea that with the right amount of self-training they can do anything, and that any authoritative answers generally should be viewed with a great amount of skepticism. I think that describes the thinking that goes on with a lot of the big city escapees who are moving to rural areas like Maine. Most of these people have thought out carefully the issues of home delivery. They are self-confident and see this experience as very important to the growth of their families.

**Farmstead:** With malpractice cases and rates what they are, what risks are you and the patient taking?

**Bill Davis:** My malpractice insurance wouldn't cover me if anything went wrong. The idea of being sued does produce some anxiety because even if things were explicitly stated and agreed upon by the couple, they could still sue.

As far as the patients go, they are taking the risk that something could go wrong resulting in harm to the mother or baby. However, I am unaware of statistics to support a significant increase in problems.

**Farmstead:** What do you consider when accepting a patient for home delivery?

**Bill Davis:** Although the client's financial concerns are real, I don't take on a home delivery patient just for that reason alone.



At first I set pretty rigid criteria for whom I would accept, and I guess my criteria are still pretty rigid and stringent. Initially I found myself refusing just about everyone, until the first year I lived and worked in Orland. A particularly articulate, aggressive and responsible women questioned my ideals versus my practice. I guess the question was really was I an advisor to a couple having a child and participating in something they were doing, or was I a physician doing something to the couple. In any case, the clients must have had no previous difficulties in pregnancy and delivery. They must have had no serious long-term illness and be in good health in the present.

I guess I also take into consideration the whole question of commitment of both parents. They have to know why they are doing it, and we have to agree on procedure for various aspects of the delivery.

**Farmstead:** I know that having a baby at home is an important decision. What should a couple consider when deciding whether they should have a homebirth or not.

**Bill Davis:** It is important for the husband/father to decide whether he is in favor of homebirth because his wife is, and the same is true for the woman. Is, for example, she having her child at home because her partner wants her to.

Each individual has to come to terms with themselves. It's a very lonely decision. The person has to respond to their inner selves, that it is the right thing to do. They have to consider what and how to deal with the idea of something going wrong. Is the possible risk worth the possible benefit? They also have to respond to the issue of "home delivery" or "humane delivery" and that's an important distinction. Most people are looking to have their needs met and not just to deliver at a particular geographical location.

**Farmstead:** What about mortality rates of home births as compared to hospital births?

**Bill Davis:** I haven't seen any figures and I doubt there are any applicable ones. I think the situation with home deliveries is new, so published statistics aren't available. The predictors are based more on socio-economic-nutritional factors than any other factors. We really have no good measures.

**Farmstead:** Infant mortalities have decreased considerable. What are the factors for this decline?

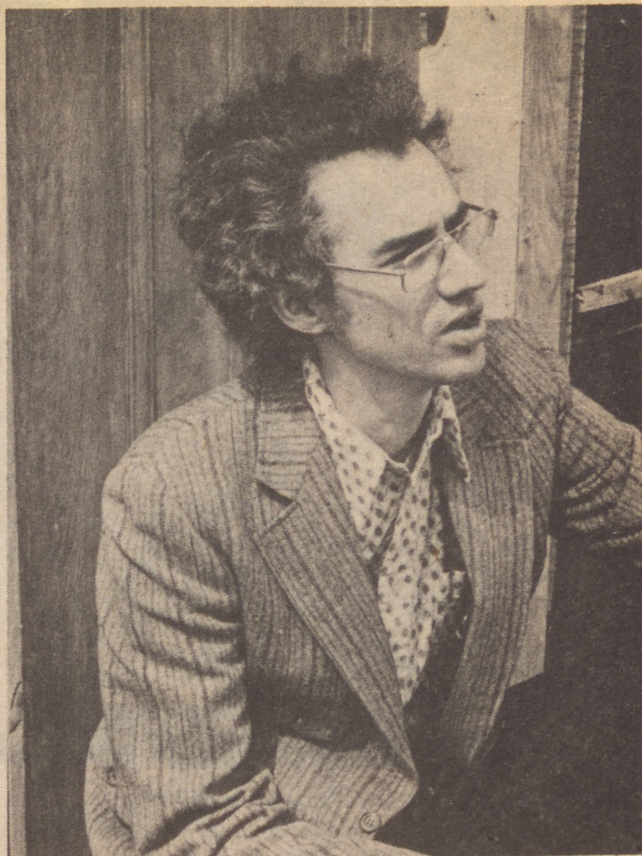
**Bill Davis:** I think infant mortality rates have decreased in high risk cases. Diabetics, for example, are having children today, whereas they weren't able to before. Mortality statistics haven't changed too much for the average woman with no definite illness. No hard statistics support any change due to fetal monitoring. Remember, though, mortality is a gross measurement anyway.

**Farmstead:** (Note: Mortality rates by nation are available through the statistical office of the U.N., New York, N.Y.) What are the differences in home deliveries today as compared to one hundred years ago?

**Bill Davis:** Well, that's awfully general, but I can say for one thing that medicine, live I.V.'s, are available today and were not 100 years ago.

There is a better understanding now of techniques for infant resuscitation. There's also a big difference today as far as infection and hemorrhages are concerned.

The technology for home birth is more advanced. Many instruments found in small hospitals are available for the



home.

I guess, in general we know more today about certain things than we did back then.

**Farmstead:** There has been in recent years a lot of criticism about hospital and medical care in general. Do you think it is more desirable for the mother and child to have a home delivery?

**Bill Davis:** No. I think the most important thing is to meet the needs of the mother and child. If these needs are represented and met properly, location becomes secondary.

**Farmstead:** What are hospitals doing concerning home deliveries and natural childbirth?

**Bill Davis:** The trend is to liberalize policy. It varies from hospital to hospital. There seems to be two things happening; those who meet technical criteria are being liberalized, but Caesarian section rates are up. One in every ten women have Caesarian section in the Maine obstetrical referral centers.

Some hospitals are into family-centered maternity and offer LaMaze classes.

**Farmstead:** There has been great interest in the LaMaze method of childbirth. Would you recommend that people involved in home delivery also get involved in prepared childbirth education?

**Bill Davis:** Yes, I will not take a patient unless they take the class. I insist on involvement in the classes for both the mother and the person involved with her in the delivery.

There's a lot of ignorance about labor and delivery. Understanding can greatly reduce the anxiety. The group approach is good, it engenders confidence and reduces tension by sharing with other people who are going to do the same thing as you.





Anything that reduces tension is useful.

**Farmstead:** What does the future hold for people who want home delivery? Will it be easier or harder to arrange a homebirth? What about insurance, etc.?

**Bill Davis:** Insurance will pay, but it varies from company to company.

I think it will be a long time before doctors will be readily available and a new system involving midwives or the like will be around.

**Farmstead:** A lot of people go to hospitals to have children because they feel more safe than at home. What happens if there is an emergency during a homebirth?

**Bill Davis:** It's hard to say because I haven't had an emergency yet. The emergencies you can get into are when labor doesn't progress normally. This means hospitalization within a couple of hours, so being at home doesn't present a problem with this.

Abnormal bleeding during labor also means hospitalization and probably a Caesarian section within two hours and obtaining that in most hospitals takes two hours.

Excessive bleeding after delivery requires an I.V. to temporize and transport and we are working here in a two-hour framework also, so there is no difference, here, really, in home or hospital.

Newborn resuscitation is critical. I have equipment available for this problem at a home delivery. The real need here is to have enough skilled hands. So a home delivery should be conducted by both an M.D. and a skilled assistant. Basically, that's it, besides the couple involved.

There are other complications that are unusual which statistically are low, perhaps one in a thousand chances. You wind up putting one in a thousand against 999, and you hope that it doesn't happen. Is that the right thing to do? I don't know. I believe it is today for me. I have done approximately eight or ten home deliveries and have had no real problems.

**Farmstead:** There is a lot of concern about what people are doing to themselves with chemicals. Do you use medication in deliveries? What kinds and under what circumstances?

**Bill Davis:** This is the major reason why I like to have someone familiar with the woman around. One way they can help is to make interpretations to me as to over-reaction, pain tolerance, etc.

The medications available in hospitals are also available at home, for pain relief, to contract the uterus after birth and for treatment of the child, like Vitamin K and silver nitrate.

In general, I hesitate to give high doses of medication for pain, in view of the fact that the mother's pain medication is the most common cause of problems for the infant just after birth. This is where the "LaMaze medicine" really helps for it is its own medication.

**Farmstead:** If you were in the position, how would you make home childbirth available to a larger population than it now serves?

**Bill Davis:** What I'd like to see is non-physician authorities available in communities. They would be properly educated and supervised as to the changing techniques in obstetrics in the community, so they can provide a continuity in care. They would aid both the newborn child and the mother. Somehow this would be tied in to hospital-based obstetrical divisions with access both ways.

If the issue is humane obstetrics rather than home delivery, then I would go with birthing homes or centers in or near hospitals. Both ideas would require close ties and mutual goals with staff so that continuity would be insured.



Bill lives with his wife and two young children in Orland, Maine. Since 1975, he has had a small family practice office there and does most of his hospital care at Eastern Maine Medical Center.



by Roy Barrette

I don't know who it was that first remarked that man is a creature of habit but, whoever, the statement has been amply substantiated over the years. In his eating habits alone man constantly demonstrates the truth of the observation. We have available, a few miles off our coastlines, both East and West, vast resources of seafood but as a nation, consume very little. Our protein requirements are largely supplied by meat, chiefly beef, with pork and fowl running a poor second, and lamb out of sight in the rear. This preference for beef is wholly a matter of habit for other meats are just as nourishing and tasty. These same habits, preferences if you want to be kinder, also apply to our consumption, of vegetables.

Take, for instance, parsnips. They are easy to grow,

Unfailingly, year after year, visitors to my garden stop beside the rows of broad beans (fava beans, if you know that name better) and ask what they are. The reason for their lack of knowledge is simply told: broad beans are never offered for sale in American markets. Why, I have never been able to decide. *Vicia faba* has been cultivated since the dawn of history. They have been found near ancient dwellings of the Bronze age and seeds have been discovered in Egypt that are dated to 2200-2400 B.C. They have been continually cultivated in the Mediterranean region and were a favorite staple food of the Greek and Roman Empires. They are resistant to drought and it is for that reason, I suppose, that they are grown extensively in the highlands of Mexico and Central America on the alto plano at 3,000 meters.



and can be left in the ground all winter. About the only other vegetables that will survive the winter are leeks (and they suffer) and Jerusalem Artichokes. Parsnips are nutritious and filled with sugar. Anybody whose culinary ability reaches beyond throwing a couple of potatoes in boiling water and frying a beefsteak, can prepare wonderfully tasty dishes from them. However it is not my purpose to write of parsnips, but of beans, broad beans, *Vicia faba* to be specific.

Roy Barrette, a writer & gardener, lives in Brooklin, Me.

The nutritive value of broad beans is high. Fresh, they have 16% solid residue, 5% protein, 4% carbohydrates, and 40 calories of energy per 100 grams (3½ oz.). Dried, they naturally have a higher nutritive value: 87% solid residue, 21% protein, 53% carbohydrates, 3% lipids, 3% ash and 332 calories per 100 grams! The only other legume having a higher caloric count is the chick pea.

My interest, however, is not so much in the broad bean's food value as it is in its appeal as a delightful addition to the menu. I am not unconscious of the fact, either, that it is easily grown in our cool and short sea-



son. Here, on the coast of Maine, one can plant early peas and broad beans on the same date, that is to say as soon as one can get onto the ground, and there are not many other seeds that can be sown so early. I follow the English method of cultivating them in double rows. The garden is prepared (no fertilizing is necessary if the land is in good condition) and double rows are opened up 12 inches apart with two feet between each pair of rows. The seed is sown 8 inches apart and 3 inches deep. If you have time, plant the bean with the eye down, as the leaves emerge from between the halves of the bean and the seed does not have to turn itself over. The rows have to be cleaned for the first few weeks but after that the bean plants will sufficiently shade the ground to choke out all but the most rank weeds.

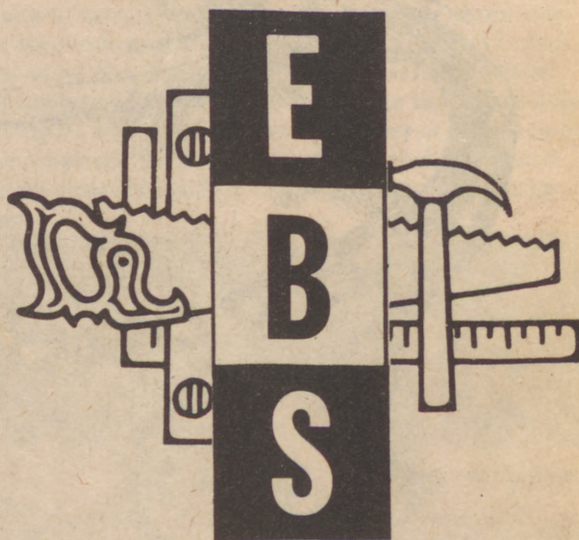
Broad beans do not grow on a vine like other beans, but hang down from a stiff central stalk rather like a lupine, to which they are related. A well grown plant will be three to four feet tall. We have discovered the best way to prevent them from being blown down by the wind is to drive stakes, about ten feet apart, along each side of the double row and stretch binder twine between them. The fava bean's only enemy is a black aphid that clusters on the tips of the new growth which, if not eliminated, will cover the whole plant. Usually they do not appear until after the plant is in flower and they can be kept under control, to some extent, by pinching out the tips. The customary sprays for aphids, either Black Leaf 40 or Malathion will give good control and I have heard, though I have not tried it, that summer savory planted between the rows will keep the aphids away. As I grow about a hundred feet of broad beans I am afraid I would be long on summer savory by the end of the season if I followed that system. Incidentally, a few leaves of that herb cooked with the beans is a pleasant addition. Happily (for some reason I can assign no cause to) there are years when the aphids do not appear at all.

**B**road beans may be cooked as are fresh peas and served with a little butter and pepper and salt or they may be creamed with a white sauce. As we usually harvest a large crop, we freeze a good supply just as we would green peas. They freeze well, and in addition to being used alone, may be mixed with frozen cream style corn to make a delightful version of succotash.

Unless it is intended to grow them on for dried beans, it is essential they be picked when the bean is about the size of one's little fingernail; if they are allowed to grow too large the outer skin becomes slightly bitter. They are, of course, a bean to be shelled — like limas. The pod is inedible unless quite tiny and I, personally, don't think much of them even then. Our grandchildren think that shelling broad beans is fun because the pod is quite thick and soft and the beans inside rest in a nest that resembles fine foam rubber or cotton batting.



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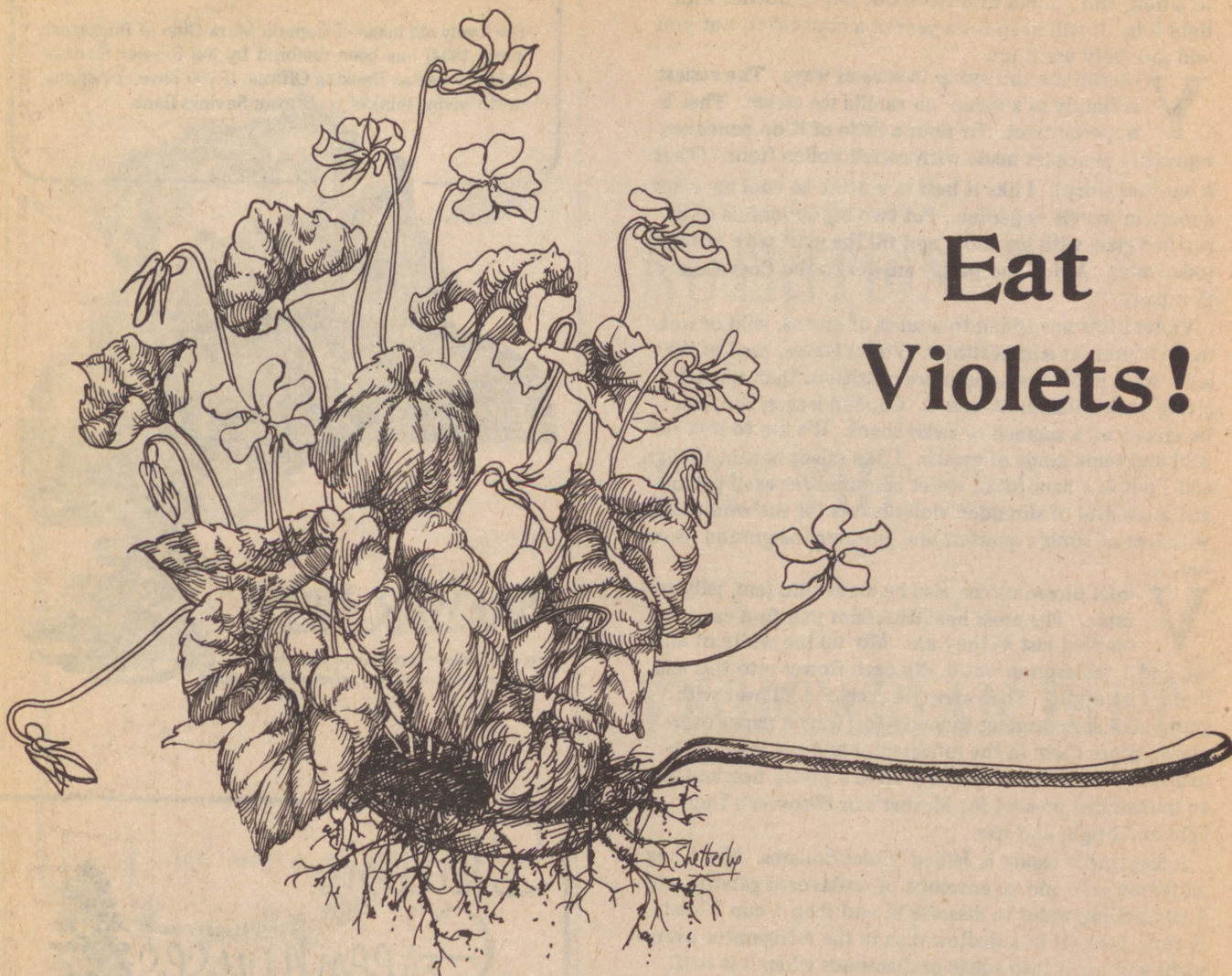
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# Eat Violets!

by Katie Johnson

**I**n the woods and fields and swamps around us grow many beautiful wild flowers and plants. Each grows and blooms in its own season, providing color and fragrance from the earliest spring until the last fall leaf.

Everyone knows that. Not everyone knows — or believes — that most of this wild beauty is also wild food. But I, for one, have been eating delicious flowers, healthful leaves, and yummy roots growing all around me for several years. (So far there have been no ill effects. A neighbor of mine, who has foraged with me often, recently confessed that she waits before trying anything wild we have found until three days have passed since I tried it!)

Spring is the best time to forage wild foods. Spring, I often think, is the best time for everything, except ice skating. Spring starts to come to my house and land in April; by the beginning of May I can go into the edges of the woods to pick violets.

Violets come in several sizes and colors. The most abundant is the common blue violet, *viola papilionacea*, which

has heart-shaped, deep-green leaves and dime-to nickel-sized flowers of blue or blue-violet. The color seems to vary as much with the wetness of the spring as with the soil in which the plant is growing.

With these first violets a lovely drink can be made. Eat a few as you gather them. Each blossom is a shot of Vitamin C. Fill a glass jar of any size with the ones you don't eat, and when you get it home, fill the jar with boiling water, cover it, and let the violets steep for 24 hours. The next day the contents of the jar will look very unappetizing, like gray paint-water with sodden cardboard floating on top — but with cooking and chemistry (or magic) we will make Violet Syrup.

Throw away the used-up flowers. Measure the violet water into a saucepan. For each cup of it add two cups of sugar and two tablespoons of lemon juice — and as you add the lemon juice, watch for the magic!

Violets, and so violet water, have a characteristic similar to litmus paper. If an acid is added, the infusion turns to pink-red; if an alkali is added, the infusion turns to green-yellow. It is fun to experiment with this property of the violet, but go out and gather another batch to do it! This

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Katie Johnson is the author of "Forage a Fall Tea Party", which appeared in the Fall '76 issue of Farmstead.



incipient Violet Syrup waiting in the saucepan, now a light blooming soft pink, needs to be put on the stove, brought to a boil, and poured into clean hot jars or bottles with tight lids. It will keep for a year in a cool cellar, but you will probably use it up.

**Y**ou can use this syrup in several ways. The easiest is simply as a syrup on vanilla ice cream. That is a special treat. Or pour a little of it on pancakes, especially pancakes made with cattail pollen flour. (That is another story). I like it best as a drink to cool me after a roam in woods or garden. Put two big spoonfuls of Syrup in a glass with ice cubes and fill the glass with water or soda water. A rich and pretty answer to the Coca-Cola Company.

Violet blossoms added to a salad of greens, wild or not, make it prettier and healthier. Violet leaves, used in the same way, make the salad more nutritious than spinach, giving both Vitamins A and C. Cooked leaves, too, can be mixed with spinach or swiss chard. It's fun to mix the wild and tame kinds of greens. I like salads better, though, and I put in a handful of violet blossoms for each person and a handful of shredded violet leaves for the whole bowl, with lots of lamb's quarters and gill-over-the-ground leaves, too.

**V**iolet blossoms can also be made into jam, jelly and aspic. The most beautiful ones you find can be candied just as they are. Mix up the white of an egg and 1 tablespoon water, dip each flower into this and drain it carefully. Then sprinkle each one all over with granulated sugar and let them dry on waxed paper overnight. Store them in the refrigerator and eat them within a few weeks. Or wrap a few up in a pretty box and give an unmatched present for Mother's or Whoever's Day, light and bright and free.

A less fragile candy is Jellied Violet Squares. Mix a box of lemon jello and an envelope of unflavored gelatin, add 1 cup boiling water to dissolve it, and then 1 cup Violet Syrup. Leave it in a shallow dish in the refrigerator overnight and cut it into cubes or diamonds when it is stiff. I am writing this — and letting one of these squares melt on my tongue — in February. It occurs to me that this candy would be even more interesting and certainly lovelier with a blossom in each cube, poked in as it jells. I'll try that, come spring.

And if you have a sore throat, or a tickling cough, take Violet Syrup straight from the bottle by teaspoons whenever you need it!

**D**oes it sound like indiscriminate picking? Too many violets being used? Are we perhaps causing a shortage, an Ecological Problem? I am always anxious to leave the foraging places I frequent just as I found them, as clean and as full. Unless we uproot these violets, however, we are doing them no harm. Unlike most plants, which reproduce through their flowers, in the spring violets make their exuberant blossoms just for show — or for us — and later in the season make a second, smaller, obscure flower from which the seed case will grow.

So search out the shy violet, enjoy eating, sipping, and perhaps even a little experimenting. To walk in the woods in early spring, to watch and listen as nature awakens, is beauty enough. The violet, the first of the wild treats, can only add health and joy.

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Y'all eat hardy, y'hear!

by Katherine O. Musgrave

**T**he production of food at home has increased during the past five years and food consumption patterns have changed. Nutrition has become a household term while methods of producing and preparing foods has assumed headline posture. This attention to food could be attributed to increased education, to environmental problems of overpopulation and overconsumption of resources, and to the dramatic increases in the cost of food, energy, and health care. With the awareness of the importance of food, home gardening with subsequent preservation of the produce has occupied the leisure time of many families. The value of homemade products based on nutritional, aesthetic and money saving qualities has increased.

Good food habits promote health by effectively reducing the risk of diet-related diseases such as obesity, dental

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*Katharine Musgrave is an associate professor in Food & Nutrition at the University of Maine in Orono.*

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## NUTRITION

## AND THE

## VEGETARIAN DIET

carries, cardiovascular disease, cancer, diabetes and diseases of the gastro-intestinal tract. Food habits or eating patterns are learned from parents, teachers, and peers. Food attitudes are caught not taught. The observation of a kindergartener's negative response to a food after another child has expressed a dislike for that food is ample evidence of the directional quality of attitudes. An adult may cause avoidance behavior in children through rejection of a food. Positive attitudes can be developed from observation of appreciation of food.

Food habits are resistant to change and the formative period is early childhood. The growth of the child is dependent on the dietary intake and this crucial period deserves consideration.

**F**or optimal health the body needs food that contains substances that function in one or more of three ways: furnish energy, provide for building and maintenance of tissues, and regulate body processes.

Food is a chemical substance containing six major kinds of nutrients: Carbohydrates, fats, proteins, vitamins, minerals, and water. Most foods are mixtures of two or



more groups of nutrients. These 45-49 nutrients are interdependent and interrelated in function, in origin, and in availability to the cell. The concepts 1) that a nutrient may serve one, or more than one function in the body, and 2) that the amount required by the body bears no relationship to its importance, are basic to an understanding of food requirements.

The food needed by each individual varies according to his age, size, sex, nature and extent to activity, and kind and amount eaten. A useful guide for nutritionists and physicians is the National Research Council's Recommended Dietary Allowances based on the average daily requirement, plus a 30 to 50 percent surplus. This guide is revised each five years by a committee of experts in nutrition and shows separate estimates for a number of different population groups by age and sex. For the consumer, this table was reduced to a more useable U.S. RDA (recommended daily allowance) which gives the highest amount of protein, vitamins and minerals recommended for any group. Many food items are labeled to inform the consumer of the percentage of the U.S. RDA available in one serving of that food.

Because the protective foods, such as fresh fruits and vegetables, bulk whole grain cereals, eggs and milk are more often not labeled, and because it is important to translate the recommended allowances into familiar diet patterns, food guides have been developed. In the guides foods are grouped according to common characteristics or nutrients provided by those foods. The consumer with no scientific knowledge of nutrition can thus choose protective foods (foods that provide a larger proportion of the needs for two or more nutrients than for energy) and have a diet adequate in most nutritional factors.

Many readers will be familiar with the USDA Guide to Good Eating. It is limited in its lack of consideration of such nutrients as iodine, vitamin B-12, magnesium, and flouride. It is possible to follow the guide and to be low in iron. Another problem is that of terminology. In the original plan, the protein group was listed as the meat group, although it was stated clearly that dry beans, peas, and nuts could be alternates in the meat group. The important concept is that one should choose a variety of foods within each group.

VEGETARIAN VITAMIN CHART

Vitamin	RDA for Adult Male	Dietary Sources	Major Body Functions	Deficiency Symptoms
<i>water-soluble</i>	<i>milligrams</i>			
Thiamin	1.5	legumes, whole grains, peanuts, seeds	coenzyme to release energy from carbohydrate	tingling in extremities, edema
Riboflavin	1.8	milk, green leafy vegetables, soy flour, wheat germ	coenzymes involved in energy metabolism	reddened lips: cracks at corner of mouth
Niacin	20	soybeans, sesame & sunflower seed kernals, lima beans, whole wheat with germ	necessary for the health of all tissues	skin and gastro-intestinal lesions
B-6		vegetables, including potato	involved in amino acid metabolism	irritability, muscular twitching
Pyridoxine	2.0	whole grains		
Folacin	0.4	legumes, spinach, asparagus, whole wheat	amino acid metabolism	anemia, gastro-intestinal disturbance, diarrhea
Vitamin B-12	3 microg.	eggs, milk, cheese not present in plant foods	formation of nucleic acids essential in blood cells	pernicious anemia; neurological disorders
Vitamin C	45	tomatoes, cabbage, cauliflower strawberries, kale, green peppers broccoli, brussel sprouts	to form and maintain collagen in skin, tendons & bone; to maintain strength in blood vessels	degeneration of skin, teeth, blood vessels
<i>fat-soluble</i>				
Vitamin A	5000 I.U.	carrots, squash, pumpkin, greens butter, egg yolk	to maintain the health of epithelial tissue (skin, eyes)	susceptible to infections; dry scaly skin
Vitamin D	400 I.U.	milk should be fortified with vit. D	to promote growth & proper mineralization of teeth & bones	bowlegs, knock-knees enlargements of bones
Vitamin E	15 I.U.	seeds, salad oils, margarine whole grains	protects vitamins and prevents cell membrane damage.	seldom seen

This chart is a sample representation of foods that may be grown in gardens in Maine. Meat sources have been omitted. The functions may be more complex than is possible to state in space allowed.



## Suggested Guide for Daily Food Selection

**MILK GROUP** — includes dried skim milk fortified with vitamins A and D, cheese, yogurt, ice cream and other dairy foods.

Children: 2-3 cups

Teenagers: 4-5 cups

Adults: 2 cups

**COMPLETE PROTEIN GROUP** — includes fish, poultry, eggs, peanut butter, and legumes.

Children and Pregnant Women: 3 servings

Adults: 2 or more servings. If plant sources are used, 3 servings. It is important that there be one serving of a complete protein at each meal. A complete protein is one containing all essential amino acids.

**VEGETABLES AND FRUITS** — four or more servings with one being dark green or yellow, and one citrus or good source of vitamin C.

**CEREALS AND BREADS** — whole grain or enriched — 4 or more servings.

**MARGARINE OR SALAD DRESSING MADE WITH VEGETABLE OIL** — amount depends on energy needed.

**R**ules that should accompany this guide are that these foods plus others needed to supply energy should be eaten in three separate meals with at least three of the groups being represented in each meal. Very active individuals may find between meal feedings necessary to supply energy. It is recommended that the meals and snacks be eaten at regular times and that water be consumed at frequent intervals (most individuals need 6-8 cups — 1½ liters — per day). The use of fluoridated water has been shown to reduce the number of dental caries and its use is highly recommended for everyone, especially children and pregnant women.

Nutritionists have recommended for some time that fiber-rich foods such as legumes, whole grain breads and cereals, nuts, fruits and vegetables be included daily in the diet. The role of fiber in the prevention of diverticular disease, cancer of the bowel, and coronary heart disease is not clear but is being studied.

## Vegetarian Diets

The guide that has been described is applicable to the vegetarian. One simply alters the sources from which the protein is derived by adding more cheese, milk, eggs, soy, fresh or dried beans, peas, seeds, and nuts.

There are different levels of vegetarian diets. Some individuals include poultry and fish. This diet has the advantages of supplying ample nutrients while decreasing the fat intake, as demonstrated in the chart below.

The second classification is that of the lacto-ovo-vegetarian who consumes an all vegetable diet supplemented with milk, milk products and eggs. A third group is that of lacto-vegetarians who supplement only with milk products. The fourth group is that of Vegans who consume no animal foods at all.

It is believed that the lacto-ovo-vegetarian diet would provide for complete nutritional needs if the following criteria are met:

1. the protein sources should be from a variety of legumes, grains, and vegetables in order to supply the essential amino acids.
2. the milk should be vitamin D fortified.
3. there is an adequate supply of iron, folacin, zinc and vitamin B-12.

## Protein from plant sources

Foods containing protein vary in amino acid content — in both quantity and quality. The human body needs the 8 essential amino acids simultaneously and in a given proportion to complete synthesis of new tissue. If even one amino acid is missing, all of the other amino acids are reduced by the same degree.

Most vegetables or grain products are low in some essentials such as lysine, tryptophan, methionine, or threonine. However, by eating specific combinations at the same meal we can obtain the equivalent of a complete protein.

Some non-essential amino acids provide important materials that can be utilized by the essential ones. Examples are cystine and methionine, as the sulfur-containing amino acids and tyrosine enhance the supply of phenylalanine by 50%.

## What to Plant for Supplementation

As garden plans are made, space should be allowed according to the ability of the plant to provide the amino acids necessary for mutual supplementation.

Soybeans are rich in lysine and threonine and can supplement wheat, corn, or rye which are deficient in lysine. Soybeans are low in the sulfur amino acids. Sesame and sunflower seed proteins are rich in methionine and thus supplement the cereal and soy meal.

Other legumes such as beans and peas, provide high amounts of lysine and threonine but are deficient in the sulfur amino acids and tryptophan. It is wise to plan to have beans reach maturity for shelling when the corn is in. Chickpeas or garbanzo peas provide high amounts of protein (12 grams per cup).

Green leafy vegetables are generally well-balanced with respect to all essential amino acids except methionine. One problem is that the total amount of protein in one cup of most green vegetables is 4 to 6 grams.

## Digestibility of Vegetables & Legumes

Availability of the amino acids in some protein foods will vary. The amino acid values stated in food composition tables may be greater than the biological availability. It would be desirable to test vegetarian diets with rats and a control diet to assess the degree of utilization. For example, in wheat gluten lysine is deficient and threonine is partially unavailable.

Food	Amount	Kcals	Fat in Animal Sources					
			Protein grams	Fat grams	Iron mg.	Thiamin mg.	Riboflavin mg.	Naicin mg.
Chicken	100g	135	24	4	1.7	.05	.19	8.8
Halibut	100g	171	25	7	0.8	.05	.07	8.3
Hamburger	100g	286	24	20	3.2	.09	.21	5.4



The digestibility of fibrous foods is less because the human being does not possess enzymes to break cellulose, hemicellulose, and lignin into a form that is usable by the cell. Plants, especially legumes and whole grains, contain cellulose and hemi-cellulose and some contain lignin. These materials pass through the digestive tract largely unchanged and play an important role in supplying bulk against which the muscles of the digestive tract can push. This stimulation facilitates the passage of all the nutrients which accompany it through the tract. Although fiber is essential for successful elimination of waste products, a diet may be too high in bulk so that the passage time of the contents of the alimentary canal is considerably reduced.

For this reason the gardener should value potatoes which provide starch, and thus energy, in a less fibrous form. Potatoes properly stored and cooked will also provide vitamin C. Carrots, pumpkins, and squash are vegetables that provide energy in a medium fiber category, and they are very high in carotene, the precursor of vitamin A.

#### Foods to be Eaten to Prevent Anemia

Iron is an important nutrient for prevention of anemia since it is an essential component of hemoglobin that transports oxygen to the cells. Iron is most easily obtained in the heme molecule in meat, but the vegetarian may obtain sufficient amounts with consumption of egg yolk, clams, molasses, dried fruits, soybeans, peanut butter, and greens.

The vitamins that are important for avoiding anemia include vitamin C, folacin, and vitamin B-12.

You will note the sources of these vitamins in the chart. Because vitamin C and folacin are easily lost in storage or long cooking, the gardener is advised to space the planting period to maintain an even supply of tomatoes, broccoli, brussels sprouts, asparagus, and a variety of greens. One should pick only the amount to be consumed daily, and a raw vegetable should be consumed at each of two meals per day.

The use of milk, eggs, clams and shellfish is particularly important for vitamin B-12 sources, since there is not vitamin B-12 in plants.

In today's world of contrasts between the overweight American and starving children in other nations, there is a need for better understanding of protein nutrition by everyone from policy-maker to producer to consumer.

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# Grow the Autumn Olive



by Gladys Baldwin

**D**o you want to beautify those odd acres and attract wild life? Then the autumn olive is for you. Most of our farms have odd spaces such as narrow field corners, steep slopes, rocky spots and roadsides. Strips, blocks or clumps of autumn olive can make them useful to wildlife and also add beauty to these places.

The autumn olive (*Elaeagnus umbellata*) is also known as the autumn elaeagnus and pink fruited elaeagnus. It came into North America from China or Japan in about 1830.

Autumn olive has been rated highly for its value to wildlife by the Soil Conservation Service. Its dark brown spreading branches growing from ten to fifteen feet high and its yellowish brown undergrowth make fine places

for birds to nest, and its overspreading prickly boughs also make an excellent shelter for rabbits, pheasants and quail.

Small yellow sweet-smelling flowers cover this shrub in the spring. These trumpet shaped blossoms, about a quarter of an inch long, growing separately and in bunches along the limbs, are a great attraction for honey bees. It is not known what kind of honey is produced, but if you are a bee keeper, you might be interested in trying it.

Plant several rows of autumn olives or at least plant the fence corners to this lovely ornamental shrub. You will not only have a beautiful spot of good protective cover for wildlife, but the most outstanding feature of the plant is its heavy crop of small, red berries. All kinds



of wildlife eat these berries but they are especially valuable to songbirds. Birds eat these berries from ripening time in September into late winter and robins have been known to winter north of their normal range despite snows and severe cold, when there were plenty of autumn olive berries. It is the fact that most of the berries stay on the plants after frost and into winter that make the plant so valuable for wildlife food.

The bobwhite quail, ruffed grouse and pheasants also feed on these berries. Sometimes the game birds find these small fruits very scarce, owing to the fact that their flavor is very attractive to the song birds; but usually some of the berries drop in the late fall or early winter and are scales and long, soft, ribbed seeds. The berries that do not drop, turn yellowish-brown and raisin-like. It takes at drop, turn yellowish-brown and raisin-like. It takes at least 100 autumn olive plants to be sure of enough food for both song and ground birds. The Soil Conservation Service Plant Materials Center at Beltsville, Maryland has found that 24 autumn olive plants yield more than 900 pounds of berries yearly.

**Y**ou will find that the autumn olive grows well on several kinds of soil — sandy, loamy, and moderately heavy clay. The land should be well drained but not too dry. This shrub does not require highly fertile soil and thrives equally well on soils that vary from moderately acid to moderately alkaline. It is best to plant it in a sunny spot. It will tolerate light shade but will produce fewer berries.

Seedlings of the autumn olive have been obtainable commercially since 1917. I found, however, that not all

nursery companies carry them. If you are unable to obtain the seedlings, the seed can be gotten from several commercial firms or you can collect seed from already established plants.

Seedlings one or two years old should be planted to insure a stable thicket. If you live in the middle latitudes of the United States they can be planted in the fall after leaf drop, but in the north, spring planting is best. Under favorable conditions the autumn olive grows rapidly and produces berries its third to fifth year.

This shrub can be used for hedge rows as a screen to shut out unpleasant views. It is especially useful on such places as sand-blow areas and gullies. It eventually makes a protective litter on the soil and keeps sand from blowing. On large areas its silvery green foliage and bright red berries make a colorful complement to the landscape. If these shrubs are placed where they can be observed, you will enjoy the song birds that inhabit them.

If you plan to plant for borders, hedgerows or wind-breaks, it is best to plow and harrow the soil first and allow it to settle before planting.

To assure an ample crop of berries you must space the seedlings wide apart. We find when planting strips across sloping land it is best to place the rows 10 to 20 feet apart with grassy strips between, and the plants 6 to 8 feet apart. Block plantings should be spaced at least 8 feet by 8 feet; the clumps having wider spacing. All this wide spacing warrants a good crop of autumn olive berries.

You will find the autumn olive easy to grow on most kinds of soil, a lovely addition to the natural beauty of nature and a bountiful banquet for the birds.



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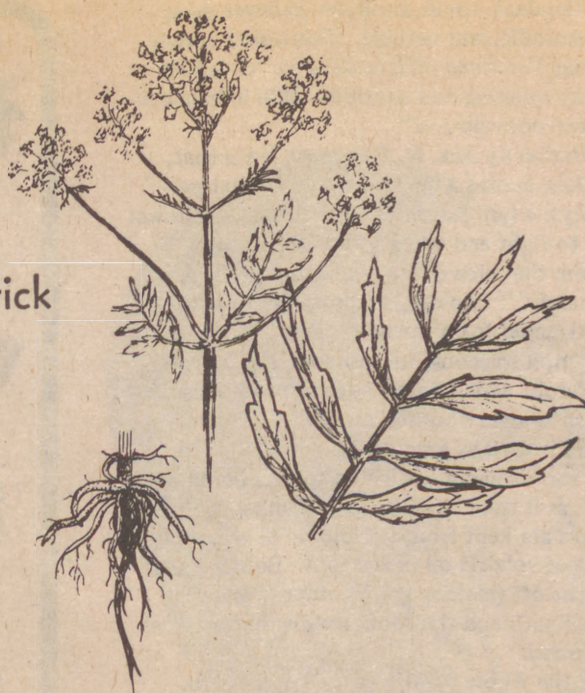
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## Mystery Herb of Mill Crick

# VALERIAN



by Steve Miller

Valerian first came to my attention as a magnificent wild flower with downy blossoms clustered by the hundreds atop four foot stems. Occuring in damp, loamy spots all over Islesboro, the most outstanding congregation of wild valerian plants I know of covers perhaps a half-acre near the Mill Crick bridge. As I was walking my ancient single-speed Schwinn Dragster bicycle up the hill from the bridge one warm day in mid-June, a fragrant, ethereal presence made itself known by filling the air with such a sweet scent that I simply had to pause in amazement. "What flower is this?" I wondered.

The flower's identity remained a mystery for a couple of years. However, as more and more herbals came my way, I began to think that this plant with pink blossoms crowning tall stems and bearing opposing pairs of spruce-green leaves must be *Valeriana officinalis*. This plant was considered so beneficial a remedy in medieval England that it was known as All Heal.

I wasn't really sure about this identification until Darrell, the herbalist on Rebel Hill, became enthused about the mystery and planted a seedling known to be *Valeriana officinalis*, a species native to Europe and parts of Asia. (Other species of *Valeriana* are native to nearly all corners of the globe.)

Although Darrell's seedling, no doubt somewhat shocked in transplanting, took nearly two months longer to blossom than the wild plants near Mill Crick, when the flower clusters finally matured and showered their aroma and color over the herb garden, there could be little doubt of the identification of *Valeriana officinalis*.

Rudolf Steiner, in lecture number five of the agriculture course he gave in Germany in 1924, says that valerian added to compost "calls forth therein elements which stimulate it to relate properly to phosphoric substances."

---

Steve Miller lives in Islesboro, Me.

William F. Brinton wrote an article titled "Valerian Influences in the Soil" in the Spring 1976 issue of *Bio-Dynamics Magazine*. Brinton says that *Valeriana officinalis* was brought to America by early colonists and in time escaped cultivation to establish itself successfully in areas that offered it favorable conditions for growth. Maine is one area where this naturalization took place and the plant is found in great abundance in the vicinity of settlements near the coast . . .

The identity of this plant now explained, Brinton's research offers even more interesting information. He worked at selected sites in four coastal Maine counties, collecting soil samples from beneath well-established wild valerian stands and places nearby having essentially the same soil but without the valerian influence. These samples were analyzed for mineral nutrient levels, pH, texture, and particle-size distribution.

"The general pattern that emerges," Brinton says, "is one of increased fertility in soils under valerian stands . . . We see the greatest alteration of minerals occurring in the case of phosphorus, which increases in the presence of valerian. Calcium and magnesium increases are medium and potassium changes less notable." Verifying Steiner, this article also convinced me to plant some valerian near my home not only for fragrant blossoms, but also so the flowers, stems and leaves can be added to compost.

It is best to propagate valerian from the young root offsets found at the end of slender lines running from the older perennial rhizomes. Place the young roots into well-manured, heavy loam soil supplied with plenty of moisture. Propagation can also be accomplished by seed.

As if this were not enough to make every farmsteader and flower lover eager to establish a valerian stand close to home, the plant's use as an herb and drug is its real claim to fame. Jethro Kloss, in *Back to Eden*, says that valerian



is an aromatic, stimulant, tonic, anodyne (relieves pain, soothes), antispasmodic, and nervine. This noted herbalist informs us that *Valeriana officinalis* is an "excellent nerve tonic — very quieting and soothing. Will help alleviate restlessness and convulsions."

In A Modern Herbal by Mrs. M. Grieve we learn that, "Professor Henslow quotes a curious recipe of that period (14th Century), a translation of which runs as follows: 'Men who begin to fight and when you wish to stop them, give to them the juice of Valeriana and peace will be made immediately.' " The drug responsible for these contentions is extracted from the root. It is yellow, slightly bitter, camphoraceous, and possessed of a powerful and distinct odour which develops as the root dries. The oil of valerian is highly praised as relief of cerebrospinal tension and is used as a sedative.

When valerian root is being cultivated for the commercial drug market, as it used to be in New Hampshire and Vermont, the tops are kept from full bloom to encourage the development of volatile oil in the root. Before harvest the stem is cut off (making great compost material for anyone so inclined) and the roots are dug before frost can affect the ground.

In old England the whole plant was used as an herb. Culpepper, in his famous Herbal, says valerian promises longevity and comfort and is under the influence of mental Mercury "and therefore hath a warming faculty." Culpepper used the leaves as salad.

One further herbal influence which is rather unusual revolves around valerian's dramatic effect on the nervous systems of certain animals, especially cats and rats. Cats are said to love to roll on the plant and rats are irresistibly attracted to bruised leaves. "It has been suggested," says Mrs. Grieve, "that the famous Pied Piper of Hamelin owed his power over rats to the fact that he secreted Valerian roots about his person." One may do well, then, to exercise caution when handling this potent herb wherever rats are known to lurk nearby. Otherwise, used as a bio-dynamic addition to compost or as a sedative before bed, or simply enjoyed for the wafting scent and beauty of the blossoms, *Valeriana officinalis* certainly seems to be a plant worth knowing on a first name basis.



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# MAINE ALBUM

*Maine Album is a continuing feature of the magazine. This interview was conducted by Diana Cohen who, with her husband, co-directs the Trailside Country School, a one-year expedition in this country's social, environmental and cultural heritage. Part of this interview was done by the students of the Trailside School and has been published in I Wish I Could Give My Son A Wild Raccoon, publ. by Anchor Press/Doubleday.*

*Two miles off route 189 on Timber Cove Road stands a small grey house with a neat woodshed attached. Anyone driving along that road might just pass by this unassuming dwelling without giving it a second thought. Yet to the stranger accidentally stopping to ask directions a whole new world awaits. Inside resides Lyman Guptill, a 77 year-old resident of Trescott, Maine. Lyme, as he is known to his friends, still retains a pride in the culture that he was brought up in; his outlooks for today are part of a value system that is oftentimes lost in today's technological world. Although all of us retain some remnants of the past, our present-day culture appears to obliterate past cultural identities faster than ever before. We often forget that what was once valuable can also have its merits now.*

*You'll easily get a sense of Lyme's individuality, his feelings and his world through the following interview. Hopefully you'll get a sense of history through the tales and perceptions of one of the common folk, and next time that you pass that unassuming house on your way home you'll give it more than just a passing thought.*



**T**he first time I was ever into Lubec was 1911. The Centennial. Lubec was 100 years old. I was with my grandfather and grandmother up in Whiting. We drove down with a horse and wagon. Fourth of July. I was up near the band stand all the time. Christ, there was big trees all around, big trees around those houses. They're all gone now, every one of them. But I remember quite a lot of it. As we drove in you could see the standpipe from West Lubec. I didn't know what it was so I asked my grandfather what that was. He says, "that's a standpipe." I says, "What's a standpipe?" "Well," he says, "it's where the town keeps its water." The old horse was going at a pretty good gait and I says, "Are we going anywhere handy to that?" He says, "We're going right by it, right close," and I thought that horse would never get to that standpipe.

Well, it's hard to describe to you what Lubec was like. There was Factory A in Brownsville, then you come up to the end of the bridge and there was a big factory there. Then there was a big factory which was a smoke stand, smoked herring, then at the breakwater there was the



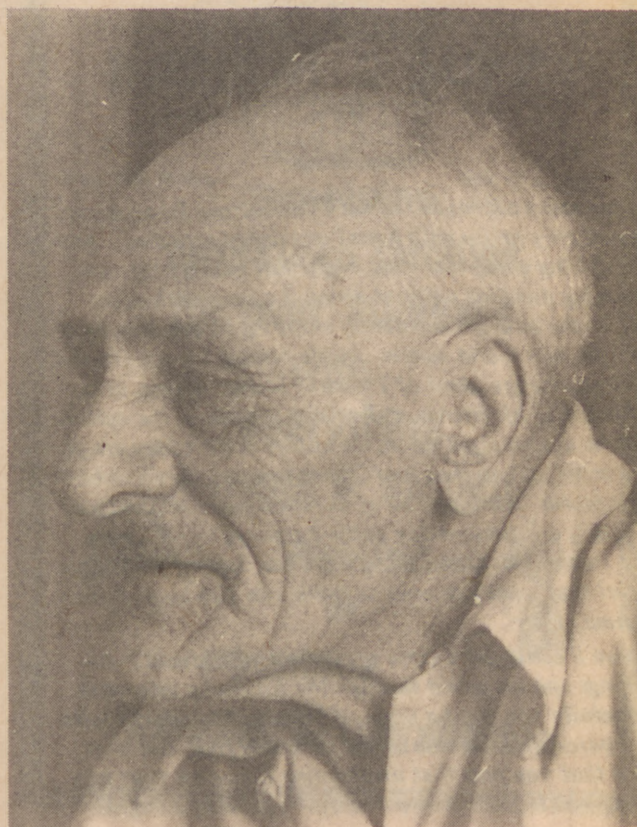
two Seacoast factories, and then you go around the breakwater and there was the Eureka factory and Peacocks factory too. And going into Lubec there was the Union factory and the Colombian Packing Company. There were three times as many smoke houses, smoke stands. Years ago when the factories were all running, there was a fleet of camps all over Lubec. A lot of people from over in Grand Manan come and worked in those factories; a lot of them stayed and worked in the winters an the smoking sheds. Camps was occupied by people who worked in the plants. They'd come from Dennysville, from Machias, from everywhere, Deer Island, just to work in the canning plants. Some of 'em boarded, I guess, and some of 'em went back and forth. You'd go down on that street after supper, after 6 o'clock and you couldn't elbow your way down that street. That's hard for you to believe, isn't it? I go down to Lubec now and if I hadn't seen it myself I wouldn't believe it. Why if you look down the street now at 6 o'clock and if you see somebody down the further end of the street, you're lucky. There was buildings at each side of the street then, there was just room enough to walk down between 'em. Ain't half of the buildings there now. There were grocery stores, clothing stores, dentists, doctor's offices, millineries, blacksmith shops. . . there were a lot of blacksmith shops, a lot of horses to shoe in them times cause all the trucking in Lubec was by boat and horses. The oil for the sardines come in barrels on the boats and steamers. The Calvin Austin and the Governor Cobb was two steamers that run there for years. All the sardines and smoked herring was trucked on the steamship wharf to ship out on all the steamers, too. Why some of the boys used to go down there and watch while they'd be unloading and loading that boat, she'd be in for three or four hours. She'd often carry passengers too, you know. She runs from Lubec to Boston and she touched on the Canadian side in different places. We used to go down to the steamship company there and watch what they called longshoring. They trucked the sardines down this gangplank and hoist them down as the tide came in. All kinds of frieght come in there for the stores. Down there in front of the wharf they piled the barrels of oil for sardines where they were unloaded, it would take 'em a week to haul the oil to all the factories. It was all truck teams, horses, single horses and double horses.

**W**e came to live in Lubec in 1912. My mother had some sisters in Lubec who wanted her to come here. Wages was better. I was just a kid, 12 or 13. You could make money, wasn't much but pretty good money for kids. Always something you could do. I set pins in Tucker's Bowling Alley, two cents a string. Play a game of pool after you get through. They started a clam factory down in Brownsville and they needed help. There was no trouble getting a job there and you got three cents for shelling one of these big two quart tin dipper fulls. You had a card that had 100 punches, you'd wear it on your shirt. Then they punch you a punch when you filled a dipper which weighed four pounds on the scale. And your card would hold \$3.00 worth, a hundred punches. I could do two cards a week. Boats used to bring the clams in there from Digdeguash on the Canadian side. They didn't take clams as small as they do today. My

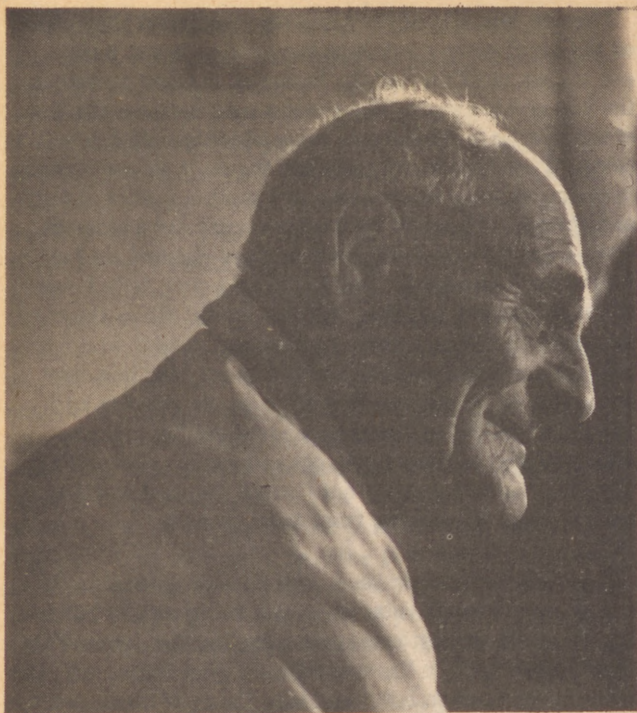
Jesus, them big bombshell clams as big as your hand from Digdeguash, brought in fifty to a hundred barrels at a time. Put 'em in a retorting pan, steam 'em and dump 'em out on the table. Well, that opens the shells up and you reach right in and take 'em by the head and snap 'em in your dipper. Made money out of it, a job . . . and the girls that cut the heads out of 'em had to cut the heads out of two dipper fulls for three cents. That was a lot of clams to cut the heads off of.

For a while I worked in the canning plants in Lubec. You see everything was hand work in there. They had what they called the rush in the summertime. A streak of fish would come about that time for a month or six weeks or two months. Of course, they had to pack all they could and they'd run the canning plant extrey hours. Extrey hours, extrey money. The more hours you worked the more money you made. I worked on the night crew down there for one summer. I went to work at 6 o'clock and quit a half an hour before they went to work in the morning. You got a couple of hours more at night than you did on the day crew. I'd come home and sleep but at noon I'd be awake; half past two or three o'clock I'd be down at the canning plant and go to work, extrey hours; besides the night shift. I didn't want to sleep, I didn't have time to do anything on the place that would amount to anything. They wanted the work done and tickled to death that you worked. I was there to earn money. I did the common work; waited on the packers, gave crates to the packers, took back empty ones, worked on the flaking machine where they falked fish, cleaned the floors, worked on the tin splitters; whatever else there was to do — just common labor.

While we were living in Lubec my mother got the pneu-







monia, in the spring of the year. I was working in the Seacoast Factory — 17 cents and a half an hour. The fish started quite early. My mother took pneumonia and had to go up to my grandmother's. She almost died; but it

was the onion poultices that cured her after old Dr. Bennet gave her up. The onion poultices dried her right up. Old Dr. Bennet was there one night. She was just breathing; that's all, I guess, and he said he'd come on the morrow. My grandmother started taking care of her. She made onion poultices and wrapped them around her all night; yes, they wrapped her in onions, grease of some kind, I think lard, and wrapped all that in cheesecloth and put it around her. Changed 'em once every so often. Put mustard in it too. It helped loosen her up and in the morning she was better. Pneumonia was something that was almost fatal back in those times. So the old Dr. come in in the morning and asked my grandmother how she was, and she says, "She's better," and he turned around and started home. He thought she meant she was dead, you know. Well, he just didn't think she'd get over it.

**T**he old people, my grandmother and others, always gathered a lot of herbs. Pennyroyal, tansy, horsemint. Pennyroyal cured me from measles; steeped it and made a tea. Then there was a prescription that they would get at the drug store which you would have to swallow, called Epicac and Squills. Had all the taste that you could think of, sour and sweet and about the damned thickest stuff; why I forgot what they give it to you for. You never hear tell of it no more. All of your doctor's medicine was liquid, no pills. I can't remember a pill. The first pills I remember was cold tablets. Of course, I still use Golden Oil, an old remedy for colds — it's good to bathe on your chest and good to take. Tastes

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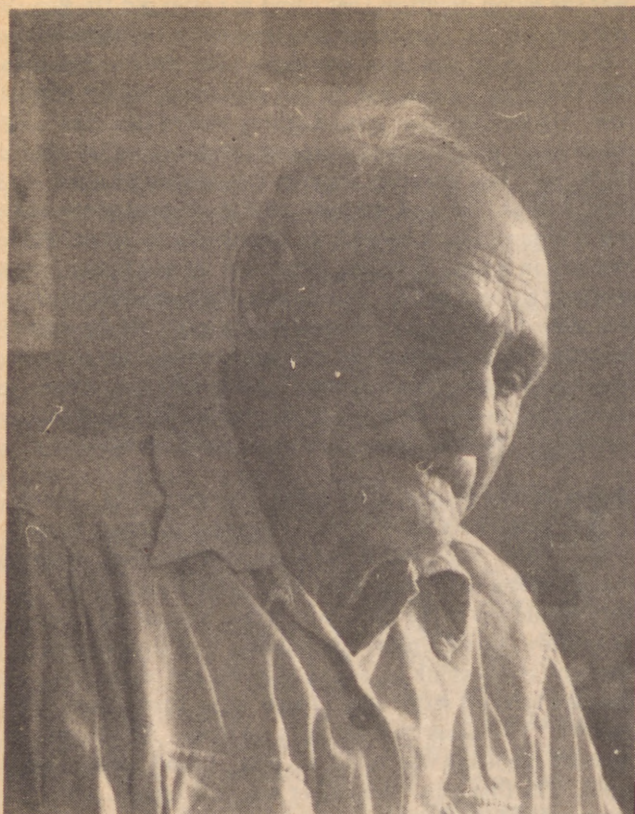
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As I got older I went to work in the woods for awhile. I remember those lumber camps. There was always a piece built on the camp which they called the cook house where the cook done the cooking. There was usually a table in there or two, all according to the size of the crew. Then the other part, they called it the bunk house, had bunks all along the walls and you hung your clothes over the ram down to dry 'em; old-fashioned heater stoves, had 'em in school houses. That was their home in there mostly and into the cook room to eat. The cook mostly had a cookie or 2 cookies to help him. We ate good, too. There were baked beans on the table every meal; baked beans and prune sauce and dried peaches. The dried peaches used to come in little boxes about a foot long and prunes the same way. You stew the prunes, it was cheap sauce for a poor man at that time. Why I still eat it now. It's hardy sauce. There was one big dish of prune sauce on the table and all you had to do was help yourself. To make it you'd take and put your prunes in a dish with water, a little more than cover them with cold water and put them on your stove and let them simmer, you know, till they soften up and swell up; let them come to a boil and usually after they come to a boil, I don't know if they did in the woods or not but I always do, I put in a little bit of sugar for they are a little might sour and I like them a little sweet, so when they start to boil I put in a quarter of a cup of sugar and it makes them plenty sweet for me, in fact a little sweet for some people, but I'm quite a sweet fellow.

Then on one side of the camp they had what they called the hovel where they kept the horses. It was built out of logs and they had the horses all in there as well as the hay and the sleds. There was a road between the hovel and the camp for the tote team which supplied the camp. They hauled the grain and the stuff we used; came in about once a week or every two weeks. I worked out as a chopper. 'Bout all we used was axes and a crosscut saw. I was a pretty good axeman, they claimed, so I almost always chopped. You'd trim up a path for a horse to get in through and then the boss would divide the crew up, some on this end, some on that end. and it would be two choppers and another, usually about four in a crew and a skid horse and the skid horse would come in and drive the logs out as fast as you could cut 'em. So the choppers they undercut the logs and cut the skid row in the back end and worked out toward the yard to clean up the strip. We worked from dawn to dark.

I was working in the backwoods on Township 25, that's up Machias way. Our camp was 32 miles from the settlement near the Machias River. They used to peel pulp in the summertime, you know, just strip it and I had to fall it and take the bark off it, then leave it where it felled. And in the fall of the year round about October or a little later they would work on that peeled pulpwood sawing it up in log ends, 12, 16, 20 ft. long. It was for the Pejepscot Paper Company. . . that was in 1918 when I was up on Old Stream in Wesley from October to February. Had a big sleet storm that year down there. The sleet was so hard they had to cut it with an axe. There was a lot of stuff peeled in there so we went to work sawing it into log lengths and we had some skid horses there to skid it on down to they yard. The Pejepscot Paper Company had a mark you had to put on every piece, it was xix. Then when they hauled it into the stream to drive it they had a pole axe (one bitted axe) with PPC on the front of it. So you hit the end of these logs that you sawed and they'd be marked with PPC, Pejepscot Paper Company. They all went into the Machias River and was drove to Machias. Of course there was different companies, you know, and they had different marks, so they kept it separate the best they could while they was driving it but some would go astray and then would come what they call picking in the rear. That's cleaning up the scatterings. They'd get together and drive them in and saw it up in the mill and they'd look at the mark on it and that goes to whatever company it is. It was all sawed up to 4 foot logs in Machias and then it was brought to the station, loaded on board freight cars and shipped to the pulp mill.

We first moved to the farm in Trescott in 1914. We used to plant potatoes, turnips, build fences at the spring of the year and used to take cattle to pasture at so much a head — \$2.00 a head, you used to get for pasturing a critter all summer. I had 70 or 80 around this place at one time. And I cut wood and worked out some at the sawmill, at the factory, raked blueberries, peddled clams, whatever jobs was going on at the time. I worked all year 'round at different things and there was always a job. When I was growed up a man, I fished for smelts off in the bay and by the rivers here. I always



used a punt, a flat bottomed boat. We had long nets about 10 ft. deep and a lead line on the bottom to sink it and they had corks on the top line to float it and the net would bow in, it wouldn't go straight up and down. You'd coil it all up and put it in the stern of your punt on a piece of canvas so it would slide off easy. The nets were 65 feet long. You'd sometimes tie two together which would give you 65 feet more. At the further end of the net you would have an anchor. There would be 10 or 12 feet of rope from your net to that anchor. The first end you'd roll into a point somewhere, a rock or an anchor could be used. Then you'd row out and when you got to the end of it you'd chuck your anchor overboard and that would make kind of a wier, like. Then your fish would gill into the net with the tide. Sometimes seals would get in the nets and fellers would take shotguns and fire into the nets if they got too thick. You had a lantern on a stick in your punt on dark, foggy nights for light and you'd go along picking out the smelts, good and dark and you'd hear whew, whew, whew. . . it would be a seal right along ahead of you picking 'em out too. We fished September, October, November but after it got too cold the ice would make on your nets and you couldn't fish. Too cold anyhow. When you shipped your smelts, you used to get the sardine cases to ship them in. They were made out of wood, the shooks, little square boxes. A lot of the fishermen put up their own ice, in ice houses. Then you got these wooden boxes I was telling you about or you got the shooks to make 'em; you

take this ice and you pound it all up, put some of this ice in the bottom of that box and you put your fish in there and some more ice and then some more fish and some more ice on the top and then nail it up and take it to the express office and put a tag on it; they used to send you tags, those fish companies. You never knew what you was going to get for your fish when you sent 'em, you just put your tags on them when you were selling them and they took out a commission and they sent you back the rest. Sometimes you wouldn't get nothing, but not too often, every once in a great while, they'd be kind of smelly and goddamn the returns from them would be better than the good nice fresh smelt.

**Y**es, there was always some way to keep busy round here. I cut and peeled pulpwood and hauled it to East Machias and loaded it aboard freight cars for six dollars and a half a cord. That wasn't very much money but everything else was cheap too. But I made a success of it and I kept building up my business here on the farm. I got into cattle, sheep. I cut wood, pulpwood, peeled pulpwood, summertime. Everybody around Lubec, North Lubec was burning firewood. I took my waste up. Instead of throwing it into the brush I sawed it out and sawed it up for firewood and hauled it into Lubec, sold it. Six dollars a cord that would fit into the stove, all ready for the stove. You couldn't get a cord cut for that now, but as I say, everything else was cheap. You got by alright. Back in them times, if you could earn three or four hundred dollars a year, the way the

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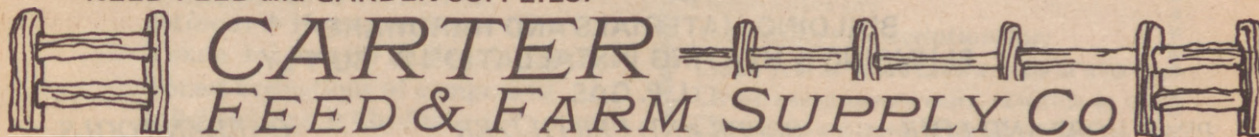
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times was, you could pay your bills. You could get by alright and have enough to eat and be comfortable. But you didn't have no luxuries, and you had to make every cent count.

Yes, things were different back then. The Indians from Pleasant Point used to come down. They were good, nice jolly fellows, friendly. They used to come around the shores, around the rivers here and shoot seals and use their hides for different purposes, I don't know just what. Then they'd come to pick sweet grass and they'd camp and tent in a field somewhere. They'd come up in boats and pick sweet grass, make all kinds of baskets from little ones to real big ones. They'd have the kids with them, young ones to ones older than 10 or 12. They'd come up around the houses after milk, butter, one thing or another; didn't have too much money, would trade for baskets. Evenings or during the day, when we had time, we used to go down to the shore to visit the Indians. Then they just dropped out, they didn't come anymore. Thing's changed, there wasn't much call for baskets, lifestyle changed; just didn't peddle baskets anymore.

Even the things we did for entertainment was different. You'd go to a neighbors house in the evening to play cards, especially in the wintertime some. They almost always had a talking machine, gramophone, play some records. You also had house parties in the winter. There was always someone who could play a violin or an organ. There was an organ in a lot of the houses back then; they'd clear things away so you could dance some. Why even had 'em in my house sometimes. You didn't even know when they were coming, it might be a big surprise. We'd sometimes make some candy, molasses candy a lot, they'd pull it and twist it, popcorn balls too. Then you had your dances Saturday nights. Most of us walked to them, all the people around here did. Some went with horses, there was even a place to tie your horses up. Why on Saturday nights me and the Caneel girls would get out on the road and meet up with teh bunch coming from Whiting. Oh yes, we'd dance the quadrilles, Lady of the Lake, Soldier's Joy, midnight waltz. . .

**Y**es, it was different in those days. In wartime, why, people smuggled groceries and things from Canada, could get 'em cheaper. Christ, I smuggled 3 barrels of flour and 400 lbs. of sugar across the border, or actually, I was with a fellow that smuggled it across, my

uncle. He had a boat and I went over with him. I was scairt to death but he wasn't. I think maybe he had brought some over before and knew everybody around town. Christ, it was right out in the daytime and the customs office was right up on top of the hill where we bought the stuff from the store. He done all the buying and the like of that. Anchored the boat off the wharf aways, rowed in with the dory. I remember just what they said. Went into the store, wanted to know if they had any flour, "Yes," sugar, "Yes," . . . well we'd like to have 3 barrels of flour, 400 lbs. of sugar. He says, "Where are you from?" We were on the Canadian side, you know. My uncle turns around and says, "You don't want to know where I'm from." He never said a word, he went right out to the door, I can see him now, looked up on the hill where the custom house sits and he comes back and says, "alright." Well, Christ, we had anchored the dory way down the wharf; they had these long trucks with wheels on them and a handle. You could put an awful load on 'em. They must have been 10 ft. long. We went back to the shed, loaded 3 wooden barrels of flour on 'em, 400 lbs. of sugar and took it down the wharf and hoisted it on a tackle and put it in the dory. Then we rowed off to the boat and put it in the hold and went to Lubec and put the boat into the wharf where he kept it and went up to this house. "Bout midnight," he says, "after it gets quiet we'll go down and bring it up to the house here." Well I thought he was going to get a truck team, so I waited around . . . About half past eleven he says, "Everything's alright now, we'll go and bring the flour and sugar up to the garage." So we started out the door and he went to the garage and he got this wheelbarrow. Jesus, I can hear that thing squeaking now, needed grease you know. By Jesus, I was about scairt to death . . . lights on the street, right out in the street, turned the corner down where the boat was, right by where the custom officer's house was, nobody on the street, never seen a soul. We made three trips back and forth there. It happened quite a lot in them days; you had to take cereal with your flour over on this side.

*What year was that?* "That was in wartime." 1940, *Around then?* "No, no, wartime, 1918." *Oh, the First World War?* "I don't know the first world war or the second world war, they wasn't too far apart. 1918 was when this happened; the second world war you had your sugar stamps."

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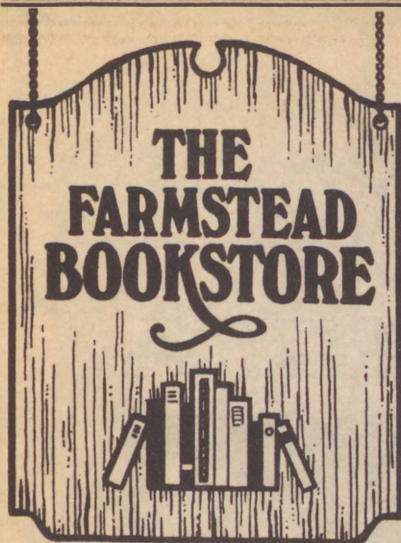
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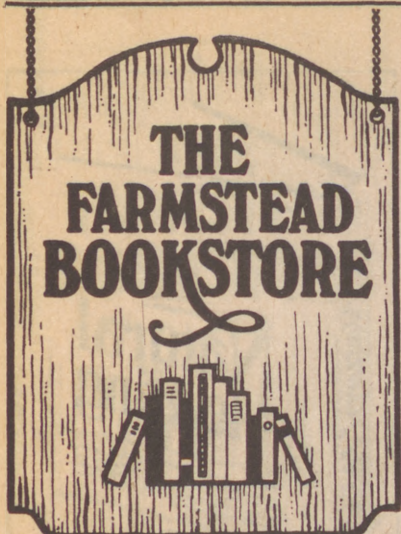
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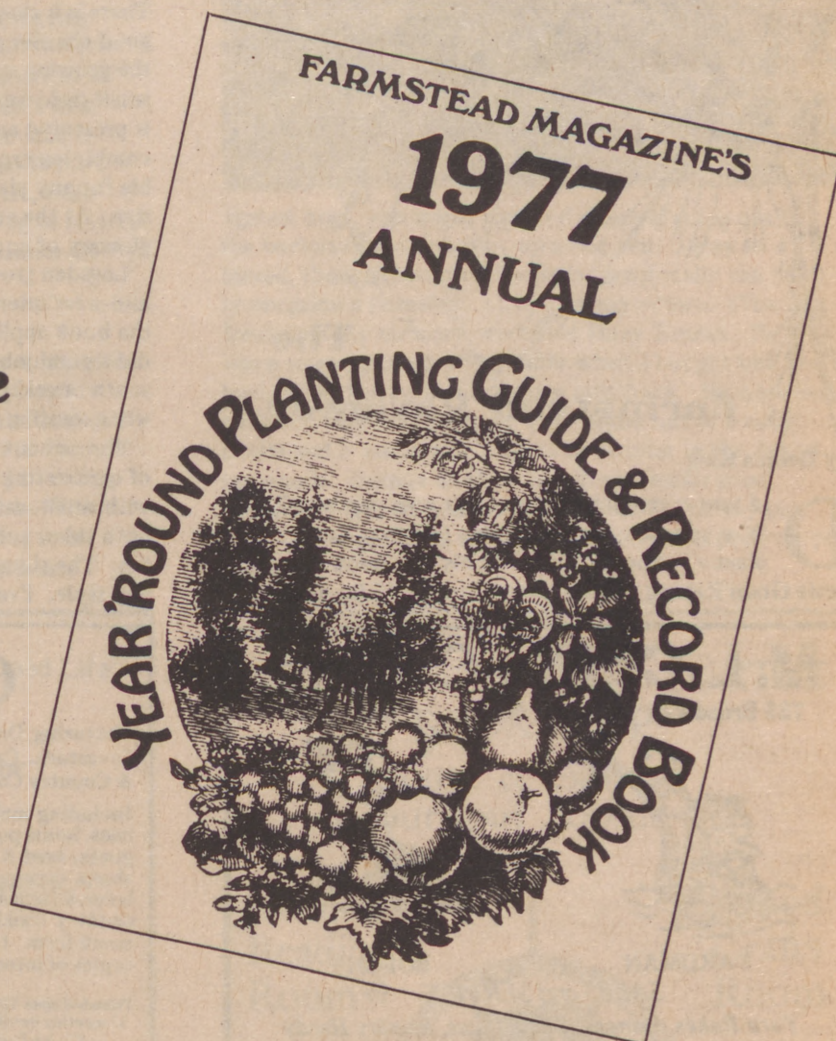
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## The Farmstead Reviewer

by Dennis King

**D**id you ever want to grow your own pancakes? Sure you can. Gene Logsden tells you how to plant a "pancake patch" in his new book, *Small-Scale Grain Raising*, Rodale Press, Inc. \$8.95 hardcover,

\$4.95 paperback. The book is meant for "gardeners and country homesteaders interested in increasing both the quantity and quality of their homegrown food supply in the most reliable way — by growing and using whole grain." Logsden gives step-by-step instructions on the growing and hand harvesting of most North American grain crops and tells how much space and work would be required. He includes a chapter on each of the common grains and discusses varieties, growing, disease and insect problems, harvesting, storage, and even recipes. There is a chapter on soybeans (not really a grain) and a good chapter on rice, for those who live in areas where the growing season is long. "The Logsden Plan" for small-scale rotations with legumes, grains and vegetables is presented and gives a lot of useful information on combining crops into a rotation which would be applicable for any piece of land from 1/10 to 1,000 acres in size. At the end of the book is an informative illustrated glossary of equipment.

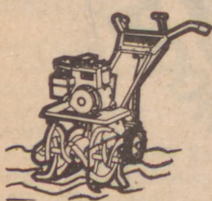
Logsden grows his grain in Northern Ohio and is thus mid-west oriented, but he made an attempt at making the book applicable to the entire continent. I'd say he did a good job of this, but those in the far north, deep south or arid parts of the west might find the book somewhat wanting for details about their special problems.

Throughout the book Logsden does an excellent job of contrasting modern agribusiness methods of farming with small-scale farming and gardening. Logsden knows both sides, and it's quite obvious where his allegiance lies. The thing I like best about the book is the Logsden style. I've never been able to decide whether he is

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arrogant or humble; I guess in his writing he portrays a character who is arrogant about his humbleness. A short section on the art of farming brings out his best. I quote: "Today no farmer builds art into his workaday world, he can't afford to . . . That took time, and now technology has decreed that time is a commodity to be priced, bought, and sold . . . So today banks are built of marble and a taste for art; the barns if built at all, are simply large, hideous collectors and storers of manure from overcrowded animals . . . Carl Rall, in his 70's now, still walks the rows of his large soybean field, cutting weeds with his hoe . . . he hoes weeds because he wants his field to look beautiful . . . In all this country full of herbicides and monstrous cultivators, only Carl's field is without weeds. And farmers stop along the road to admire it . . . Carl leans on his hoe and admires it too . . . Carl has raised his daily work to the level of art, while the technologist slaves away all his days hoping to reserve a little time in the end for art. Whose economics are the wiser?"

**W**hat about some good bacon or sausage to go with Logsdon's home-grown, whole-wheat pancakes. Jerry Bellanger has written a new book *Raising the Homestead Hog*, Rodale Press, \$7.95, and let me tell you, it is excellent. Whether you're interested in raising hogs or not you should enjoy reading this book. With the typical Bellanger style, he makes hog raising seem fun, and even if you have the typical civilized biases



against hogs, you might just find yourself going out to the backyard and throwing up a hog pen. I may be a bit biased, though, because, like Bellanger, I really can hardly imagine a farmstead without a hog or two. (The hog fondest in my memory, we called Piney Rooter. He was a scrawny black 40-pounder when I bought him and looked like the typical Arkansas razorback. His nose was so skinny and long he could have drunk out of a coke bottle and I suspect he'd spent the winter in the Arkansas woods. Despite all these handicaps, under good homestead care he had the best personality of any pig I've known; raised up to be some pretty good pork chops too.)

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Seriously Bellanger aims his book at two levels. First, the backyard homesteader who's interest is in raising one pig a year for his own meat. Even for the former city-slicker, there is enough information here to proceed, especially if you've apprenticed up through the route of gardening and raising small animals. In Bellanger's opinion, most anyone except high-rise apartment dwellers could profit by raising a hog except most city dwellers would probably end up in jail because of zoning restrictions. Secondly, the book is aimed at the small farmer interested in hog raising as a part-time job. The advantages of small-scale hog raising are a result of low capital and overhead expenses and flexibility.

Throughout the entire book Bellanger contrasts old time methods with modern agribusiness methods of

raising hogs. With this firm background, Bellanger recommends the best methods for the one hog homesteader and the small farmer raising several hogs for sale. Modern agribusiness proponents often look at farmsteaders as backward, as running their lives and enterprises with only nostalgia from the past and rejecting modern, scientific methods only because they're modern. Bellanger emphasizes that a farmsteader needs to know as much, and often more, to profitably raise pigs, than a modern agribusiness farmer who may be no more than a custodian of a "hog concentration camp." Homestead methods are not backward. They take a blend of modern scientific methods, old-time commonsense, and most of all, thoughtful, independent, action. This book is a good blend of all these.

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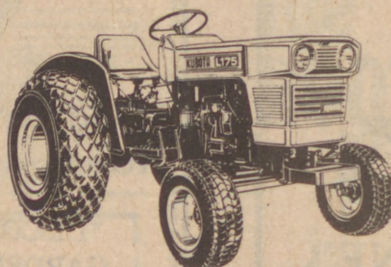
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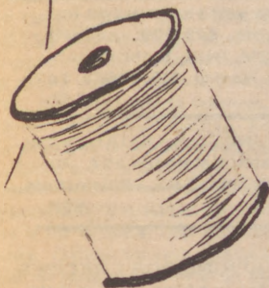
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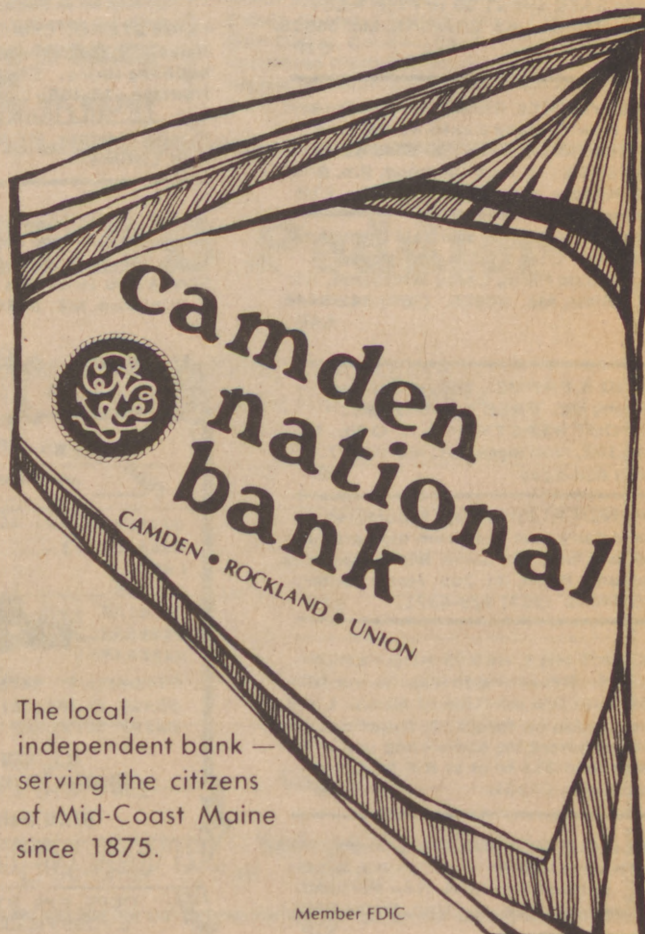
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